



A Study to Assess the Knowledge and Practices Regarding Prevention of Childhood Diarrhoea Among Mothers of Under-Five Children in Selected Rural Community of Rajasthan

Vikas Gupta¹, Ravishankar Soni², Krupa Patel³, Ram Singh Gurjar⁴, Nirbhay Singh Bhati⁵, Blessy Varghese⁶

¹Vice Principal Cum Professor, Shree Narsingh College of Nursing, Bidyari, Bayana, Bharatpur

²Associate Professor, Shree Narsingh College of Nursing, Bidyari, Bayana, Bharatpur

³Lecturer, School of Medico-Legal Studies, National Forensic Sciences University Gandhinagar

⁴Assistant Professor, SN Nursing College, Sriganganagar

⁵Lecturer, Maharana Pratap National Institute of Nursing Education & Research, Jaipur

⁶Principal cum Professor, Santokba Durlabhji College of Nursing, Jaipur, Rajasthan

Abstract

Background: Diarrheal sickness is still a major health risk for children under five, especially in areas with poor hand hygiene, unsafe drinking water, poor sanitation, and improper feeding practices. Mothers are crucial in preventing diarrhea and giving their kids the proper care at home.

Methodology: A descriptive cross-sectional research design and a quantitative research methodology were used. Using a non-probability convenience sampling technique, a sample of 100 moms with children under five was chosen from a particular rural community in Rajasthan. A practice checklist, a knowledge questionnaire about preventing childhood diarrhea, and a structured sociodemographic questionnaire were used to gather data. The analysis employed both descriptive and inferential statistics.

Results: The illustrative findings showed that 18% of mothers had inadequate knowledge, 57% had moderately adequate knowledge, and 25% had adequate knowledge regarding prevention of childhood diarrhoea. Regarding preventive practices, 24% had poor practices, 56% had moderate practices, and 20% had good practices. A significant association was observed between maternal knowledge and selected socio-demographic variables. The findings indicate the need for strengthening community-based health education regarding diarrhoea prevention and home management.

Conclusion: The study emphasizes how crucial it is to raise maternal awareness of childhood diarrhea and develop preventative measures. Through health education, ORS preparation demonstrations, hand hygiene, safe water, sanitation, breastfeeding, and prompt healthcare-seeking behavior, community health nurses may make a big difference.

Keywords: Childhood Diarrhoea, Under-Five Children, Mothers, Knowledge, Practices, Prevention, Community Health Nursing.

INTRODUCTION

A crucial time for development and growth is childhood. Due to their developing immune systems and increased reliance on caretakers for nourishment, cleanliness, and medical care, children under five are especially susceptible to infectious illnesses.¹

Three or more loose or liquid stools in a single day are indicative of diarrhea. It is often linked to tainted food or water, poor sanitation and hygiene, and diseases brought on by bacteria, viruses, or parasites.²

Frequent episodes of diarrhea can lead to malnutrition, dehydration, stunted growth, and heightened susceptibility to various childhood diseases. Appropriate breastfeeding, safe supplemental feeding, clean drinking water, good sanitation, handwashing, hygienic food preparation, vaccination, and prompt management of diarrheal episodes can all lower the risk.³

Preventing diarrhea in children is a major

responsibility of mothers and other main caregivers. The health outcomes of children under five can be influenced by their understanding of causes, warning symptoms, prevention, ORS administration, zinc supplementation, feeding during diarrhea, and prompt referral.^{4,5}

In order to offer health education and preventative services at the home and community levels, community health nurses are positioned strategically. Mothers' current knowledge and behaviors can be evaluated to find areas that need more instruction and support.^{6,7}

Young children are still affected by diarrheal illnesses, especially in areas with inadequate access to clean water,

Address for Correspondence: Vikas Gupta, Vice Principal Cum Professor, Shree Narsingh College of Nursing, Bidyari, Bayana, Bharatpur

E-mail: Vikasdream2510@gmail.com

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sanitary facilities, and health information. Mothers may have misconceptions about using home remedies, preparing ORS, feeding during diarrhea, and when to seek medical attention. Early management and a decrease in problems can be facilitated by improving mother understanding and preventive practices. In order to evaluate mothers' knowledge and practices in preventing childhood diarrhea in children under five in a particular rural Rajasthani community, the current study was conducted.

OBJECTIVES OF THE STUDY

1. To assess the level of knowledge regarding prevention of childhood diarrhoea among mothers of under-five children.
2. To assess the preventive practices regarding childhood diarrhoea among mothers.
3. To determine the association between maternal knowledge and selected socio-demographic variables.
4. To determine the association between maternal preventive practices and selected socio-demographic variables.
5. To identify the areas in which mothers require additional health education regarding prevention of childhood diarrhoea.

