

A Study To Assess The Knowledge And Practices on Prevention and Management of Diarrhoea Among The Mothers of Children Under 5 Years of Age in Selected Community Setting in East Khasi Hills, Meghalaya

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Abstract

Introduction: In many developing countries, Diarrhoeal episodes are treated at home by the Mothers who are the main caregivers to Under-Five Children. Hence, their knowledge about this common disease is critically important. On the other hand, the poor knowledge of Mothers about the cause of Diarrhoea might limit them from taking appropriate timely actions. The role of the mother is vital in health promotion, disease prevention and child care. Therefore, this study was undertaken to assess the knowledge and practices on prevention and management of diarrhoea and to find out the association of their knowledge with selected demographic variables (age, education, per capita income, number of children under 5 years of age, no. of episodes of diarrhoea in the past 6 months and source of water).

Methodology: A cross-sectional study was conducted among the mothers of children under 5 years of age in selected community setting, East Khasi Hills, Meghalaya. A total of 183 mothers were selected for the study using convenient sampling technique.

Result: The findings of the study revealed that out of 183 mothers, about 86 (47%) mothers have good knowledge and 139 (76%) mothers have adequate practice regarding diarrhoea and its prevention and management.

It is found that education of the mothers and per capita income of the family is associated with the knowledge regarding diarrhoea and its prevention and management.

Conclusion: From the present study, it is found that most of the mothers have good knowledge and adequate practice regarding diarrhoea and its prevention and management.

Keyword: Mothers, Knowledge, Practice, Diarrhoea

Introduction

Background of the Study

Diarrhoea is the third leading cause of death in children under 5 years old and is responsible for killing around 443,832 children every year according to World Health Organization¹⁸. The burden of diarrhoea prevails in the developing world where water quality and sanitation and the general living condition remain poor.

There are inherent cultural practices for management of diarrhoea at domestic level. Poor sanitation and unhygienic condition are the important risk factors for diarrhoea. Mode of water transportation and poor handling of water at the house hold level, presence of waste water in the streets, refuse storage, collection and disposal, domestic water reservoir by the mother, lack of hand-washing, before feeding their children and hand-washing without soap were associated with increased risk. Studies have shown mother's age, age of child, social class, religion, residence and wealth index have influence on childhood diarrhoeal cases in India. In the actions Mothers take, the minimum required is a brief and superficial examination of the child suffering from diarrhoea and the amount and type of liquid fed to him or her in the case of diarrhoea, however these actions are vital for paediatric welfare.¹⁸

Need of the Study

According to the National Health Mission, Diarrhoeal diseases contribute to 4.5% of infant mortality rate and 5.8% of childhood mortality rate in India¹⁹.

In India, according to the National Family Health Survey (NHFS-5, Phase-II)2019-21, the prevalence of childhood Diarrhoea was found to be 7.3% in the last two weeks preceding the survey²⁰.

Under-Five Children are susceptible to high mortality owing to Diarrhoea, so Mothers should have basic knowledge regarding care of Under-Five Children during

Diarrhoea and its management. Therefore, this study attempts to assess the knowledge and practices on prevention and management of diarrhoea which may be helpful in providing need-based awareness program.

Objectives

Primary Objectives

To assess the knowledge and practices on the prevention and management of diarrhoea among the mothers of children under 5 years of age.

Secondary Objectives

To find the association of knowledge with selected demographic variables (age, education, per capita income (in Rs.), number of children under 5 years of age, episodes of diarrhoea in the past 6 months and source of water).

Methodology:

Research Approach: Quantitative research approach

Research Design: Cross sectional study design.

Variables

a) Independent variables: Socio-demographic variables: Age, education, per Capita Income, number of children under five years of age, episodes of diarrhoea and source of water

b) Outcome variables: Knowledge and practices on the prevention and management of diarrhoea among the mothers

Study Settings

The pilot study was conducted in Mawpdang and final study was conducted in Mawlai-Mawroh, Shillong, Meghalaya.

Ethical Considerations

In our study, permission was obtained from NEIGRIHMS Scientific Advisory Committee (NSAC), Institutional Ethics Committee (IEC), The Directorate of Health Services and Informed Consent from Participants.

Study Population

In this study, the population comprises of mothers who have at least one child below the age of five years in a selected Community setting, East Khasi Hills, Meghalaya.

Sampling Technique

Convenience sampling technique was selected.

Sample Size

Sampling population: Mothers of under five children residing in rural areas.

