

# Study on Knowledge, Attitude and Practice of Mothers on the Use of Oral Rehydration Salt (ORS) in Children with Diarrhoea

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## Abstract

This descriptive cross sectional study was carried out among 394 purposively selected mothers in a rural area of Jakigong, Sylhet to study the status of knowledge, attitude and practice of mother on Oral Rehydration Salt (ORS) in diarrhoea. Data were collected by face to face interview by using a semi structured questionnaire. About 68.3% mothers defined diarrhoea appropriately and majority (88.8%) of the respondents used ORS till diarrhea cure. Among the respondents majority (93.4%) said right answer and rest (6.4%) of them gave wrong answer regarding amount of water use for ORS preparation. About 16.5% used boiled cool water, 11.2% used tap water and 72.3% were used tube-well water to dissolve packet ORS. Only 37.6% mothers use ½ liter water bottle for measuring of water. Although 33% knew that the prepared ORS could be used for 6 hours and 28.4% didn't know about it. Most (82.7%) of the mother used handmade ORS when packed ORS were not available. About 95.5% reported that ORS is good in diarrhea and 86% did not stop ORS feeding during diarrhea. About half of the respondents consult with their doctor, 47.7% feed at home and only 1.5% waits when their children suffer from diarrhoea and dehydration. About 58.6% did not stop ORS feeding during vomiting and 41.4% stopped it during vomiting. Among all the respondents 72.1% used anti-diarrheal drug during diarrhea and 27.9% didn't use any drug. Awareness campaigns can improve the use of ORS and can pay regular visits by the health workers can improve knowledge, attitude as well as practice regarding the use of ORS among rural people.

**Keywords:** Diarrhoea, Oral Rehydration Salt (ORS), Knowledge, Attitude, Practice

## Introduction

Diarrhoea, is the condition of having at least three loose or liquid bowel movements each day. It often lasts for a few days and can result in dehydration due to fluid loss. About 1.7 to 5 billion cases of diarrhoea occur per year. It is most common in developing countries, where young children get diarrhoea on average three times a year. Total deaths from diarrhoea are estimated at 1.26 million in 2013 – down from 2.58 million in 1990.<sup>1</sup>

In 2012, it was the second most common cause of deaths in children younger than five (0.76 million or 11%). Frequent episodes of diarrhoea are also a common cause of malnutrition and the most common cause in those younger than five years of age.<sup>2</sup>

Each episode deprives the child of the nutrition necessary for growth. As a result, diarrhoea is a major cause of

malnutrition, and malnourished children are more likely to fall ill from diarrhoea. Diarrhoea can be treated with a solution of clean water, sugar and salt, and with zinc tablets.<sup>3</sup>

The leading cause of death from acute Diarrhoea is the loss of water and essential minerals, which can be compensated in most cases by an oral rehydration solution (ORS).<sup>4,6</sup>

ORS does not stop diarrhoea but replaces the lost fluids and essential salts, thus preventing or treating dehydration. Glucose in the ORS helps intestine absorb the fluid and salts more efficiently. ORS alone is an effective treatment in 90% of the diarrhoea patients. It is on the WHO lists of essential medicines.<sup>7</sup>

## Materials and Methods

This is a Descriptive type of cross sectional study conducted at Jaintapur Upazila health Complex and surrounding areas, Sylhet during the period of October 2017 to March 2018 with a sample size of 394 to study the status of knowledge, attitude and practice of mother on ORS in diarrhoea. The respondents were women having at least one child through purposive sampling technique using a pretested semi structured questionnaire and method was face to face interview. After cleaning, the data were analyzed with the help of SPSS software and presented accordingly.

