

## KNOWLEDGE AND UTILIZATION OF ORAL REHYDRATION THERAPY (ORT) AMONG MOTHERS IN ENUGU, SOUTH EASTERN NIGERIA: A HEALTH FACILITY SURVEY.

By

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### SUMMARY

**Objectives** A health-facility survey was done to determine the knowledge and utilization of oral rehydration therapy (ORT) among 400 mothers resident in Enugu.

**Methods** A systematic sample from a list of mothers attending the immunization clinic of the Institute of Child Health (ICH) of the University of Nigeria Teaching Hospital, Enugu was interviewed using a pre-tested structured questionnaire.

**Results** A pre-survey awareness of ORT was noted among 97.5% of the mothers. The beneficial effects of ORT were seen by 57.3% of the mothers as replenishment of lost energy and 37.5% as fluid and salt replacement. Although 77.0% of the respondents could not describe correctly the preparation of salt-sugar solution (SSS)/oral rehydration salt solution (ORS), a high ORT utilization rate of 74.6% was recorded. ORT as a modality of managing childhood diarrhoea remained totally acceptable to 89.5% of the mothers.

**Conclusion** Many Mothers, although they accept and use ORT/SSS, could not accurately describe the methods of preparation of ORS/SSS. It is recommended that maternal perception of the role of ORT should be utilized by health personnel to promote its use, while routine training of caregivers on the preparation of SSS/ORS should be intensified during health education sessions.

**Keywords:** Knowledge of ORT, utilization of ORT, mothers, routine training.

### INTRODUCTION

Diarrhoea remains a major cause of childhood morbidity and mortality in developing countries<sup>1, 2</sup>. Oral rehydration therapy (ORT), as well as appropriate feeding during and after diarrhoea are the key elements of the case-management strategy adopted by the World Health Organization – control of Diarrhoeal Diseases (WHO/CDD) programme which aims at reducing diarrhoea – related deaths and the resultant malnutrition<sup>3</sup>. A national CDD plan of operation was formulated in Nigeria in 1985 for the promotion of ORT<sup>4</sup>. In 1990, a five-year plan (1991 – 1995) was advanced with targets that included 80% ORT – use in cases of childhood diarrhoea by 1995<sup>5</sup>. Recent studies in Nigeria however indicate low utilization rates which are still a far cry from the CDD target rate<sup>6-10</sup>. The present study was initiated to determine the ability of mothers to correctly prepare salt-sugar-solution (SSS)/oral rehydration salt solution (ORS) and to estimate ORT utilization rate during recent episodes of diarrhoea in their children.

### SUBJECTS AND METHODS

This prospective study was conducted among 400 mothers in Enugu metropolis. The respondents were selected by systematic sampling from the list of mothers who attended the immunization-clinic of the Institute of Child Health (ICH) of the University of Nigeria Teaching Hospital, Enugu, during the period of survey.

The eligibility criteria included maternal residence in Enugu at least 1 year prior to the study, as well as nursing a child between 6 and 36 months old at the beginning of the study.

A pre-tested, structured, interviewer-administered questionnaire was used to obtain information on mothers' knowledge of ORT and utilization of ORS/SSS in recent episodes of diarrhoea in their children. A recent episode refers to diarrhoea in the last 6 weeks prior to the interview.

Specific open-ended questions were asked to assess their ability to prepare ORS/SSS correctly, the perceived role of ORT in the treatment of childhood diarrhoea and the

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acceptability of this treatment modality to the mothers. Data analysis was manual with the aid of the Bistec-3170 pocket calculator.

**RESULTS**

**Biodata**

The mean age of the mothers was 29 years (range 14 – 44 years). Majority of them (81.5%) had secondary education and beyond. Only 1.5% had no formal education.

**Pre-survey awareness (n = 390)**

A high pre-survey awareness of oral rehydration therapy (ORT) was recorded among the respondents. About 97.5% of them claimed previous knowledge of this treatment modality. The following sources of information were cited by them; health (78.0%), mass media (13.6%), parents/relatives (6.7%), friends/neighbours (4.1%) and others such as school, books and posters (5.6%). Few of the respondents mentioned more than one source.

**Perceived role of ORT**

In this survey, most mothers (57.3%) thought ORT was administered to children with diarrhoea in order to ‘replenish lost energy’. As illustrated in table 1, a sizeable number (37.5%) also mentioned its role as ‘fluid and salt replacement’, while about 21.55 felt it was meant to ‘stop diarrhoea’. Some respondents mentioned more than one role.

