

Knowledge Regarding Hand Foot Mouth Disease Among Mothers of Under Five Children

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Abstract—Background: Hand, Foot and Mouth Disease (HFMD) is an emerging and contagious viral disease that mostly occurs in children who are less than five years of age. HFMD was first described in the late 1950s. New Zealand reported the first cases in 1957, and in 1958, the causative agent of the disease, Coxsackie virus A16, was first identified in Canada. In India, the first recorded outbreak of HFMD occurred in Calicut (Kozhikode), Kerala, during 2003-2004. Since then, a significant outbreak of HFMD occurred in 2007 in Kolkata, West Bengal.

Objectives: The study's objectives were multifarious, including the evaluation to assess the level of knowledge regarding Hand Foot Mouth Disease among mothers of under five children, to find out association between knowledge score with their selected socio demographic variables and to develop an information booklet on Hand foot mouth disease.

Methodology: The study employed descriptive research method on 60 mothers of under five children to evaluate the knowledge regarding hand foot mouth disease in pananchery grama panchayath, Thrissur and purposive sampling method was used. Data for the study was gathered using self-structured questionnaire. The data analysis was triangulated using descriptive and inferential statistics to obtain meaningful results.

Result: The findings revealed that 33.3% of mothers had moderate knowledge, 18.34% had inadequate knowledge and 3.3 % demonstrated adequate knowledge.

Conclusion: The findings of this study indicated a need to boost mothers' knowledge about HFMD. It is crucial to provide suitable health education for mothers to raise their awareness about the causes, symptoms, transmission, prevention, and home care of HFMD. The study suggests that healthcare professionals, particularly child health nurses, should take steps to educate mothers about HFMD and how to prevent it. Additionally, distributing an information booklet during the study helped improve mothers' understanding of HFMD in young children.

Index Terms—Hand Foot Mouth Disease, knowledge, management, mothers of under five children.

I. INTRODUCTION

Hand, Foot, and Mouth Disease (HFMD) is a highly contagious illness that mainly affects children. The disease is usually mild and goes away on its own. Symptoms include fever, painful mouth ulcers, and rashes with blisters on the hands, feet, and buttocks. In some cases, serious complications like meningitis, encephalitis, and polio-like paralysis can happen. HFMD is mainly caused by two RNA viruses, Coxsackievirus A16 (CVA16) and Enterovirus 71 (EV71), which are part of the Enterovirus group in the Picornaviridae family. The incubation period typically lasts from 3 to 6 days. HFMD is most common in children under 5 years old. Since humans are the only known carriers, spread within families is a key factor in the disease's transmission. The virus spreads through fecal-oral, oral-oral, and respiratory routes. Studies show that the transmission rate of EV71 in households is about 52%, increasing to 84% in children younger than six years. HFMD cases are often reported from summer to early autumn, frequently occurring as localized outbreaks. Main clinical signs include red bumps on the hands, feet, and mouth, along with early symptoms like muscle pain, fever, and stomach discomfort. These lesions typically turn into blisters and clear up on their own within one to two weeks¹

HFMD was first described in the late 1950s. New Zealand reported the first cases in 1957, and in 1958, the causative agent of the disease, Coxsackie virus A16, was first identified in Canada. Since then, Hand, Foot, and Mouth Disease has gained prominence as a significant infectious disease among

pediatric patients in different parts of the world, particularly in the Asia-Pacific region. In 1997, a major outbreak of Hand, Foot, and Mouth Disease caused by Enterovirus A71 was reported in Sarawak, Malaysia. The outbreak caused significant morbidity among child patients and resulted in the deaths of 34 children. Since then, a major outbreak of Hand, Foot, and Mouth Disease caused by Enterovirus A71 has been reported in Taiwan in 1998. The outbreak caused significant morbidity among 1.5 million child patients, resulting in 78 deaths. Since the early 2000s, several countries in the Asia-Pacific region, such as Singapore, Thailand, Vietnam, China, and others, have reported several major outbreaks of Hand, Foot, and Mouth Disease. The recurring nature of the Hand, Foot, and Mouth Disease outbreak in different parts of the world emphasizes the importance of the infectious disease in the context of global health.²

II. METHODS

A descriptive study is used to assess the knowledge regarding hand foot mouth disease among the mothers of under five children at selected community, Thrissur. The study was conducted in ward 23 of Panchayath Grama Panchayath, Thrissur district. The objectives of the study include (1) to assess the level of knowledge regarding HFMD among mothers of under five children. (2) to find out the association between knowledge score of mothers of under five children regarding HFMD with their selected set of demographic variables (3) to develop an information booklet of HFMD. The purposive sampling technique was used to enroll the 60 mothers of under five children to evaluate the knowledge level regarding HFMD.

The mothers who are not present at the time of data collection, cannot read and write Malayalam, who are not willing to participate in the study were excluded from the study. Informed consent was obtained from the mothers.

