

A Descriptive Study to Assess the Knowledge Regarding Diarrhea and its Management among the Mothers of Under Five Children with a view to Develop an Information Booklet in Selected Areas under Hajo BPHC, Kamrup, Assam

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Abstract: ***Background:** Diarrhea is one of the commonest cause of mortality and morbidity among young children in developing countries as well as low-income countries. Worldwide, diarrhea is the second most common cause of mortality and morbidity among under five children. **Methods:** The research approach used in the study was descriptive quantitative approach. Descriptive survey research design was adopted for the study. A total of 114 mothers of under five children were selected by multistage random sampling technique. Data were collected by using structured interview schedule. **Results:** Out of 114 mothers, majority (64.9%) of the mothers had moderately adequate knowledge, 18.4% mothers had adequate knowledge and 16.7% mothers had inadequate knowledge. The overall mean found to be 18.17 with standard deviation as ± 3.99 . There was a significant association between the level of knowledge with selected demographic variables such as age of the mother, educational qualification of the mother, family income per month and number of children. **Conclusions:** Majority of the mothers had moderately adequate knowledge regarding diarrhea and its management. Health education to the mothers should be used as an effective tool to promote knowledge and practices regarding prevention and management of diarrhea in under five children.*

Keywords: Assess, knowledge, diarrhea, Information booklet

1. Introduction

Children are the most vital population in the society. The birth of a child is unique and by far the most marvellous phenomenon. As the saying goes “child is the future of both the family and society”. Worldwide, the most common causes of acute gastroenteritis are infectious agents, viruses, bacteria and parasites. Rotavirus is the most important cause of serious gastroenteritis among children, with 28% of all cases causing fatality. Diarrhea is defined as a change in consistency and frequency of stools, i.e., liquid or watery stools, that occur more than three times a day. If there is associated blood in the stools, it is termed dysentery. Rotavirus is the most common cause of diarrhea associated hospitalization, with an estimated 2.3 million hospitalizations occurring worldwide in children younger than 5 years.¹

Since 1990, diarrhea has been listed as one of the top ten causes of mortality and disability-adjusted life-years for persons in all age groups, and 1 of the 5 leading causes of mortality and disability-adjusted life-years among children aged <5 years. In 2016, diarrhea caused a total of 1,655,944 deaths, including 446,000 deaths in children aged <5 years. The leading risk factors for diarrhea were childhood wasting (low weight for height score), unsafe water, and poor sanitation; these risk factors were responsible for 80.4%, 72.1% and 56.4% of diarrhea related deaths in children aged <5 years, respectively.²

According to WHO (2017), diarrhea disease is the second most leading cause of death in under five children. Each year diarrhea kills around 5,25,000 under five children. Globally, there are nearly 1.7 billion cases of childhood diarrheal disease every year. It is the leading cause of malnutrition in under five children. A significant proportion of diarrheal disease can be prevented through safe drinking water and adequate sanitation and hygiene.³

According to article published in The Telegraph on June 2018, Assam reported the second highest cases of acute diarrhoeal disease and enteric (typhoid) deaths in 2017-National Health Profile 2018. In terms of acute diarrhoeal disease, the state reported 1,65,347 cases with 239 deaths.⁴

According to article published in G plus news on June 2019, Assam recorded the highest number of deaths due to diarrhea in 2018. There were 439 cases of deaths due to diarrhea in Assam. In the same year 2,34,578 cases of diarrhea were detected in Assam which was according to report of Central Bureau of Health Intelligence under the Ministry of Health and Family Welfare.⁵

Diarrhea is mainly transmitted because of poor environmental sanitation, ingestion of contaminated food or water, contact with infected soil, utensils, etc. In order to control transmission of diarrhea we need to maintain personal and domestic cleanliness, hygienic food preparation

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and storage, clean and plentiful water supply and sanitary excreta and refuse disposal. After reviewing many literatures, based on incidence and mortality rate of diarrhea, inadequate knowledge on preventive measures and management of diarrhea, it is found that awareness and information should be provided to the mothers of under five children.

As the mothers are primary caregivers, so the investigator felt the need for assessing the knowledge of mothers regarding diarrhea and its management and also preparing an information booklet which will be beneficial for the mothers in prevention of diarrhea among under five children.

1.1. Statement of the Problem

“A descriptive study to assess the knowledge regarding diarrhea and its management among the mothers of under five children with a view to develop an information booklet in selected areas under Hajo BPHC, Kamrup, Assam.”

