

# Knowledge, Attitude and Practices of Mothers on Home Management of Childhood Acute Watery Diarrhoea in Maiduguri, Borno State, Nigeria.

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## SUMMARY

Diarrhoea still remains one of the leading causes of U-5 morbidity and mortality especially in the developing countries of the world. Major contributor to the mortality and morbidity in acute watery diarrhoea, is dehydration. This cross-sectional study was conducted in October, 2006 by the use of structured interview at Yerwa Primary Health Care Centre, Maiduguri, to assess mothers' knowledge, attitude and practice of home management of acute watery diarrhoea in U-5 children. A total of 80 mothers were interviewed, all mothers had heard of ORS, while 20% of them had good knowledge of home management of acute watery diarrhoea. No significant difference in knowledge of home management was observed in relation to age and parity of the mothers, but significant statistical difference was found between mothers with tertiary education and those with no education. The general attitude of the mothers towards ORS was higher than to other recommended home fluids of home management of acute watery diarrhoea. All, but 6 (7.5%) mothers had used ORS in the past. The non users of ORS were primipara, teenage mothers with no education. A lot of gap still exists in knowledge, attitude and correct practice of home management of acute watery diarrhoea in Maiduguri. Proper education and training of stake holders in HM diarrhoeal disease in our health facilities is therefore recommended.

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## INTRODUCTION

Acute watery diarrhoea (AWD) refers to diarrhoea that begins acutely or suddenly and lasts less than 14 days. Most episodes last less than 7 days and involve the passage of frequent loose or watery stools without visible blood.<sup>1</sup> Diarrhoea is one of the leading courses of illness and death among children in developing countries where an estimated 1.3 billion episodes

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of diarrhoea and 4 million deaths occur each year in under-five (U-5) children world wide and U-5 children experience an average of 3.3 episodes per year of diarrhoea and in some areas the average exceeds 9 per year per U-5 child.<sup>1</sup> In a bulletin of the World Health Organization (WHO), Snyder *et al*,<sup>2</sup> estimated that up to 5 million children die each year of the immediate or long term consequences of diarrhoeal disease.

The main cause of death from AWD is dehydration, and the cornerstone for management of AWD is administration of fluid especially oral rehydration fluid (ORF) which can prevent or correct dehydration.

Home management (HM) of AWD with recommended home fluids (RHF), particularly oral rehydration salt, has significantly reduced the morbidity and mortality associated with AWD.<sup>3,4</sup> However, for HM of AWD to be successful, correct preparation and administration of the fluid is important as wrong preparation of ORS/SSS or administration of fluids not recommended for HM of diarrhoea could be even dangerous.<sup>5</sup>

Other fluids that can effectively function like the WHO/UNICEF ORS or SSS in HM of diarrhoea are plain water, green coconut water, "gari" water, fresh fruit juice diluted with equal amount of clean water, and food based fluids eg rice water, soups, pap etc.<sup>1,4,6-8</sup> Breast milk has a dual function of being food and a home fluid in the management diarrhoea. Although similar studies on diarrhoeal disease have been done in Maiduguri,<sup>9,10</sup> these studies concentrated mainly on ORS/SSS while the other recommended home fluids (RHF) were not given much emphasis, hence the need for the present study.

## METHODS

The study was conducted at Yerwa Primary Health Care Centre (PHCC) in Maiduguri, Borno State, Nigeria in October 2006. Quantitative method by use of structured interview was employed. The interview was conducted through face-to-face interview by a nurse in the local language. The nurse was trained in conducting the interview by the authors. She understood the study objective, sampling procedure and her proficiency verified through a role play. Consecutive mothers (or their substitutes) of U-5 children at the Yerwa PHCC U-5 clinic with complaint of AWD in their children/ward at the time of the study, made the study group. A total of 80 mothers were interviewed.

The knowledge of the mothers in relation to HM of AWD was categorized into the following:

**Good:** Correct preparation and use of ORS, correct knowledge of function of ORS and knows other RHF that can be used in

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HM of AWD.