The data collection proforma consists of 2 sections, first included data regarding demographic data elicited are age of the mother, age of the children, gender of the child, type of the family, area of residence, educational status of the mother, occupation of the mother, monthly income of the family, immunization status of the child and source of previous information regarding HFMD. The second

section includes a structured questionnaire having 25 questions regarding knowledge of HFMD. The correct response carried 1 mark and wrong response carried none.

THE INTERPRETATION OF KNOWLEDGE LEVEL

Scoring	Level of knowledge
0-9	Inadequate knowledge
10-17	Moderate knowledge
18-25	Adequate knowledge

The study received the approval from the ethical committee of the college, and formal permission was obtained from the concerned administrative authorities prior to commencement of the study. The research tool was developed by the investigator following an extensive review of recent and relevant literature. The content validity of the tool was established through the evaluation by the subject experts. Subsequently, the study was conducted among mothers of under five children who fulfilled the predetermined inclusion and exclusion criteria. The collected data were analysed using both descriptive and inferential techniques, including frequency, percentage, and chi-square tests.

III. RESULTS

SECTION A DATA ON DEMOGRAPHIC VARIABLES INCLUDES

- Regarding the age of the mother out of 60 samples 9 (15%) belonged to the age group of below 25 years, 25 (41.66%) were in the group of 26-30 years, 18 (30%) were in the age group of 31-35 years, 8 (13.3%) were in the age group of above 35 years.
- According to the age of child 3 (5%) children belonged to the group of below 1 years, 32 (53.3%) children were in the group of 1-3 years and the remaining 25 (41.6%) belonged to the group of 3-5 years.
- With respect to the gender of the child 29 (48.3%) were male and the remaining 31 (51.6%) were female.
- Regarding the type of family, out of 60 samples 37 (61.66%) belonged to the nuclear family, 22

(36.6%) were in joint family, 1(1.66%) were in extended family.

- Considering the area of residence 52(86.6%) belonged to rural area, 8(13.3%) were in urban.
- With respect to educational status of mother 2(3.3%) were belonged to no formal education, 6(10%) were in primary education, 16(26.6%) were in secondary education, 36 (60%) were in higher secondary and above
- Regarding the occupation of the mother out of 60 samples 31(51.6%) belonged to home maker , 9(10%) were in daily wage worker , 19(31.6%) were in private employee, 1 (1.6%)
- According to the monthly income of the family 16(26.6%) were belonged to below 10,000₹ , 14 (23.3%) were in 10,001₹- 20,000₹, 13(21.6%) were in 20,001₹- 30,000₹ and 17 (28.3%) were in above 40,000₹.
- With respect to immunization status of the child 55(91.6%) were belonged to children immunized upto the age and 5(8.3%) were in the children skipped some vaccine.
- Considering the source of previous information regarding HFMD 15(25%) were belonged to the

health workers, 25 (41.6%) were in mass media ,16 (26.6%) were in family/ friends and 4(6.6%) were in school/anganwadi

SECTION B

Data on level of knowledge on HFMD among mothers of under five children includes:

TABLE 1 : FREQUENCY AND PERCENTAGE DISTRIBUTION OF LEVEL OF KNOWLEDGE AMONG MOTHERS OF UNDER FIVE CHILDREN

Sl.no	variables	Frequency	Percentage
1	Inadequate knowledge	38	63.4%
2	Moderate knowledge	20	33.3%
3	Adequate knowledge	2	3.3%

The table 1 shows the frequency and percentage distribution of level of knowledge among mothers of under five children. Out of 60 samples 38(63.4%) mothers have inadequate knowledge regarding HFMD, 20(33.3%) are having moderate knowledge and 2(3.3%) mother having adequate knowledge regarding HFMD