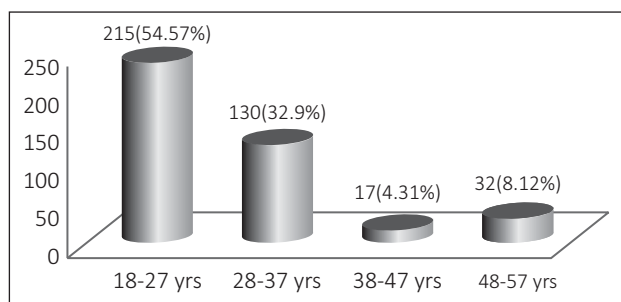
## Results

After analysis data were presented through following table and charts:

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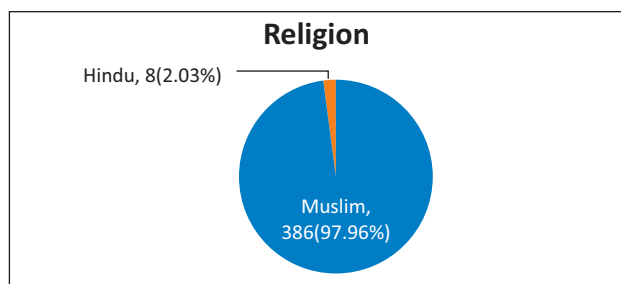
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**Figure 1:** Distribution of the respondents by age group (n=394)

Figure-1 shows that 215(54.57%) respondents were within 18-27 years age group and 32(8.12%) were 48-57 years age group.



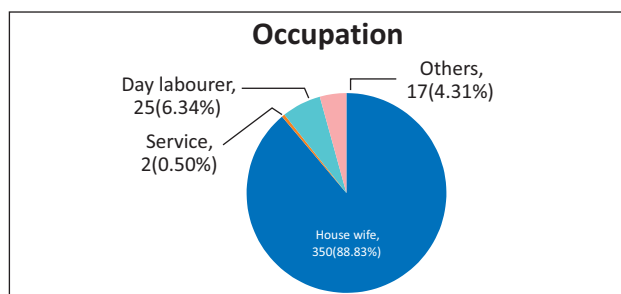
**Figure 2:** Distribution of the respondents by Religion (n=394)

Figure 2 shows that most 386(97.96%) of the respondents were Muslims

**Table 1:** Distribution of the respondents by level of education (n=394)

Level of education	Frequency	Percentage
Illiterate	146	37.1
Primary	148	37.6
Secondary	97	24.6
Bachelor and Above	3	0.7
<b>Total</b>	<b>394</b>	<b>100</b>

Table 1 shows that 148(37.6%) respondents were primary school pass and only 3(0.7%) had bachelor and above level degree.



**Figure 3:** Distribution of the respondents by occupation (n=394)

Figure 3 shows that 350(88.83%) respondents were housewife whereas only 2(0.50%) were service holder.

**Table 2:** Distribution of the respondents by number of the children in their family

No of the children	Frequency	Percentage
1-3	238	60.4
4-7	156	39.5
<b>Total</b>	<b>394</b>	<b>100</b>

Table 2 shows that among all the respondents 238(60.4%) had 1-3 child in their family

**Table 3:** Distribution of the respondents by their knowledge about methods of rehydration (n=394)

Knowledge about methods of rehydration	Frequency	Percentage
Rehydration salt	93	23.6
Anti-diarrheal drug	246	62.4
Glucose	6	1.5
Water	7	1.8
Don't know	42	10.7
<b>Total</b>	<b>394</b>	<b>100</b>

Table 3 shows that 246(62.4%) knew that ORS is an anti-diarrheal drug, 93(23.6%) said it is rehydration salt.

