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Knowledge and Practice of Oral Rehydration Therapy in Management of Childhood Diarrhoea in Okomoko Community in Rivers State, Nigeria

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Abstract:

This cross sectional study was carried out in Okomoko community in southern Nigeria. A total of 218 women of child bearing age responded to semi-structured interviewer administered questionnaire. 89% of these women were aware of ORT as an important measure in management of childhood diarrhoea. However, only 83% of these ORT aware women had used it and only half of them can correctly describe the preparation of ORT. Parity and level of education as 38.7% of the ORT aware women had at least 3 children and 45.8% of the ORT-unaware women had no formal education.

Keywords: Knowledge, practice, rehydration, therapy.

1. Introduction

It is well known that diarrhoeal diseases constitute a serious threat to the lives of young children in Nigeria and other developing countries causing over 100,000 under-five deaths annually in Nigeria¹. Infants and toddlers are especially susceptible to diarrhoeal diseases in most developing countries since they may easily pick up object contaminated with infective organisms and throw into their mouths. Also the lackadaisical attitude of some care givers who prepare food in unhygienic conditions or store food given to these children in room temperature for prolonged periods may be contributory.

In epidemiological terms, diarrhoea is defined as the passage of three or more loose stools in a 24-hour period (a loose stool being one that will take the shape of its container²). The causative agents of diarrhoea are especially bacteria, viruses, protozoa and helminths that are transmitted by the feco-oral route.

Dehydration and electrolyte imbalance have been reported as the most important causes of death from diarrhoeal disease. Thus fluid and electrolyte replacement are the mainstay of management. Oral rehydration therapy is of proven efficacy in the management of acute watery diarrhoea. It is inexpensive and technologically appropriate in dramatically reducing mortality associated with diarrhoea and thus was adopted as the cornerstone of the control of diarrhoeal diseases (CDD) program launched by the world health organization³.

The use of ORT came into limelight in 1971 during a cholera epidemic in Bangladesh⁴ where it reduced mortality from 40% to 3%. The rationale for use of ORT is related to the fact that in the small intestine, glucose is absorbed by secondary active transport coupled with sodium ions while water follows passively.

	Standard ORS solution (mmol/l)	Reduced osmolarity ORS solution (mmol/l)
Glucose	111	111
Sodium	90	50
Chloride	80	40
Potassium	20	20
Citrate	10	30
Osmolarity	311	251

Table 1: Composition of standard and reduced osmolarity ORS solutions⁵.

**30 mmol/l of bicarbonate instead of 10 mmol/l of citrate.*

Despite successfully using ORT in reducing mortality from diarrhoea, its use in some developing countries is still poor. Akintoye and Ekenem⁶ reported that 84% of mothers in a community in Lagos are aware of the use of ORT in management of childhood diarrhoea. However, the percentage of those who practiced may be as low as 23% reported by Ogbuagu et al⁷, 22.2% by Oladepo et al⁸ and 20.8% by Akintoye and Ekenem⁶.

Some socio-cultural beliefs determine the attitude of mothers in accepting ORT. For instance, amongst the Yorubas, some mothers believed that the sugar added in ORT may cause more serious form of diarrhoea referred to as “jedi jedi” (bloody watery stooling⁶). This may be responsible for the lower practice rate reported in such communities.

1.1. AIM

The aim of the study is to assess the knowledge and practice of ORT in management of childhood diarrhoea in Okomoko community.

2. Methodology

This cross sectional study was carried out in Okomoko community in the Etche LGA of Rivers state, between March and April 2005. Okomoko is a rural community with the majority of mothers as farmers and housewives.

Their source of drinking water include, stream (which is no longer popular), rainwater and borehole.

The community has a functional general hospital which runs infant welfare and antenatal clinics.

A total of 218 women who was nursing or had nursed at least an under-5 child within the past two years participated. They were selected using a systematic sampling method and each gave oral consent. Data was collected using a semi-structured interviewer administered questionnaire. The questionnaires were manually sorted and analyzed using Microsoft excel. A statistical significance was set at 95% confidence interval.

3. Results

The mean age (standard error of mean) of respondents was 32.0 ± 0.5 years.

