

# A Study on Knowledge and Practice of Diarrhoeal Management by Mothers of Children below Five Years of Age in a Rural Area

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**Abstract:- World Health Organization (WHO) has defined diarrhoea as “the passage of three or more loose or liquid stools per day , or more frequently than is normal for the individual”. Diarrhoea is the fifth leading cause of death worldwide and is the leading cause for under five child mortality in developing countries including India. Millennium Developmental Goal (MDG) has specially focused on decreasing the mortality from diarrhoea in under five children. In India mortality of under five children due to diarrhoeal diseases is 18% as per WHO report (2006).**

Mothers basic knowledge about diarrhoea depends on various factors such as educational status, prior experience of managing the disease. The availability of ORS can reduce the mortality and morbidity due to diarrhoea but due to lack of knowledge among mothers and their attitude towards its use, diarrhoea is still a common problem. The mortality of children due to diarrhoea can be reduced when there is better knowledge and practice among mothers. This study is aimed to assess the knowledge and practice on the management of diarrhoea among mothers of under five children.

## I. INTRODUCTION

World health organization (WHO) has defined diarrhoea as “the passage of three or more loose or liquid stools per day, or more frequently than is normal for the individual”[1]. About 1 to 2.5 billion individuals are affected by diarrhoea annually [2]. One in four deaths in children are caused due to diarrhoea (3). One out of ten child in developing country fails to reach five years of age due to diarrhoea (3). Acute diarrhoea is the major type of diarrhoea illness .Diarrhoea is the fifth leading cause of death worldwide and is the leading cause for under five child mortality in developing countries including India. The typical treatment for diarrhoea are oral rehydration therapy (ORT), home prepares solutions, non stop feeding during diarrhoea and continued breast feeding.

In India mortality of under five children due to diarrhoeal diseases is 18% as per WHO report 2006[1]. In the last two decades the mortality due to diarrhea in under

five has reduced. This reduction may be due to correct case management as per standard treatment guidelines recommended by WHO and use of oral rehydration therapy as a key in the management.

One of the main aim of the Millennium Development Goals is to reduce the mortality in under five children due to diarrhoea[1]. To address this issue the ministry of health and family welfare (India) along with the UNICEF has initiated a campaign known as Intensified Diarrhoea Control Fortnight (IDCF). IDCF aims to achieve improved coverage of ORS, zinc dispersible tablets and proper feeding techniques during diarrhoea[4].

The availability of ORS can reduce the mortality and morbidity due to diarrhoea but due to lack of knowledge among mothers and their attitude towards its use, diarrhoea is still a common problem. Mother’s basic knowledge about diarrhoea depends on various factors such as educational status, prior experience of managing the disease. The mortality of children due to diarrhoea can be reduced when there is better knowledge and practice among mothers. This study is aimed to assess the knowledge and practice on the management of diarrhoea among mothers of under five children.

## II. OBJECTIVES

1. To assess the knowledge on management of diarrhoea among mothers of under-five children
2. To study the practice of management of Diarrhoea among mother of under-five children

## III. METHODOLOGY

A cross sectional study was conducted among 151 Mothers who have under five aged children in Meppedu, Tiruvallur district of Tamilnadu from January-March 2019. Simple Random sampling method was employed in this study. The inclusion criteria aremothers of under five children inMeppedu and those who aren't willing to participate in the study were excluded from the study.The study was conducted after getting the approval from the Institutional Ethics Committee.

The respondent was the mothers of under five children. Confidentiality is assured for all the participants and after getting their informed consent, a structured questionnaire was administered to the mothers containing demographic data, questions on knowledge, Attitude and management of diarrhoea in under five children. The answers were entered in a excel sheet and the data was tabulated and analyzed. Data Analysis was done using SPSS version 25. Descriptive statistics was calculated for the background variables. Association between the factors influencing the knowledge and management of the diarrhoea in under five children among mothers was analyzed and chi square was used as a test of significance.

#### IV. RESULTS

##### ➤ Demographic Profile

The study was conducted in 151 mothers of under-five children who are living in Mappedu village.. Out of 151 mothers 53(35.09%) were at the age of 21-25 and 62 (41.05%) were at the age of 26-30. It was found that about 66 (43.7%) mothers had middle school education 55(36.4%) mothers had high school education and 24(15%) mothers were Graduates (Table 1).