**Table 4:** Distribution of the respondents by their knowledge about diarrhea (n=394)

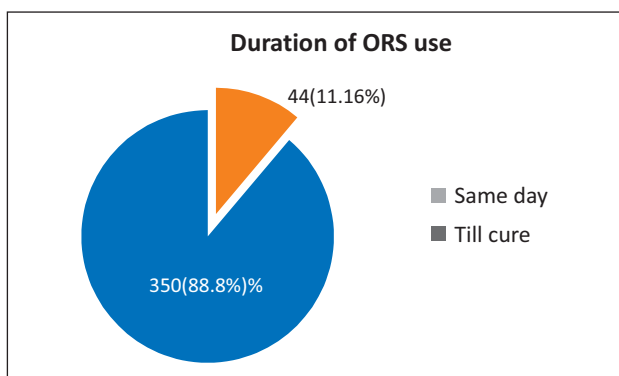
Knowledge about diarrhea	Frequency	Percentage
Loose stools >3/day	269	68.3
Loose stools <3/day	65	16.5
Don't know	60	15.2
<b>Total</b>	<b>394</b>	<b>100</b>

Table 4 shows that most 269(68.3%) of the respondents reported that diarrhoea means passage of loose stools >3 times/day, 65(16.5%) respondents reported passage of loose stools <3 times/day and 60(15.2%) don't know about it.

**Table 5:** Distribution of the respondents by knowledge of correct quantity of water for ORS preparation (n=394)

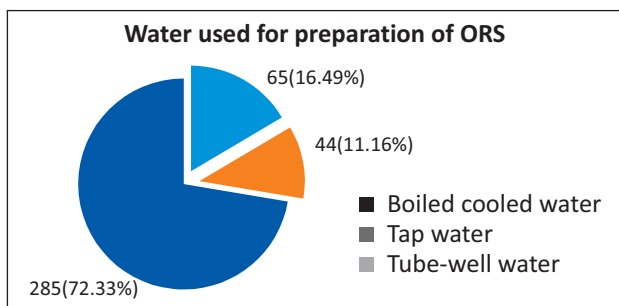
Knowledge of correct quantity of water for ORS preparation	Frequency	Percentage
1 liter	22	5.6
500 ml	368	93.4
Don't know	4	1
<b>Total</b>	<b>394</b>	<b>100</b>

Table 5 shows that 368(93.4%) knew the correct quantity of water (500 ml) for preparation of ORS.



**Figure 4:** Distribution of the respondents by their opinion about duration of ORS use for correction of dehydration (n=394)

Figure 4 shows that majority 350(88.8%) respondent know that ORS should be used till cure of diarrhea.



**Figure 5:** Distribution of the respondents by sources of water using for ORS preparation

Figure 5 shows that majority 285(72.33%) respondents used tube-well water for ORS preparation and 44(11.16%) use tap water.

**Table 6:** Distribution of the respondents by using water measuring tools for preparing ORS (n=394)

Tools for measuring water	Frequency	Percentage
Drinking glass	110	27.9
Drinking mug	136	34.5
½ liter water bottle	148	37.6
<b>Total</b>	<b>394</b>	<b>100</b>

Table 6 shows that for measuring water about 110(27.9%) respondents used drinking glass, 136(34.5%) used drinking mug and 148(37.6%) used ½ liter water bottle.

**Table 7:** Distribution of the respondents by knowledge about duration of using prepared ORS (n=394)

Time	Frequency	Percentage
6 hours	130	33
12 hours	151	38.3
24 hours	1	0.3
Don't know	112	28.4
<b>Total</b>	<b>394</b>	<b>100</b>

Table 7 shows that 38.3% of the respondents new the exact time (within 12 hours) for using ORS, followed by 6 hours (33%) and 28.4% did not know the exact time for using prepared ORS.

**Table 8:** Distribution of the respondents by practice of ORS during diarrhoea (n=394)

Characteristics	Frequency	Percentage
<b>Use handmade ORS when packed ORS is not available</b>		
Yes	326	82.7
No	68	17.3
<b>Measures taking when the child gets diarrhea</b>		
Use drugs	17	4.30
Use drugs and ORS	328	83.25
Use only ORS	49	12.45
<b>Water used for preparing oral saline</b>		
Boiled cooled water	65	16.5
Tap water	44	11.2
Tube well Water	285	72.3
<b>Duration of ORS use</b>		
Till diarrhea is cured	350	88.8
Only on the same day	44	11.2
<b>Have prepared ORS previously</b>		
Yes	337	85.5
No	57	14.5