1.2. Objectives of the study

Objectives of the study were formulated to:

- 1) Assess the level of knowledge regarding diarrhoea and its management among the mothers of under five children in selected areas under Hajo BPHC, Kamrup, Assam.
- 2) Find out the association between the level of knowledge and selected demographic variables, e.g.- age of the mother, educational qualification of the mother, occupation of the mother, family income, religion, type of family, number of children and sources of information regarding diarrhea and its management.
- 3) Develop and validate an information booklet regarding diarrhoea and its management for the mothers of under five children.

2. Review of Literature

Review of literature has been presented under following headings:

Studies related to prevalence of diarrhea among under five children

Mihret YA (2020) conducted a study to assess the prevalence and factors associated with diarrhea among under five children in Ethiopia. The study used data from 2016 Ethiopia demography and health survey. Findings of the study revealed that the prevalence of diarrhea among under-five children was 825 children out of 5,335 in Ethiopia. Based on the chi square test; region, currently pregnant mothers, child lives with whom and source of drinking water were significantly associated with the prevalence of diarrhea among the under five children. It was also found that the odds of diarrheal diseases among children for taking protected water were lower than unprotected (unsafe) water. The study concluded that child who was taking protected water, and child living with his or her family was highly appreciated for reducing the prevalence of diarrhea among the under five children.⁶

Studies related to knowledge regarding diarrhea among the mothers

Saha N (2021) assessed the knowledge and practice of mothers of under five children regarding management of diarrhea with home available fluid. A non-experimental research survey approach was used and descriptive research design was adopted. 100 mothers from ICDS Centre were selected by purposive sampling technique. Structured questionnaire was used for assessment of knowledge and stated practice. Results showed that majority (45%) of the respondents had good knowledge and few had (28%) very good knowledge. In stated practice approximately 48% of respondents were average and 18% showing very good practices. The association between knowledge and demographic variables found to be Significant. The study concluded that though the mothers of under five children had good knowledge score but average stated practice score regarding management of diarrhea with home available fluid. If health education could be correctly provided to the specific target group (mothers, guardians) regarding all the rules of home management, the situation can be improved.⁷

Studies related to information booklet on diarrhea

Joyce A et al (2020) performed a study to assess the effectiveness of an information booklet on knowledge of mothers regarding care and prevention of diarrhoeal disease among children between 0-5 years of age admitted in people's hospital Bhanpur, Bhopal. The sample size for the study was 50 mothers of under five children. Qualitative approach was used in the study. The study findings revealed that majority (40%) of the mothers belonged to the age group of 26-30 years, most (90%) of the mothers were housewife, 38% mothers had education up to higher secondary level, 28% mothers had education upto primary school level, 26% mothers were graduate and above and remaining 8% were illiterate. In pretest majority (98%) of the mothers had average knowledge, only 2% mothers had poor knowledge. The mean and SD score was 11.62 and 1.87 respectively. Post-test knowledge score revealed that majority (100%) of the mothers had good knowledge with mean score 17.76 and SD 0.84.⁸

3. Methodology

A descriptive quantitative approach was used and descriptive survey design was adopted for the study. A total of 114 mothers of under five children were selected by multistage random sampling technique; samples were drawn by using kth number from 10 selected villages of five selected sub centres. Structured interview schedule was used to assess the knowledge regarding diarrhea and its management among the mothers of under five children. The reliability of structured interview schedule was tested by Spearman-Brown split half method. The validity of the tool and information booklet was established in consultation with the guide and experts from the field of Pediatric Medicine and Pediatric Nursing. Approval to conduct the study was obtained from the Institutional Ethics Committee. The purpose of the study was explained and written consent was obtained from the study participants prior data collection. Information booklet on diarrhea for mothers of under five children was developed by keeping in mind the specific objectives to be achieved, learner's capacity to absorb

information and was distributed to the mothers at the end of interview schedule. Descriptive and inferential statistics were used for analysis of the data. Pearson's chi-square test was used to find out the association between the level of knowledge and selected demographic variables.

3.1. Sampling criteria

Inclusion criteria:

- Mothers who were willing to participate in the study.
- Mothers who were available during data collection.

Exclusion criteria:

- Mothers who were seriously ill.
- Mothers who were health personnel.

