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KNOWLEDGE, ATTITUDE AND PRACTICE TOWARDS ORAL REHYDRATION SALT IN AYSAITA TOWN, AFAR REGIONAL STATE, NORTHEASTERN ETHIOPIA

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ABSTRACT: Introduction: Oral rehydration therapy is a life saving intervention to save the lives of children. However, millions of children die every year due to failure to replace body fluid effectively. Therefore, this study was aimed to assess knowledge, attitude and practice (KAP) of care takers towards ORS on the management of diarrhoea among under five children in Aysaita town, Afar Regional State, Ethiopia. **Method:** A community based cross-sectional study was conducted in May, 2016. Data were collected using pretested structured questionnaire. The data were cleaned, coded and entered into EpiData version 3.02 and exported to SPSS version 20 statistical package for analysis. Then descriptive statistics was used to describe the study variables. **Result:** One hundred seventy two (72.9%) of the study children had diarrhoea at least once in their life time. Two hundred twelve (89.8%) of the care takers had defined diarrhoea as passing of three or more watery stool. Furthermore, 164 (69.5%) of the care takers knew at least one danger sign of dehydration. Of 172 study children who had diarrhoea at least once in their life time, 157 (91.3%) had taken ORS solution. **Conclusion:** Although the findings of this study showed good attitude, knowledge and practice regarding Oral rehydration salt in Aysaita district, health institutions in the district should strengthen their effort to provide health education and information regarding Oral rehydration salt.

Keywords: KAP, ORS, Aysaita Town, Afar, Northeastern Ethiopia.

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INTRODUCTION: Diarrhoea is defined as three or more loose /watery stool per day¹. It can last several days and leaves the body without water and salt. Diarrhoea kills around 760,000 children every year, and is the second leading cause of mortality among under five children². Oral rehydration therapy is the cornerstone of fluid replacement.

Oral rehydration solution (ORS) is a glucose-based salt solution used in oral rehydration therapy³. ORS is a liquid preparation developed by WHO which is more physiological, easy to administer, cost effective and needs no sterilization. It is used to prevent dehydration and preserve good nutritional status by maintaining fluid and food intake^{4,5}.

Management of diarrhoea should begin at home, since effective early interventions can reduce complications such as dehydration and poor nutrition. Early home management with ORS will result in fewer office or emergency room visits, hospitalizations, and deaths.

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This type of management is best realized through support and education of mothers by health care personnel at centres that use oral therapy⁶. The recent Ethiopian Demographic and Health Survey showed that 12.7% prevalence of diarrhoea in Afar Regional State. About 40% of children with diarrhoea sought advice or treatment from health facility, and 32.8% mothers use fluid from ORS packet in this region⁷.

Knowledge, attitude and practice of care takers towards ORS are important determinants to diarrheal intervention program. Therefore, this study was aimed to assess knowledge, attitude and practice of care takers towards ORS on the management of diarrhoea in under five children in Aysaita town of Afar Regional State. The findings of this study will be vital for health service providers, policy makers and program managers to design intervention strategies for diarrheal management in the study area.

METHODS:

Study design and participants: Administrative Zone one is one of the five Zones of Afar Region. Based on the 2007 Census, this Zone has a total population of 410,790, of whom 186,134 are women. Nearly twenty percent (20.18%) of population are urban inhabitants and 43.47% are pastoralists. Pastoral and agro-pastoral system of livestock production is the dominant livelihood source in Aysaita district.

A Community based cross sectional study was conducted in May, 2016 at Aysaita town. Aysaita town is the largest town in the Zone which is 655 km far away from Addis Ababa and 65 km from Samara. It has two kebeles. It has a total population of 19,810. From the total population 2,654 of them are estimated to be under five children.

A sample size of 242 was calculated using a single population proportion formula;

$$n = \frac{\left(z \frac{\alpha}{2}\right)^2 p(1-p)}{d^2}$$

Where: n= required sample size.

$z \frac{\alpha}{2}$ = critical value for normal distribution at 95% confidence level which equals to 1.96 (Z value at alpha 0.05).

P= prevalence of diarrhea.

d= an absolute precision.

Assumptions: 4.5% margin of error, 95% confidence level, 12.7% prevalence of diarrhoea in Afar region of Ethiopia⁷, and 10% for non-response.

Sampling technique and procedure: From the two kebeles in the town, one was selected by lottery. From the selected kebele, the sampling interval was determined by dividing the total number of under five children in the selected kebele by the sample size. Then systematic sampling technique was used to select the target households.

At the time of survey, from each household unit one eligible care taker who had a biological child aged less than five years was selected. If there were more than one mother with children aged less than five years in one household unit, one mother with the youngest child was selected. From mothers who had two children aged less than five years, the youngest child was selected as the reference.