Sample size calculation:

$$n = \frac{2 \cdot xp(1-p)}{d^2}$$

where,

n = Total sample size

Z = value at a specified confidence level

P = proportion of event in the population

d = acceptable margin of error in estimating the true population

The sample size calculated for the pilot study was 16 and final study was 160.

Criteria for Sample Selection:

Inclusion Criteria

- Mothers having at least one under-five child

Exclusion Criteria

- Mothers who have only one child below six months of age.

Development of Data Collection Tool

An extensive review of literature from books, research journals, online resources, suggestions from experts and personal experience of the investigators and discussion with the colleagues.

Description of Data Collection Tool

The tool used for our research study to collect the data is self-administered questionnaire. It consists of 3 sections.

SECTION I: Items related to socio-demographic data of the participants.

SECTION II: Items related to knowledge on prevention and management on diarrhoea.

SECTION III: Items related to Practice on prevention on management on diarrhoea.

SCORING: Section I was not given any score while in Section II and Section III, each correct response was given '1' mark and there was no negative marking

Validity

For content validity, the tool was given to experts from the Department of Community Medicine, Department of Pediatrics, Department of Community Health Nursing, Department of Public Health Nursing. Further, the tool was validated by Khasi and English language expert.

Data Collection Procedure

Pilot study was conducted from the 19th May to 24th May, 2025 where 30 mothers participated and the final data collection was carried out from the 16th June to 21st June, 2025 in Mawpdang under Diengpasoh PHC and Mawlai Mawroh under Mawlai Mawroh PHC, East Khasi Hills, Meghalaya respectively.

Prior to the data collection, informed consent was taken from the participants to explain the procedure and the purpose of the study, which also stated the confidentiality and anonymity of the results. Thereafter, the participants were allowed to proceed with the self-administered questionnaire and participants took approximately 15-20 minutes to complete it.

Results

Section-I

Table 1: Frequency and Percentage Distribution of The Participants According To The Demographic Variables. (n=183)

Demographic variables	Frequency(f)	Percentage (%)
AGE (in years)		
18-27	45	24.6

28-37	99	54.1
38-47	39	21.3
EDUCATION		
Primary	15	8.2
Middle School	29	15.8
Secondary	48	26.2
Higher Secondary	42	23.0
Graduate	38	20.8
Post Graduate	11	6.0
OCCUPATION		
Housewife	115	62.8
Working	68	37.2
PER CAPITA INCOME (in Rs.)		
0 – 1288	29	15.8
1289-2577	44	24.0
2578-4295	31	16.9
4296-8591	50	27.3
≥ 8592	29	15.8
RELIGION		
Christian	181	98.9
Hindu	02	1.1
NUMBER OF CHILDREN UNDER FIVE YEARS OF AGE		
1	152	83.1
2	31	16.9
EPISODES OF DIARRHOES IN PAST 6 MONTHS		
No	141	77.0
Yes	42	23.0
SOURCE OF WATER		
Underground	27	14.8

PHE	146	79.8
Private	05	2.7
Both (Underground and PHE)	05	2.7

Table 1: Shows that majority of mothers, 99 (54.1%) belong to the age group of 28-37 years, 48 (26.2%) mothers completed the secondary education, 115 (62.8%) were housewives and 50(27.3%) mothers belong to upper middle class. Also, 181 (98.9%) mothers identify themselves as Christians, 152(83.1%) mothers have one child under-five years of age, 141(77.0%) mothers have children who did not experience episode of diarrhoea in the past 6 months and 146 (79.8%) mothers use water from PHE.

Section - II

Figure 1: Bar Diagram Showing Frequency And Percentage Distribution Of Knowledge Of Participants Regarding Diarrhoea And Its Prevention And Management. (N=183)

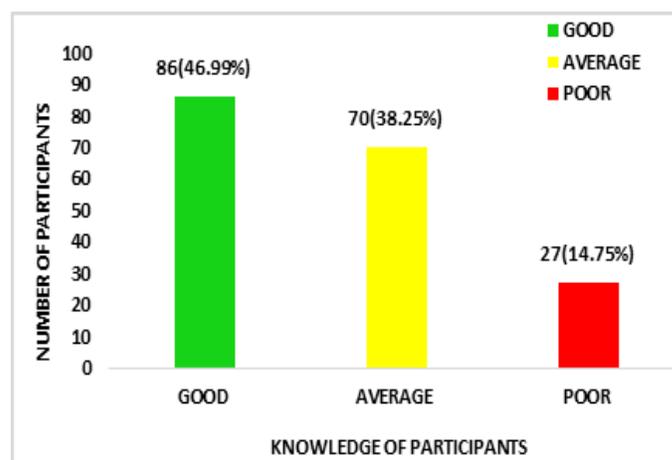


Figure 1: Shows that most of the mothers 86 (46.99%) have good knowledge regarding diarrhoea and its prevention and management.