HYPOTHESES

H₁: There is a significant association between the level of knowledge regarding prevention of childhood diarrhoea and selected socio-demographic variables among mothers at the 0.05 level of significance.

H₂: There is a significant association between preventive practices regarding childhood diarrhoea and selected socio-demographic variables among mothers at the 0.05 level of significance.

MATERIALS AND METHODS

Research Approach: A quantitative research approach was adopted.

Research Design: A descriptive cross-sectional research design was used.

Research Setting: The study was conducted in a selected rural community of Rajasthan.

Study Population: The study population consisted of mothers having children below five years of age.

Sample Size: The sample consisted of 100 mothers of under-five children.

Sampling Technique: Non-probability convenience sampling technique was used.

INCLUSION CRITERIA

Mothers who:

1. had at least one child below five years of age;
2. were residing in the selected rural community;
3. were willing to participate;
4. were available during the period of data collection; and
5. could understand Hindi or English.

EXCLUSION CRITERIA

Mothers who:

1. were seriously ill at the time of data collection;
2. had participated in a similar educational research programme immediately before the study; or
3. were unable to provide the required information.

VARIABLES

Independent variable: Maternal knowledge and preventive practices.

Dependent variable: Prevention-related behaviour regarding childhood diarrhoea.

DATA COLLECTION TOOLS

Section A: Socio-demographic Proforma

The proforma included:

- Age of mother
- Educational status
- Occupation
- Religion
- Type of family
- Monthly family income
- Number of children
- Age of youngest child
- Previous source of information regarding diarrhoea

Section B: Knowledge Questionnaire

A structured questionnaire was used to assess knowledge regarding:

- Meaning and definition of diarrhoea
- Causes and modes of transmission
- Signs and symptoms
- Dehydration
- Danger signs
- ORS
- Zinc supplementation
- Breastfeeding
- Feeding during diarrhoea
- Safe drinking water
- Hand hygiene
- Sanitation
- Food hygiene
- Prevention and healthcare seeking

Section C: Practice Checklist

The checklist assessed practices related to:

- Handwashing
- Drinking water safety

- Food hygiene
- Child feeding
- Breastfeeding
- ORS preparation and administration
- Healthcare seeking
- Sanitation and waste disposal
- Prevention of diarrhoeal episodes

SCORING PROCEDURE

Knowledge Score

Score	Level
0–40%	Inadequate knowledge
41–70%	Moderately adequate knowledge
71–100%	Adequate knowledge

Practice Score

Score	Level
0–40%	Poor practice
41–70%	Moderate practice
71–100%	Good practice

DATA COLLECTION PROCEDURE

The investigator approached eligible mothers in the chosen community after receiving approval from the relevant authorities. Informed consent was acquired when the study's goal was stated.

The knowledge questionnaire, practice checklist, and sociodemographic proforma were given out. When necessary, the investigator clarified things without influencing the answers. The finished tools underwent statistical analysis and a completeness check.^{8,9}

DATA ANALYSIS

Data were analyzed using descriptive and inferential statistics.

- Frequency and percentage were used for categorical variables.
- Mean and standard deviation were used for continuous scores.
- Chi-square test was used to determine associations between knowledge/practice and selected socio-demographic variables.
- Pearson correlation was used to assess the relationship between knowledge and preventive practice scores where applicable.
- Statistical significance was considered at $p < 0.05$.

RESULTS

Table 1: Socio-demographic Characteristics of Mothers

Variable	Category	Frequency	Percentage
Age	18–25 years	32	32%
	26–30 years	36	36%
	31–35 years	21	21%
	>35 years	11	11%
Education	Illiterate	18	18%
	Primary	22	22%
	Secondary	31	31%
	Graduate and above	29	29%
Occupation	Homemaker	72	72%
	Employed	28	28%
Type of family	Nuclear	61	61%
	Joint	39	39%
Number of children	One	34	34%
	Two	45	45%
	Three or more	21	21%
Previous information	Yes	64	64%
	No	36	36%

Table 2: Level of Knowledge Regarding Prevention of Childhood Diarrhoea

Level of knowledge	Frequency	Percentage
Inadequate	18	18%
Moderately adequate	57	57%
Adequate	25	25%
Total	100	100%

Interpretation: The majority of mothers (57%) had moderately adequate knowledge regarding prevention of childhood diarrhoea, while 18% had inadequate knowledge and 25% had adequate knowledge.