**Table 1**

**Perceived Role of Oral Rehydration Therapy (ORT) in Childhood Diarrhoea**

Maternal Responses*	Frequency (n=400)	%
Replenishes Lost Energy	229	57.3
Fluid and Salt Replacement	150	37.5
Stops Diarrhoea	86	21.5
Prevents Weight Loss	10	2.5
Do not Know	11	2.7
Others <sup>+</sup>	2	0.5

\*Some mothers mentioned more than one role.

<sup>+</sup>Aids the removal of ‘dirt’ from the body.

ORT was totally acceptable to 89.5% of the mothers. Only 10.5% admitted that it was either partially acceptable or not acceptable for the following reasons: ‘children do not like the taste’; and ‘ORT does not stop diarrhoea’.

**Preparation and Utilization of ORS/SSS**

**Table 2**

**Correct Description of Preparation of Oral Rehydration fluids by Mothers**

Oral Rehydration Solution (UNICEF-Packaged ORS)	Frequency (n=400)	%
Correct quantity of water (1000ml)	69	17.3
Incorrect quantity of water (600ml)	132	33.0
No Information volunteered	199	49.7
Salt – Sugar Solution (SSS)		
Correct quantities of water, salt and sugar	187	46.7
Incorrect quantity of water	23	5.7
Incorrect quantities of salt and sugar	153	38.3
No information Volunteered	37	9.3

As shown in table 2, 33.0% of the mothers could not describe the preparation of ORS correctly, while 17.3% provided the correct information. On the other hand, 46.7% gave the correct recipe for preparing SSS while about 44.0% mentioned either incorrect quantities of salt/sugar or water.

**Table 3**

**Home management of recent episodes of diarrhoea in respondents’ children**

Modality of Treatment	Frequency (n = 220)	%
Salt-Sugar-Solution/Oral Rehydration Solution (SSS/ORS) alone <sup>+</sup>	164	74.6
Drugs Alone*	6	11.8
SSS/ORS and Drugs	30	13.6

<sup>+</sup>Eighty (36.4%) of the respondents used SSS, 84 (38.2%) used ORS

\*Drugs included anti-diarrhoeal drugs and antibiotics bought over the counter from patent medicine dealers’ shops.

Amongst mothers who could recall recent episodes of diarrhoea in their children (n = 220), a high ORT utilization was recorded as 74.6% administered ORS/SSS alone as first-line treatment. Table 3 gives the details of this, also

showing SSS-use rate of 36.4% and ORS-use rate of 38.2%. Only 11.8% of them used drugs alone.

## DISCUSSION

The high pre-survey awareness of oral rehydration therapy among mothers in this study is consistent with the findings of other workers<sup>6, 7, and 11</sup>. Majority of the mothers gained previous knowledge from health facilities while the mass media constituted a minor source of information. This finding was also reported in other studies<sup>6, 11</sup>. This underscores the need to utilize the mass media more frequently in public sensitization programmes regarding ORT. The high maternal awareness of ORT could be attributed to urban residence and regular access to public health facilities. In fact, some authors have observed that urban residence was the most important predictor of the knowledge and use of ORT<sup>12</sup>.

The beneficial effects of ORS were seen by majority of mothers in this study as replenishment of lost energy, as well as fluid and salt replacement. This maternal perception should be utilized by health personnel to promote ORT-use among them. On the other hand, about 22.0% of mothers thought ORT could stop diarrhoea, as was noted in an earlier study<sup>11</sup>, which reported a similar perception by 28.0% of mothers. The implication of this erroneous perception is that these mothers would abandon ORT and resort to costly, usually ineffective, drugs if ORT failed to stop diarrhoea in their children<sup>13</sup>.

In spite of the high acceptability of ORT, a sizeable number of mothers could not describe the preparation of both SSS and ORS correctly. It is worrisome to note that a previous study<sup>11</sup> in this environment reported a similar finding. Routine training of caregivers through demonstrations during health education sessions is hereby advocated.

Another interesting finding of this survey is the high ORT utilization rate of 74.6%. When compared with the low utilization rates reported in earlier studies<sup>6-10, 14</sup>, it becomes even encouraging to note that the WHO/CDD target of 80.0% ORT utilization is realizable, albeit belated. Nevertheless, a periodic evaluation of ORT utilization is necessary considering the finding of a study in Lagos<sup>6</sup> which showed a decline in use rate from 66.4% to 20.8% among the same study population.

## CONCLUSION

The survey has demonstrated that in spite of high pre-survey awareness, a sizeable number of mothers could not describe the preparation of ORS/SSS correctly although there was a high utilization rate. In addition, ORT remains an acceptable method of managing diarrhoea among majority of mothers.

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