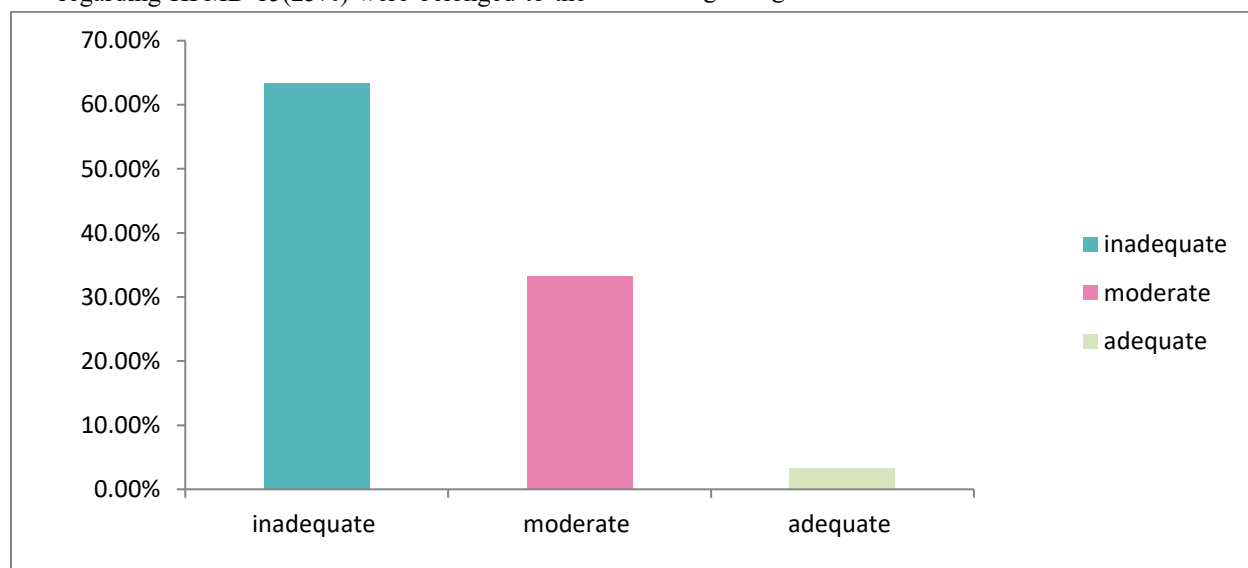


FIGURE 1 : PERCENTAGE DISTRIBUTION OF MOTHERS ACCORDING TO THEIR LEVEL OF KNOWLEDGE REGARDING HFMD

SECTION C

Data on association of knowledge on HFMD with their selected demographic variables. Chi square calculated value of age of mother, age of children, gender of the child, type of family, area of residence,

educational status of mother , occupation of mother , monthly income of the family, immunization status of the child previous knowledge regarding HFMD is less than the table value, and there is no significant

association between the demographic variables and the level of knowledge hence H_0 is accepted.

IV. DISCUSSION

The discussion is based on the objective of the study, the first objective is to assess the level of knowledge regarding hand foot mouth disease among the mothers of under five children. The present study revealed that among 60 subjects 38(63.3%) had inadequate knowledge, 20(33.33%) had moderate knowledge and 2(3.3%) knowledge regarding HFMD.

The present study findings in tune with to assess and compare the knowledge regarding Hand, Foot and Mouth Disease (HFMD) among mothers of under-five children and staff nurses working in the pediatric ward in Gandhi Medical College and Research Institute (MGMCRI), Puducherry. The study comprised 60 participants, including 30 mothers and 30 staff nurses, selected using a purposive sampling technique. The results shows that mother's had 50% inadequate knowledge 40% moderate knowledge, 10% adequate knowledge and staff nurses had 73.3% moderate knowledge, 16.7 % have inadequate knowledge and 10% had inadequate knowledge about HFMD. And there is no significant association between the knowledge regarding the HFMD among the mothers of under-five children with selected demographic variables.³⁶ There is no significant association between the level of knowledge with their selected demographic variables such as age of mother, age of child, gender of child, type of family, area of residence, educational status of the mother, occupation of the mother, monthly income of the family, source of previous information regarding HFMD. Also shows significant association in immunization status of the child.

The second objective is To find out the association between knowledge score of mothers of under five children HFMD regarding with their selected set of demographic variables

The present study revealed that There is no significant association between the level of knowledge with their selected demographic variables such as age of mother, age of child, gender of child, type of family, area of residence, educational status of the mother, occupation of the mother, monthly income of the family, source of previous information

regarding HFMD. Also shows significant association in immunization status of the child.

The findings of the study were contradictory with A study conducted to assess the knowledge and preventive practices of mothers regarding Hand, Foot and Mouth Disease (HFMD) in Shyampur, Khordha district, Bhubaneswar, Odisha. The study comprised 400 mothers of under-five children selected by using convenient sampling. Information was gathered using a validated self-structured questionnaire to evaluate knowledge and a checklist to assess preventive practices. The results revealed that rural mothers demonstrated significantly better knowledge and preventive practices regarding the disease compared to urban mothers, with statistical significance of approximately 98.8% for knowledge and over 99.9% for preventive practices.³

As per the third objective To develop an information booklet of hand foot mouth disease. An information booklet was prepared by investigator about HFMD its causes, clinical manifestations, diagnostic measures and its management. It was validated by the experts in the subject. After assessing the knowledge, information booklet was distributed to the sample in regional language

V. CONCLUSION

Hand, Foot and Mouth Disease is a common viral illness that mainly affects children under five years old. It shows symptoms like fever, mouth sores and blisters on the hands and feet. Although the disease usually resolves on its own, many mothers struggle with understanding how it spreads, how to prevent it, and how to manage it. This lack of knowledge can lead to delays in recognizing the illness and increase the chance of it spreading among children. Mothers are key in spotting symptoms early and taking preventive steps at home and in their communities.

The finding revealed that only 3.3% of the mothers have adequate knowledge while the majority 63.4% demonstrated inadequate knowledge. Approximately 33.3% of the mothers have moderate level of knowledge the findings of this study indicated a need to boost mothers knowledge about hfmd. It is crucial to provide suitable health education for mothers to raise their awareness. Also have important

implications for nursing practice, education, future research.

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