Section III

Figure 2: Bar Diagram Showing Frequency And Percentage Of Practice Score Of Participants Regarding Prevention And Management Of Diarrhoea. (n=183)

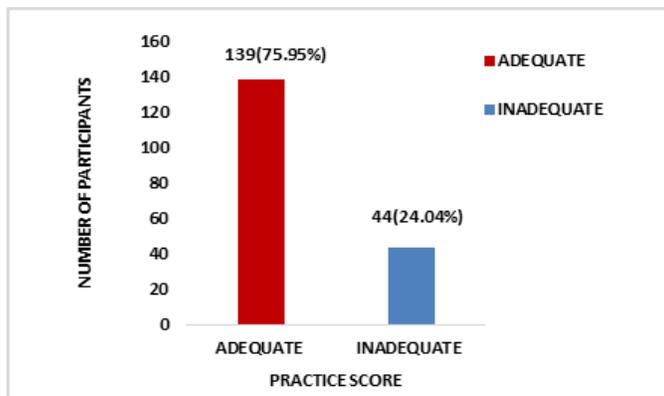


Figure 2: Depicts that 139(75.95%) mothers have adequate practice regarding diarrhoea and its prevention and management.

Section IV

Table 2: Association of knowledge with selected demographic variables regarding prevention and management of diarrhoea (n=183)

Demographic Variables	Knowledge			P Value (Chi Square)
	Good	Average	Poor	
Age (in Years)				0.592
18-27	17	19	09	
28-37	48	38	13	
38-47	21	13	05	
Episodes of Diarrhoea In The Past 6 Months				0.417
No	70	51	20	
Yes	16	19	07	

Table 2: Depicts that there is no significant association between knowledge with age and episodes of diarrhoea in past 6 months.

Table 2(b): Association of knowledge with selected demographic variables regarding prevention and management of diarrhoea (n=183)

Demographic Variables	Knowledge			Fisher's exact value
	Good	Average	Poor	
EDUCATION				0.000*
Primary	06	05	04	
Middle School	07	15	07	
Secondary	15	23	10	
Higher secondary	22	15	05	
Graduate	25	12	01	
Post Graduate	11	0	0	
PER CAPITA INCOME (in Rs.)				0.003*
0-1288	09	15	05	
1289-2577	16	18	10	
2578-4295	09	17	05	
4296-8591	30	14	06	
≥ 8592	22	06	01	
NUMBER OF CHILDREN UNDER FIVE YEARS OF AGE				0.069
1	72	54	26	
2	14	16	01	
SOURCE OF WATER				0.25
Underground	13	11	03	
PHE	66	58	22	
Private	02	01	02	
Both (Underground and PHE)	05	0	0	

Table 2(b): Depicts that there is significant association between knowledge with the educational qualification of the mothers (p=0.000) and per capita income (p=0.003) of the family indicating that higher educational qualifications and income of the family may influence the mothers' knowledge.

Discussion

The study reveals out of 183 mothers, about 86 mothers (47%) have good knowledge regarding diarrhoea and its prevention and management. And for practice, 139 mothers (76%) have adequate practice and 44 mothers (24%) have inadequate practice regarding diarrhoea and its prevention and management. It is also found that,

education of the mothers ($p=0.000$) and per capita income ($p=0.003$) of the family is associated with the knowledge regarding diarrhoea and its prevention and management. Similar study was conducted by Gollar LH, Avabratha KS. Knowledge, Attitude and Practice of mothers of under-five children regarding diarrhoeal illness in Mangaluru, coastal Karnataka reveals that most of the mothers (84%) had good knowledge regarding diarrhoeal sign and symptoms, spread and prevention and most (76%) of the mothers practice good dietary and preventive measure during diarrhoeal episodes.

Conclusion

The study reveals that most of the mothers have good knowledge and adequate practice regarding diarrhoea and its prevention and management. The study also shows that the education of the mothers and per capita income of the family may impact the knowledge of mothers regarding diarrhoea and its prevention and management.

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