Table- 8 shows that 326(82.7%) used handmade ORS when packed ORS were not available, 17(4.3%) used drugs, 285(72.3%) use tube-well water and 57(14.5%) had no idea about handmade ORS

**Table 9:** Distribution of the respondents by attitude regarding ORS during diarrhea (n=394)

Characteristics	Frequency	Percentage
<b>Efficacy of ORS</b>		
Good in diarrhea	376	95.5
Useless	10	2.5
No idea	8	2.0
<b>Continuation of ORS during diarrhea</b>		
Do not stop ORS during diarrhea	339	86.0
Stopped ORS if not improved	53	13.5
No idea	2	0.5
<b>Consult doctor during diarrhea</b>		
Consult doctor	200	50.8
Give ORS at home	188	47.7
Only wait	6	1.5
<b>Stopped ORS if there is vomiting</b>		
Continue ORS during vomiting	231	58.6
Stopped during vomiting	163	41.4
<b>Use of anti-diarrhoeal drugs</b>		
Yes	284	72.1
No	110	27.9

Table 9 shows that 376 (95.5%) respondents reported that ORS is good in diarrhea. It also explored that 339(86.0%) did not stop ORS feeding during diarrhea, 200(50.8%) consult their doctor, It was also found that 231(58.6%) did not stop ORS feeding during vomiting and 284(72.1%) used anti-diarrhoeal drugs during diarrhea.

## Discussion

The study population included mothers were within the age group of 18-57 years, majority (54.57%) of them were among 18-27 years age group. More than half (60.4%) of the women had 1-3 children and 88.8% women were housewife. About 37.1% were illiterate and 37.6% studied up to primary level. Most (98%) of the respondents were Muslim. Almost similar findings were observed by Akhtaruzzaman M *et al* in 2015 at Mymensingh.<sup>8</sup>

The study reveals that, more than half (62.4%) of the respondents thought that ORS is anti diarrhoeal drug and only 23.6% respondents had correct knowledge that it is Rehydration salt. Around 85.5% of the respondents prepared packed ORS previously. Similar finding was observed in a study named 'Maternal knowledge, attitude and practices towards diarrhea and oral rehydration therapy in rural Maharashtra' where the results revealed that 90.7% of mothers were aware of ORS but only 60% of mothers practiced it.<sup>9</sup>

The study also shows that majority of the respondents 350(88.8%) used ORS till diarrhea is cured; remaining 11.2% used it only in the same day. It is also revealed that 93.4% knew that exact amount of water needed to prepare ORS. The result shows that 16.5% used boiled cooled water, 11.2% tap water and 72.3% used tube-well water to prepare packet ORS. Similar findings were observed in a study Malawi in the year 2015 by Essomba NE *et al*.<sup>10</sup>

When asked regarding duration of using the packet ORS, more than one third (38.3%) knew that the prepared ORS could be used for 12 hours, 33% used for 6 hours, and 28.4% don't know the exact duration. A very distinct different finding was observed by Muthulakshmi M. and Gopalakrishnan S. in Kancheepuram district, Tamil Nadu, India in the year 2017 where almost 87% of the mothers had a good practice of not storing the ORS for more than 24 hours.<sup>11</sup>

On the inquiry for the substances used other than ORS when it is not available, majority (82.7%) used handmade ORS, 4.3% used drugs and 13% didn't knew about it. Moreover, 58.6% did not stop ORS feeding during vomiting and 41.4% stopped it during vomiting. This result is consistent with the findings of the study conducted by Akrem Mohammad Al-Atrushi *et al*.<sup>12</sup>

## Conclusion

The knowledge and the use of ORS in diarrhoea by the study sample were insufficient. Awareness campaigns can be carried out in order to improve the use of this effective intervention for diarrhoea. The health workers should pay a regular visit to the rural community and knowledge, attitude as well as practice regarding the use of ORS should be improved by health education.

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