Occupation	Frequency	%
Farmers	74	33.9
Housewives	66	30.3
Teachers	29	13.2
Health workers	13	6.0
Others	36	16.6

Table 2: Occupation of respondents

	Frequency	%
No formal education	29	13.3
Primary	52	23.9
Secondary	94	43.1
Tertiary	43	19.7

Table 3: Educational Status of respondents

	Frequency	%
Single	23	51.1
Married	161	73.9
Divorced	24	11.0

Table 4: Marital Status of respondents

No. of children	Frequency	%
None	41	18.8
1	45	20.6
2	46	21.1
≥3	86	39.4

Table 5: Parity of respondents

Religion	Frequency	%
Christianity	198	90.8
Islam	3	1.4
African tradition	16	7.3
Others	1	0.5

Table 6: Religion of respondents

Awareness	Frequency	%
Yes	194	89
No	24	11

Table 7: Awareness of ORT by respondents

Source	Frequency	%
Group discussion	56	28.8
Mass media	19	9.8
Hospital visit	114	58.8
Others	5	2.6

Table 8: Source of awareness

Usage	Frequency	%
Used	161	83
Not used	33	17

Table 9: ORT use amongst ORT-aware women

	Frequency	%
Correct	97	50
Incorrect	86	44.3
Don't know	11	5.7

Table 10 :Preparation abilities of ORT-aware women

Effect	Frequency	%
increase the frequency of diarrhoeal stools	18	9.3
Will cause vomiting	7	3.6
Will make him feel stronger	155	77.9
No effect	14	7.2

Table 11: Opinion of ORT-aware women on its effect on the child with diarrhoea.

Response	Frequency	%
Force him to drink	34	17.5
Watch for 2 days	14	7.2
Take him to hospital	143	73.7
Don't know	3	1.6

Table 12: Response of ORT-aware women when the child becomes very weak and unable to drink

	Frequency	%
No formal education	11	45.8
Primary	6	25.0
Secondary	5	20.8
Tertiary	2	8.3

Table 13: Educational status of women that are not aware of ORT.

4. Discussion

Fluid and electrolyte replacement is the mainstay of management of childhood diarrhoea. ORT is a simple and cheap measure that is widely accepted by health professionals as a means replacing lost fluid and electrolyte that usually occur during diarrhoea and thus plays a significant role in preventing diarrhoea related deaths.

In the present study involving 218 respondents, 89% (Table 7) of these women are aware of ORT in childhood diarrhoea management (most of them describing it as oral drip). Hospital visit was the major source of information and this may be related to the existence of a functional General hospital in the community.

Awareness has however, not translated into an expected level of use. The present study carried out ten years after the target of 80% ORT use by 1995⁹, showed that only 83% of the ORT aware mothers had actually used it. This is just 3% more than the target of 1995 and is worrisome at the time when one should expect a 100% use.

This may not be unrelated to the negative attitude of some women who responded that ORT will exacerbate diarrhoea, causes vomiting or has no effect (Table 10).

Again, amongst the ORT aware mothers, only 50% can correctly describe preparation of salt sugar solution. Similar conclusions were also reported in previous studies (^{6, 7}). This may be related to poor health education techniques, especially those that do not give mothers the opportunity to demonstrate it themselves or those that do not provide for reinforcement of skills after training. For

instance, some of the women only had the opportunity to learn preparation of ORT in the antenatal clinic. It is therefore, important to teach ORT preparations more frequently especially in women gatherings (such as market women' meeting, church women group meetings), so as to continually remind them of the correct method of preparation.

Apart from poor preparation skills and its consequences, some women still do not know at what point to stop the use of ORT and seek expert management. This is also worrisome as 17.5% of the ORT aware women will continue to force the child to drink even when he becomes very weak and unable to drink. Health education instruction should also include signs of dehydration so that mothers can recognise severe dehydration which will require treatment by experts in the health facility.

Parity and educational level may have influenced the knowledge and practice of ORT in Okomoko community. 38.7% of the ORT aware mothers had at least 3 children and 45.8% of those that are not aware had no formal education. Other factors such as age, marital status and religion did not have any significant effect on the study.

In rural communities like Okomoko, diarrhoeal disease is still a leading cause of preventable death. I recommend that more health awareness programs especially organized by UNICEF should be targeted at these communities. Also, men need to be involved since generally in most rural communities male literacy is usually higher.

5. References

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