3.2. Variables

The variables for the study consisted of:

- Research variable: knowledge of mothers of under five children regarding diarrhea and its management.
- Demographic variables: age of the mother, educational qualification of the mother, occupation of the mother, family income, religion, type of family, number of children and sources of information regarding diarrhea and its management.

4. Results

The data were analyzed by using descriptive and inferential statistics. Analysis of the study findings were organized, classified and presented under the following sections:

n=114

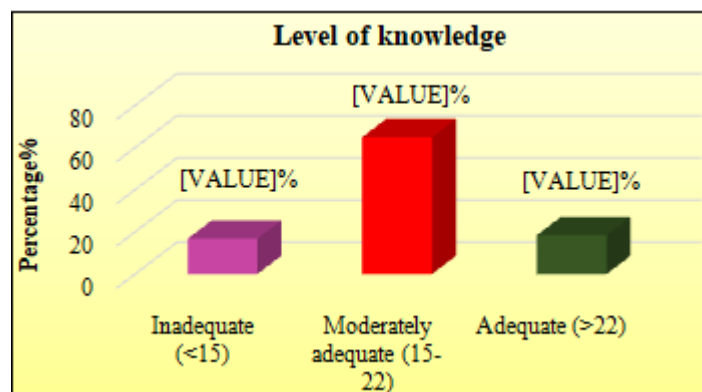


Figure 1: Bar diagram showing the Level of Knowledge of Mothers regarding Diarrhea and its Management.

Section III: Association between the level of knowledge regarding diarrhea and its management among the mothers of under five children with selected demographic variables

The association between the level of knowledge regarding diarrhea and its management and selected demographic variables was assessed by using Pearson's chi-square test. The study finding showed that there was a significant

Section I: Frequency and Percentage distribution of mothers according to Demographic Variables

The study results showed that maximum number i.e., 62 (54.4%) out of 114 mothers belonged to the age group 25-30 years. For the education, maximum number i.e., 30 (26.3%) had passed high school level. For the occupation, majority number i.e., 91 (79.8%) out of 114 mothers were housewives. Out of 114 mothers, the maximum number i.e., 81 (71.1%) had monthly income of the family of Rs. 10,002-Rs. 29,972. Majority number i.e., 84 (73.7%) belonged to Hindu religion and minimum number i.e., 30 (26.3%) belonged to Islam religion. Out of 114 mothers, maximum number i.e., 82 (71.9%) belonged to nuclear family. Majority of mothers i.e., 59 (51.8%) had two children. Maximum number i.e., 41 (36%) mothers reported source of information regarding diarrhea and its management as health personnel.

Section II: Assessment of the level of knowledge regarding diarrhea and its management among the mothers of under five children

Out of 114 mothers, majority number i.e., 74 (64.9%) had moderately adequate knowledge regarding diarrhea and its management, followed by 21 (18.4%) mothers had adequate knowledge and the minimum number i.e., 19 (16.7%) mothers had inadequate knowledge. The overall mean found to be 18.17 with standard deviation as ± 3.99 . Thus, findings indicated that there was moderately adequate knowledge regarding diarrhea and its management among the mothers of under five children.

association between the level of knowledge and age of the mother, educational qualification of the mother, family income per month and number of children. On the contrary, there was no significant association between the level of knowledge and occupation of the mother, religion, type of family and sources of information regarding diarrhea and its management. The findings are depicted in Table No. 1.

Table 1: Association between the Level of Knowledge regarding Diarrhea and its Management and selected demographic variables, n= 114

Demographic Variables	Level of Knowledge				χ^2	df	p-value	Remark
	Inadequate	Moderately adequate	Adequate	Total				
Age of the mother								
19-24 years	10	10	0	20				
25-30 years	8	47	7	62	36.43	4	<0.001	S
Above 30 years	1	17	14	32				
Educational qualification of the mother								
Illiterate	4	1	0	5				
Primary school passed	7	5	0	12				
Middle school passed	3	15	1	19	67.83	10	<0.001	S
High school passed	3	24	3	30				
Higher secondary passed	2	22	4	28				
Graduate and above	0	7	13	20				
Occupation of the mother								
Housewife	19	59	13	91				
Daily wage earner	0	2	0	2				
Self employed	0	6	3	9	13.89	8	0.085	NS
Private sector employee	0	4	1	5				
Government employee	0	3	4	7				
Family income per month								
≤ Rs. 10,001	12	6	1	19				
Rs. 10,002- Rs. 29,972	7	58	16	81	36.65	4	<0.001	S
Rs. 29,973- Rs. 49,961	0	10	4	14				
Religion								
Hindu	13	53	18	84	2.00	2	0.368	NS
Islam	6	21	3	30				
Type of family								
Nuclear	18	48	16	82				
Joint	0	10	3	13	7.76	4	0.101	NS
Extended	1	16	2	19				
Number of children								
One	12	33	2	47				
Two	7	37	15	59				
Three	0	4	3	7	17.90	6	0.006	S
More than three	0	0	1	1				
Source of information regarding diarrhea and its management								
Health personnel	9	26	6	41				
Friends	1	5	1	7				
Relatives	3	5	0	8	22.56	14	0.068	NS
Neighbours	4	6	1	11				
New paper	0	2	3	5				
Magazine	0	1	2	3				
Television	1	13	4	18				
Internet	1	16	4	21				