In the study it was found that 58(38.4%) of children had diarrhoea within a month. It was found that 43.2% of mothers were not aware of the causes of diarrhoea. It was found that 71(47%) of mothers were not aware of the danger signs of diarrhoea in children. When sanitation is concerned 99 (65.5%) of study population practice open air defecation.

Socio-economic profile	Frequency (%)
<b>Age group</b>	
15-20	8(0.05%)
21-25	53(35.09%)
26-30	62(41.05%)
31-35	22(14.5%)
36-40	6(0.03%)
<b>Educational status</b>	
Illiterate	2(0.01%)
Primary school	3(0.01%)
Middle school	66(43.7%)
High school	55(36.4%)
Graduate	25(16.55%)
<b>Socio-economic status</b>	
Lower	0
Lower middle	136(90%)
Upper lower	0
Upper middle	15(10%)
Upper	0

Table 1:- Socio-Economic profile of the mother of under-five children

##### ➤ Knowledge of Mothers

Out of 151 mothers, 100 (66.2%) knew about the proper definition of diarrhoea. It was found that 43.2% of mothers were not aware of the causes of diarrhoea. According to 119 (78.8%) mothers, diarrhoea is caused by water contamination. It was found that 71(47%) of mothers were not aware of the danger signs of diarrhoea in children. Almost all mothers knew about the Oral rehydration solution and 124 (82%) mothers knew about the preparation of ORS. Knowledge about rota virus vaccination among mothers were very poor, only 1.3% of the mothers knew about the vaccination for Rota virus to prevent diarrhoea. When overall knowledge regarding the Diarrhoea and its management is considered then it is 105 (69.53%) .

##### ➤ Attitude of Mothers

Out of the 151 mothers 87 (57.6%) mothers considers open air defecation causes ill-effects. The percentage of mothers who wash their hands which soap after using toilet is 93(61.5%). Nearly 60 (40%) of mothers have thought their child to wash their hands with soap after using toilet. About 100 (66.2%) of mothers feel that they have to purify water before drinking. Among those mothers almost 90 (59.6%) mothers selected boiling as their method. When breast feeding during diarrhoea is concerned nearly 92 (60.9%) mothers felt that they have to breast feed their baby when the child is having diarrhoea. Only 70 (50%) of mothers think that they have to dispose the sewage water properly. When overall attitude of mothers regarding diarrhoea and its management were concerned, it was found that 99 (65.5%) mothers had good attitude.

##### ➤ Management of Mothers

When the child is suffering from diarrhoea, 78(51.6%) mothers took their child to a private clinic/hospital. About 53(35%) mothers took their child to a primary health centre. When the breastfed baby acquired diarrhoea infection 85(56.2%) mothers continued their breast feeding. Almost all mothers were aware of the ORS solution and gave them to their children when they had diarrhoea. Almost all mothers did not give any antibiotics to their children during diarrhoea.

When sanitation and personal hygiene is considered 99(65.5%) mothers practice open air defecation and their children also does the same. All children were immunized for Rotavirus vaccine. When overall management of diarrhoea is considered, 82 (54.3%) mothers had good management practices.

There is a positive correlation between the educational status of the mother and knowledge of mother about diarrhoea. There is also a positive correlation between the educational status and the management of diarrhoea.(Table 3 and Table 4). Mothers who have completed schooling have better knowledge and practice than the mothers received low education or no education at all.

	A	B
<b>Knowledge of mothers</b>	105(69.53%)	46(30.46%)
<b>Attitude of mothers</b>	99 (65.5%)	52 (34.4%)
<b>Management</b>	82 (54.3%)	68 (45.03%)

Table 2:- Knowledge, Attitude and Management of mothers

A: Good knowledge, B: Poor knowledge

## V. DISCUSSIONS

The present study 'A study on knowledge and practice on the management of diarrhoea among mothers of under five children in a rural area' is based on analysis of 151 mothers who had under five children living in a rural area of Mappedu, Tiruvallur district, Tamilnadu. This study helped to arrive a understanding regarding the knowledge, attitude and management of mother regarding under five children diarrhoea and to findout where they are lacking in knowledge and practice. In the study it was found that 58(38.4%) of children had diarrhoea in the last one month. It was found that 43.2% of mothers were not aware of the causes of diarrhoea. It was found that 71(47%) of mothers were not aware of the danger signs of diarrhoea in children.