Data collection process and Statistical analysis: Data was collected using a pre-tested, structured and interviewer administered questionnaire. The questionnaire was prepared first in English then translated in to Amharic and back to English to check for consistency. The Amharic version of the questionnaire was used to collect the data. The data was collected by five Public Health students. The data collectors were trained for one day on the study instrument, consent form, how to interview and data collection procedure. Then the questionnaire was pretested on one kebele which was not included in the study. Then the pretest amendments on the questionnaire were made accordingly.

The data was checked for completeness and consistencies. Data was cleaned, coded and entered into EpiData version 3.02. Then data were exported to SPSS version 20 statistical package for analysis. Finally descriptive statistics was performed.

Ethical consideration: The study was approved by Public Health department ethical research committee in Samara University. An official letter was written from Public Health department to

Aysaita town administration office. Then permission and support letter was written to the selected Kebele. The participants enrolled in the study were informed about the study objectives, expected outcomes, benefits, the risks associated with it and the right to withdraw from the study at any time they want. Assigned written consent was taken from the participants before the interview. Confidentiality of responses was maintained throughout the study.

RESULTS: Socio-demographic characteristics of the study participant's Two hundred thirty six care takers were included in the study with a response rate of 97.5%. Of these 150(63.6%) were in the age

group of 25-34 years. Two hundred twenty nine (97%) of the care takers were females. Only 21(8.9%) females were head of their households (**Table 1**). Two hundred twenty three (94.5%) of the care takers were mothers of the index children (**Table 2**).

Knowledge of the care takers about diarrhoea and dehydration: One hundred seventy two (72.9%) of the study children had diarrhoea at least once in their life time. Two hundred twelve (89.8%) of the care takers had defined diarrhoea as passing of three or more watery stool per day. Furthermore, 164 (69.5%) of the care takers knew at least one danger sign of dehydration (**Table 3**).

TABLE 1: SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE CARE TAKERS IN AYSAITA TOWN, 2016

Variables	Frequency	Percentage
Age		
15-24	69	29.2
25-34	150	63.6
>35	17	7.2
Mean(\pm SD)	27.26(\pm 5.3) years	
Sex		
Male	7	3
Female	229	97
Ethnicity		
Amhara	126	53.4
Afar	94	39.8
Tigray	4	1.7
Others*	12	5.1
Religion		
Muslim	193	81.8
Orthodox	43	18.2
Educational status		
Non formal education	126	53.4
Formal education	110	46.6
Occupation		
Government employee	27	11.4
Private employee	11	4.7
House wife	189	80.1
Other	9	3.8
Marital status		
Single	3	1.3
Married	221	93.6
Divorced	8	3.4
Widowed	4	1.7
Parity(n=229)		
1	84	36.7
2	63	27.5
\geq 3	82	35.8
Average monthly income		
<1000	78	33.1
\geq 1000	158	66.9
Head of the household		
Husband	215	91.1
Wife	21	8.9

*Oromo, Guraghe

TABLE 2: SOCIO-DEMOGRAPHIC CHARACTERISTICS OF UNDER FIVE CHILDREN IN AYSAITA TOWN, 2016

Variable	Frequency (n=236)	Percentage
Relationship of care takers to the index child		
Mother	223	94.5
Grandmother	7	3.0
Sister	6	2.5
Number of under five children		
1	198	83.9
≥2	38	16.1
Age of the index child		
0-11	49	20.8
12-23	46	19.5
24-35	56	23.7
36-47	39	16.5
48-59	46	19.5
Mean(±SD)	26.22(±15.03) months	
Sex of the index child		
Male	124	52.5
Female	112	47.5

TABLE 3: KNOWLEDGE OF CARE TAKERS ABOUT DIARRHEA AND DEHYDRATION IN AYSAITA TOWN, 2016

Variable	Frequency (n=236)	Percentage
What is diarrhoea?*		
Frequent (≥3) passing of watery stool/day	212	89.8
Greenish stool	38	16.1
Mucus in stool	13	5.5
Frequent passing of non-watery stool	7	3
Blood in stool	6	2.5
What are the causes of diarrhoea?*		
Poor hygiene	191	80.9
Food poisoning	126	53.4
Contaminated water	85	36.0
Teething	47	19.9
Know danger sign of dehydration		
Yes	164	69.5
No	72	30.5
Danger signs of dehydration*		
Lethargic	135	82.3
Sunken eye ball	124	75.6
Unable to drink	36	22.0
Eager to drink	22	13.4

*Multiple answers

Knowledge of care takers about Oral Rehydration Salt (ORS):

All of the care takers heard about Oral Rehydration Salt (ORS). Of these majority of the care takers (78%) heard about ORS from health professionals (Table 4). One hundred thirty nine (58.9%) care takers defined ORS as a solution used to treat dehydration and 97 (41.1%) as a solution used to decrease diarrheal episodes. Most of the respondents (96.6%) knew how to prepare ORS solution: 1 sachet of ORS per one liter of water. In addition, most of the care takers (82.6%) were aware of ORS preservation for 24 hours (Fig. 1).