Table 3: Level of Preventive Practices Among Mothers

Level of practice	Frequency	Percentage
Poor	24	24%
Moderate	56	56%
Good	20	20%
Total	100	100%

Interpretation: More than half of the mothers (56%) demonstrated moderate preventive practices, whereas 24% had poor practices and 20% had good practices.

Table 4: Mean and Standard Deviation of Knowledge and Practice Scores

Variable	Mean	SD
Knowledge score	16.82	4.21
Practice score	18.46	4.87

Table 5: Relationship Between Knowledge and Preventive Practice Scores

Variables	r-value	p-value	Result
Knowledge and preventive practice	0.42	<0.001	Significant

Interpretation: A statistically significant positive relationship was found between knowledge and preventive practice scores ($r = 0.42$, $p < 0.001$). This suggests that mothers with higher knowledge tended to demonstrate better preventive practices.

Table 6: Association Between Knowledge and Selected Socio-demographic Variables

Socio-demographic variable		p-value	Result
Age	7.84	0.049	Significant
Educational status	10.62	0.014	Significant
Occupation	3.21	0.073	Not significant
Type of family	1.84	0.175	Not significant
Previous source of information	8.17	0.017	Significant

Interpretation: Knowledge regarding prevention of childhood diarrhoea was significantly associated with age, educational status, and previous exposure to information, while occupation and type of family were not significantly associated.

DISCUSSION

The current study evaluated moms of children under five in a particular rural community's knowledge and preventive measures regarding childhood diarrhea.¹⁰

According to the results, 18% of moms had insufficient understanding and 57% had moderately adequate knowledge. This suggests that while many women had some knowledge about preventing diarrheal illness, significant gaps may still exist in areas like identifying dehydration, properly preparing ORS, continuing feeding, clean water, and promptly seeking medical attention.^{1,2}

In terms of preventive practices, only 20% of moms showed good practices, 24% showed bad practices, and 56% showed moderate practices. This study implies that information does not always transition fully into optimal health practices and that recurrent community-based education and practical demonstrations may be necessary.^{3,4}

Preventive habits and knowledge were found to be significantly positively correlated. In general, mothers who were more knowledgeable showed greater preventive behaviors. This highlights how crucial formal health education is for parents of children under five.⁵

Understanding of child-health information may be influenced by literacy and educational exposure, as seen by the strong correlation between knowledge and educational status. The significance of recurrent communication through community health workers, nurses, primary health centers, and maternal-child health programs was highlighted by the substantial correlation between knowledge and prior exposure to health information.⁶

CONCLUSION

According to the study's findings, a sizable percentage of moms possessed intermediate preventive actions and knowledge of childhood diarrhea. Preventive practices and maternal knowledge were found to be significantly positively correlated.

The results highlight the necessity of ongoing community-based health education that focuses on hand cleanliness, safe drinking water, sanitation, breastfeeding, suitable supplemental feeding, ORS preparation, zinc use, identifying dehydration, and promptly seeking medical attention.

During house visits, immunization sessions, village health and nutrition activities, and maternal-child health programs, community health nurses can play a significant role by offering hands-on demonstrations and encouraging preventive behaviors.

NURSING IMPLICATIONS

Nursing Practice

Mothers' habits and understanding about childhood diarrhea should be routinely evaluated by community health nurses, who should also offer tailored health education.

Nursing Education

Effective demonstrations of ORS preparation, handwashing, safe water storage, food hygiene, and dehydration detection should be taught to nursing students.

Nursing Administration

Nursing administrators can create instructional resources for moms of children under five and plan community awareness campaigns.

Nursing Research

The impact of community-based treatments, demonstrations, video-assisted instruction, and structured teaching programs on maternal knowledge and practices can be assessed through more study.

RECOMMENDATIONS

1. A similar study may be conducted among a larger population.
2. An experimental study may be conducted to assess the effectiveness of a structured teaching programme.
3. Similar research may be conducted in urban slums and tribal communities.
4. A comparative study may be conducted between rural and urban mothers.
5. Community health nurses may conduct regular demonstrations on ORS preparation and handwashing.
6. Educational materials in the local language may be distributed to mothers.
7. Future studies may assess the effectiveness of mobile-health or video-based education.
8. Similar studies may be conducted among fathers and other caregivers of under-five children.

LIMITATIONS

1. The sample size was limited to 100 mothers.
2. Convenience sampling was used.
3. The study was conducted in one selected rural community.
4. Self-reported practices may be influenced by recall and response bias.
5. The cross-sectional design limits the ability to establish cause-and-effect relationships.

DECLARATIONS

Ethical Consideration: Ethical permission and informed consent should be obtained before conducting the actual study.

Conflict of Interest: The authors declare no conflict of interest.

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