**Adequate:** Correct preparation and use of ORS, did not know correct function of ORS, and may know other RHF.

**Poor:** Incorrect preparation of ORS with correct or incorrect use of ORS, did not know correct function of ORS, may know other RHF.

**None:** Not heard of HM, could not provide any details about ORS.

The attitude of the mothers towards HM of AWD was divided into very favourable (VFAV), favourable (FAV), undecided (UND), unfavourable (UFAV) and very unfavourable (VUFAV).

**Methods of Analysis.** Data obtained was entered into a computer and analysed using statistical package SPSS version 13.0. Results are presented in tables and percentages. Means and Standard deviations are calculated where necessary. Fisher's Exact probability and  $X^2$ -tests were used to test for difference as appropriate, taking a level of significance at  $< 0.05$ .

### RESULTS.

The age of the mothers ranged from 15 to 45 years. The mean age + SD was 29.67 + 7.89 years. Fifty four (67.5%) mothers had education ranging from primary to tertiary, while 26 (32.5%) had no education. The parity of the mothers ranged from 1-10 with an average parity of 4. The mothers' home management of AWD in relation to their age, levels of education and parity is as shown in table 1.

Only 16 (20%) mothers had good knowledge of HM of AWD, 24 (30%) and 40 (50%) mothers had adequate and poor knowledge of HM of AWD, respectively. No significant statistical difference was obtained between the different age groups as regards knowledge of HM of AWD. No mother in the teenage group or age group  $>40$  years had a good knowledge of HM of AWD.

Fifty per cent, 52% and 45% of the primipara, multipara and grand multipara had poor knowledge of HM of AWD,

**Table 1: Distribution of the Knowledge of Home Management among the Mothers.**

Age Group	Response			Total
	Good	Adequate	Poor	
15-19	0	4	4	8
20-29	6	10	18	34
30-39	10	6	14	30
>40	0	4	4	8
<b>Total</b>	<b>16</b>	<b>24</b>	<b>40</b>	<b>80</b>
Edu. Level				
None	0	6	20	26
Primary	0	6	4	10
Secondary	6	8	8	22
Tertiary	10	4	8	22
<b>Total</b>	<b>16</b>	<b>24</b>	<b>40</b>	<b>80</b>
Parity				
Primi.	0	4	4	8
Multip.	10	14	26	50
Grand M.	6	6	10	22
<b>Total</b>	<b>16</b>	<b>24</b>	<b>40</b>	<b>80</b>

respectively. Mothers' knowledge of HM of AWD did not attain statistical significance as regards to their parity,  $P > 0.05$ .

Pertaining to educational levels, no mother with no education or primary education had good knowledge of HM of AWD. No significant difference was observed between mothers with no education and those with primary education; ( $P = 0.053$ ). However, comparing the knowledge of HM of AWD by mothers with tertiary education and those with no education attained statistical significance; ( $P = 0.005$ ). But such difference was not attained between mothers with primary school education and those with tertiary education ( $X^2 = 0.039$ ,  $p = 0.844$ ).

The mothers' attitude towards HM greatly varied. While 6 (7.5%) and 4 (5%) mothers had unfavourable attitude towards ORS and other RHF, respectively, none had a very unfavourable attitude towards ORS or other RHF in HM of AWD. Favourable and VFAV attitude towards ORS and other RHF among the mothers put together was 92.5% and 60%, respectively. No mother had UND attitude towards ORS, but 35% had UND attitude towards other RHF in the HM of AWD. The undecided response cut across all age groups, parity and educational levels. The unfavourable responses towards other RHF were obtained among mothers with no education. Table II shows the attitude of the mothers towards ORS/other RHF in relation to their age groups, educational level and parity.

The practice of use of ORS among the mothers was very high as all, but 6 (7.5%) had used ORS in the past. Of the 6 that never used ORS 4 (66.6%) were primipara and the other 2 (33.3%) were multipara with 2 children each. All the primipara were teenagers and the multipara were in their 20s. All the 6 of them had no education at all.