Variables	Knowledge	
	X <sup>2</sup>	P value
Educational status	14.202	<b>0.007</b>
Socio-economic status	1.303	0.254

Table 3:- Mother's knowledge regarding causes of diarrhoea (n=151)

In the study conducted by Harmeet Singh Rehan et al[6] and Mukhtar et al[7] showed that the lower education and lower socioeconomic-economic status influenced the knowledge , practice and management of diarrhoea in under five children. In these studies , mothers lack adequate knowledge, practice and management of diarrhoea. Similar results were obtained in this study and there was statistically significant relationships between education and socio-economic status and knowledge,practice and management among mothers.

Variables	Knowledge	
	X <sup>2</sup>	P value
Educational status	11.788	<b>0.019</b>
Socio-economic status	2.817	0.093

Table 4:- Mother's knowledge about danger signs of diarrhoea (n=151)

It was found that out of 151 mothers about 99(65.5%) mothers practice open air defecation and they dispose the child feces in open air. Relation between socio-economic status and practicing open air defecation was calculated and it was found significant (Table 5).

Variables	Practice	
	X <sup>2</sup>	P value
Educational status	20.519	<b>0.000</b>
Socio-economic status	11.372	<b>0.001</b>

Table 5:- Mother's practice regarding using toilet (n=151)

Source of drinking water in the study area was mostly public tap. Hence it is necessary to purify the water before drinking. In this study it was found that 90 (59.6%) mothers purify water before drinking. Boiling was the most common method of purification.

In this study 124(82%) mothers knew the preparation of ORS. They had adequate knowledge in the preparation of ORS and its administration to children affected by diarrhoea. In a study conducted by Rasanian SK et al[8] in New Delhi nearly 69.8% of mothers knew about the preparation of ORS. In a similar study conducted by Mukhtar et al[7] in Nepal most of the mothers lacked the knowledge of preparation of ORS solution. Improper preparation and intake of ORS hampers the prevention and treatment of diarrhoeal disease and contribute to morbidity and mortality. Thus according to this study there is adequate knowledge among mothers regarding the ORS.

Zinc is used in treatment of diarrhoea. Oral supplementation of zinc decrease the course of treatment and reduce the episodes of diarrhoea which helps to decrease the morbidity and mortality. In this study about 43(28.4%) mothers knew about zinc supplementation. Almost all the mothers who administered zinc to their children had consulted the doctor. Similar study such as Rokkappanavar KK et al[4], Padhay S et al[5] only a few percentage of mothers knew about zinc supplementation.

In a study conducted by Padhay S et al[5], it was found that 40% mothers were abusing antimicrobial drugs and were responsible for microbial resistance. In this study almost all mothers recommend not to use any antimicrobial drugs. In this study it was found that more number of mothers visit private clinics/hospitals 78(51.6%) rather primary health centre /government hospitals. Similar findings were reported in study conducted by Harmeet Singh Rehan et al[6]. Promotion of home based ORT should be promoted which helps in early reduction in dehydration even before the visit to doctor.

## VI. CONCLUSION

There is high prevalence of diarrhoea among under five children. There is no adequate knowledge regarding the causes and warning signs of diarrhoea. There is adequate knowledge among mothers regarding the availability of Oral Rehydration Solution. Nearly two third of the population are practicing open air defecation which is a major risk factor for causing diarrhoea. Therefore due consideration has to given to address the problem of open air defecation and awareness should be created to use private toilet and public toilet.

According to WHO anti-diarrhoeal and anti-microbial drugs has very little role in diarrhoea management. Community health education should be done to produce a productive contact between health services and community. Mothers should be educated regarding the causes, danger signs of diarrhoea and feeding during diarrhoea and also regarding the importance of Oral Rehydration Solution.

Mothers have very poor knowledge regarding the vaccination to prevent diarrhoea due to Rota virus. Lack of awareness can lead to improper utilization of health services which are available in the society like abusing of anti-microbial and lack of knowledge regarding the danger signs of diarrhoea. In our study, a strong association was found between educational status and Socio-economic status of mothers and knowledge, practice by them regarding diarrhoea management.

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