Section IV: Development and validation of an information booklet regarding diarrhea and its management for the mothers of under five children.

Information booklet regarding diarrhea and its management for the mothers of under five children was developed on the basis of objectives of the study and conceptual framework. The information booklet was modified and prepared as per suggestions and advice by the experts and consultation with guide. The content was made simple, clear, understandable and interesting so that it would be suitable for the mothers of under five children which were the target population of the study. Information booklet was distributed to the mothers after completion of the interview session as it would help the mothers in improving and gaining knowledge regarding diarrhea and its management.

The information booklet was developed under the following headings:

- Introduction to diarrhea
- Definition of diarrhea
- Causes of diarrhea
- Mode of transmission of diarrhea
- Risk factors/predisposing factors of diarrhea
- Signs and symptoms of diarrhea
- Management of diarrhea
- Prevention of diarrhea.

5. Discussions

The findings of the present study revealed that majority number i.e., 74 (64.9%) out of 114 mothers had moderately adequate knowledge regarding diarrhea and its management, followed by 21 (18.4%) mothers had adequate knowledge

and the minimum number i.e., 19 (16.7%) mothers had inadequate knowledge.

Similar study was conducted by **Muniyandi S, Komathi V (2018)**⁹ in selected hospital of Mehsana, Gujarat, which was to assess the level of knowledge regarding prevention and management of diarrhea among mothers of under five children. The findings of the study revealed that majority (74%) mothers had good knowledge, followed by 16% mothers had poor knowledge and remaining 10% mothers had good knowledge regarding prevention and management of diarrhea.

The findings of the present study showed that there was a significant association between the level of knowledge and age of the mother, educational qualification of the mother, family income per month and number of children. On the contrary, there was no association between the level of knowledge and occupation of the mother, religion, type of family, sources of information regarding diarrhea and its management.

Similar study was conducted by **Raj N (2016)**¹⁰ in selected villages of Waghodia Taluka among the mothers of under five children showed association between the level of knowledge and educational status of the mother.

The present study was consistent with the study conducted by **Alli R (2011)**¹¹ conducted in Kadaperi, Tamilnadu where study findings showed that the level of knowledge had a significant association with age and number of children.

6. Conclusions

The present study was conducted to assess the knowledge regarding diarrhea and its management among the mothers of under five children with a view to develop an information booklet in selected areas under Hajo BPHC, Kamrup, Assam. The study findings showed that majority of the mothers had moderately adequate knowledge regarding diarrhea and its management. The level of knowledge was significantly associated with demographic variables, such as age of the mother, educational qualification of the mother, family income per month and number of children. As the mother in the family occupies pivotal role, providing education and health awareness to the mothers will facilitate high standard of living. Health education to the mothers should be used as an effective method to promote knowledge and practices regarding prevention and management of diarrhea in under five children and health care professionals should develop various effective programs to help the mothers in improving their knowledge regarding diarrhea and its management.

7. Recommendations

- Similar studies can be conducted in different settings.
- A comparative study can be conducted among mother of under five children in urban and rural community.
- The same type of study can be conducted including fathers and the knowledge of both can be compared.
- An evaluative study can be conducted to observe effectiveness of structured teaching programme on

diarrhea and its management among mothers of under five children.

- The same study can be undertaken with larger sample so that findings can be generalized.
- An exploratory study can be conducted to find out factors responsible for inadequate knowledge level of mothers regarding diarrhea and its management.
- Studies can be undertaken based on observational method to assess the practices of mothers regarding home management of diarrhea in children.

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