**Table 2: Distribution of Mothers' Attitude towards ORS and Other RHF with Respect to their Age Groups, Parity and Levels of Education.**

Age Group (Yrs)	Attitude towards ORS/RHF			
	FAV	UFAV	VFAV	UND
15-19	4/4	0/0	4/0	0/4
20-29	4/14	4/4	8/6	0/12
30-39	12/14	2/0	16/6	0/10
>40	4/2	0/0	2/2	0/2
<b>TOTAL</b>	<b>44/32</b>	<b>6/4</b>	<b>30/16</b>	<b>0/28</b>
Parity Group				
Primipara	4/4	2/2	2/0	0/2
Multipara	30/22	2/2	18/8	0/18
Grand Multip.	10/6	2/0	10/8	0/8
<b>Total</b>	<b>44/32</b>	<b>6/4</b>	<b>30/16</b>	<b>0/28</b>
Educ. Levels				
None	14/14	6/4	6/0	0/8
Primary	8/2	0/0	2/2	0/6
Secondary	14/10	0/0	8/4	0/8
Tertiary	8/6	0/0	14/10	0/6
<b>Total</b>	<b>44/32</b>	<b>6/4</b>	<b>30/16</b>	<b>0/28</b>

Key: Numerator and denominator refers to attitude towards ORS and other RHF, respectively.

## DISCUSSION

The place of fluid in the form of ORS/SSS or other RHF in the management of diarrhoea cannot be over emphasized.<sup>5,11</sup> Although the launching of ORT programme in Nigeria is more than 2 decades now, there is still a lot of gap among mothers in Maiduguri in knowledge and proper use of ORT as reported earlier from Maiduguri and other parts of Nigeria.<sup>12-16</sup> This may be as a result of lack of continued training and education of the mothers about HM of diarrhoeal disease. Similar to this study, 96.9% and 82% of mothers in Enugu<sup>5</sup> and Kaduna<sup>11</sup> had heard of SSS. This high awareness may be as a result of the wide spread campaigns about ORS. However, the lack of difference in knowledge, based on parity and age of the mothers may suggest lack of exposure to health talks, or poor patronage of the health centres by the mothers. Otherwise, the older mothers would have been more knowledgeable than the younger ones as far as HM of diarrhoea is concerned as reported by Ugochukwu.<sup>5</sup> This may be due to their probable increased contact with health centres. But in a study at coastal community in Lagos, younger mothers were reported to have higher ORT use.<sup>17</sup> The fact that higher maternal level of education is associated with increased knowledge of HM of diarrhoea has been reported earlier.<sup>5,17,18</sup>

Although, 35% of the mothers did not know that other RHF can be used instead of ORS in HM of AWD, majority (92.5%) of them had FAV and VFAV attitude towards HM of AWD with ORS. In the Enugu study,<sup>5</sup> 32 out of 512 (6.25%) mothers refused ORS compared to 7.5% with UFAV in the present study. This shows that the mothers are willing to use ORS and other modalities of HM of AWD. The high proportion of mothers with undecided attitude to the use of other RHF in HM of AWD, may imply that, they were not taught that other RHF could be used in HM of AWD by health care providers. The fact that primipara accounted for majority of ORS non users is not surprising, because, possibly their only child never had diarrhoea in the past and so probably had no cause to use it. All the mothers who never used ORS had no education and 66.6% of the non users of ORS were teenagers. Although the sample size was small, since primipara, teenagers and mothers with no education were the non users of ORS, there might be a direct relationship between maternal parity, age and level of education with use of ORS as reported earlier.<sup>5</sup>

The existence of gaps in knowledge and correct practice of the use of ORS have been reported, but the attitude of mothers towards use of ORS is high, therefore it is important to teach or to educate the mothers about correct use of ORS and other RHF that is readily available, culturally acceptable and affordable with the aim of decreasing the morbidity and mortality associated with AWD. This is because most children with diarrhoea are not taken to hospitals, those that go to hospitals also return home for further management, hence the significance of proper HM of AWD. The PHCC are good sites for such continued education and enlightenment. The health and medical staff also need to be trained and retrained for them to continually carry out the task of teaching and educating the mothers appropriately.

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