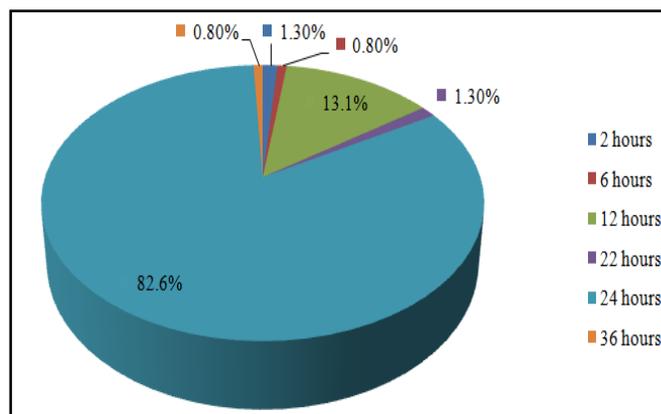


FIG. 1: ORS SOLUTION PRESERVATION TIME (N=236) IN AYSAITA TOWN, 2016

TABLE 4: SOURCE OF INFORMATION OF THE CARE TAKERS ABOUT ORS IN AYSAITA TOWN, 2016

Source of information*	Frequency (n=236)	Percentage
Health professionals	184	78.0
Media	43	18.2
Friends	38	16.1
Health extension workers	3	1.3

*Multiple answers

Attitude of the care takers towards Oral Rehydration Salt (ORS): This study showed that 181 (76.7%) of the study participants thought that ORS is useful to treat diarrheal, and 147 (62.3%) believe that homemade fluids can be used to treat diarrhoea. One hundred eighty four (78%) of the study care takers believe that additional foods should be given when the child had diarrhoea. Moreover, two hundred seven (87.7%) of the respondents believe that not feeding a child during diarrhoea will aggravate the disease.

Practice of care takers to manage diarrhoea: Of 172 study children who had diarrhoea at least once in their life time, 157(91.3%) had taken ORS solution. Of 157 care takers, 143 (91.1%) use drinking water to prepare ORS solution, and 14 (8.9%) use previously boiled and cooled water (Table 5).

TABLE 5: TYPE OF WATER USED TO PREPARE ORS SOLUTION AND FOODS GIVEN WHEN THE INDEX CHILDHAD DIARRHEA, AYSAITA TOWN, 2016

Variables	Frequency	Percentage
Foods given during diarrhoea (n=172)*		
ORS	157	91.3
Rice water	56	32.6
Salt solution	35	20.3
Fruit Juice	31	18.0
Sugar solution	22	12.8
Water used to prepare ORS solution (n=157)*		
Drinking water	143	91.1
Boiled and cooled water	14	8.9
Bottled water	13	8.3

DISCUSSION: Oral Rehydration Therapy is the cornerstone of fluid replacement. One of the components of WHO diarrhoea control Programme is proper knowledge and use of oral rehydration solution ⁸. In Aysaita town, 164(69.5%) of the study care takers knew about danger signs of

dehydration and nearly 97% of the care takers knew about correct preparation of ORS solution. Moreover, the present study showed that about 99.0% of the care takers knew that freshly prepared ORS was fit for consumption within 24 hours only. This is higher compared to findings from Nigeria ⁹.

The present study revealed that most of care takers (89.8%) had defined diarrhoea as passing of watery/loose stool three or more times. This is higher than the findings at Assela town ⁹. Medical consultations were also found to be widespread in Aysaita town. Such treatment-seeking behaviour might be explained by the availability of both public and private health facilities in this urban area.

About 91% of the study children in Aysaita town had got ORS when they had diarrhoea. This was similar to a study done in rural Gujarat where oral rehydration was given for 90.6% of the diarrhoea episodes ¹⁰. However, the finding in Aysaita town was higher compared to the findings from Assela town where 58.2% of the mothers gave ORS while their child had diarrhoea ⁹.

CONCLUSION: The findings in this study showed that majority of the care takers had positive attitude, knowledge and practice regarding Oral rehydration salt (ORS). However, certain lapses are seen in the attitude and knowledge of mothers regarding ORS. Therefore, health institutions in Aysaita district should strengthen their effort to provide health education and information regarding Oral Rehydration Salt.

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