



Basic Knowledge of Childhood Diarrhea and Health-seeking Practices of Caregivers of Under-five Children in Calabar-South, Calabar, Nigeria

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Authors' contributions

This work was carried out in collaboration among all authors. All liabilities therein pertaining to the content shall be borne by us. The study was conceptualized by authors EMN, RIEN and GIO. Manuscript was written and designed by author GIO, vetted by authors EMN, RIEN, AAI, UEE and SNU. Data were collected by all and analyzed by author AAI.

Article Information

DOI: 10.9734/AJMAH/2020/v18i430195

Editor(s):

(1) Dr. P. Veera Muthumari, V.V.Vanniaperumal College for Women, India.

Reviewers:

(1) Jorge Castro-Bedriñana, Universidad Nacional del Centro del Perú, Peru.

(2) Jyotirmoy Nandi, India.

(3) Manisha Aggarwal, Govt. Medical College, Patiala, India.

Complete Peer review History: <http://www.sdiarticle4.com/review-history/56500>

Original Research Article

Received 14 March 2020

Accepted 19 May 2020

Published 27 May 2020

ABSTRACT

Background: Diarrhea claims the lives of more children than malaria, HIV and measles combined. Prompt identification of symptoms of diarrhea by Caregivers and timely commencement of oral rehydration therapy using oral rehydration solution (ORS) or appropriate home available fluids are recommended corrective measures. This study was to ascertain the basic knowledge of childhood diarrhea and the health-seeking practices among caregivers of under-five children in Calabar-South, Calabar, Nigeria.

Materials and Methods: Six wards were chosen from the 12 wards in the study area by casting lot. Ten streets were randomly selected from each of the 6 wards. Eleven compounds were selected randomly per street to give a total of 660 compounds. A household with an under-five child or children was randomly selected per compound and therefore 660 Caregivers were enlisted on giving consent. Semi-structured questionnaires were used to collect data from respondents.

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Results: In this study, 638 (98.2%) of respondents had good basic knowledge of childhood diarrhea in under-five children, 12 (1.8%) had fair basic knowledge, no group was rated as having poor basic knowledge. Occurrence of childhood diarrhea was marginally higher among respondents with good knowledge of diarrhea (50.3%) than respondents with fair basic knowledge, (50%). In practice during advent of childhood diarrhea, some caregivers chose to seek health-care from traditional healers 6.1% (19), churches 1.9% (6), pharmacies 16.9% (53), patent drug stores 18.8% (59), hospital, 14.3% (45), or self medication at home 42% (132).

Conclusion: Although most Caregivers possessed good basic knowledge of childhood diarrhea, there were constrains translating this knowledge into intervention practices due to inadequate presence. Of social amenity framework in the study area. Government and non Governmental authorities should make provision of social amenities such as hospitals, pipe borne water, waste disposal facilities, power supply, water drainagesetc, a priority.

Keywords: Caregiver; basic knowledge; health-seeking; Calabar-South.

1. INTRODUCTION

Diarrhea is defined as passage of ≥ 3 episodes of loose or watery stool per day or the rate of passage of stool which the Caregiver considers abnormal for the child [1,2] Diarrhea is the second chief cause of mortality among under-five children in the world [3,4]. It is responsible for about 1 in 5 childhood deaths translating to about 1.5 million deaths per year in low and middle income countries [4,5]. It claims the lives of more children than malaria, HIV and measles combined [1,4]. Diarrhea is one the diseases with serious untoward effects on attainment of growth and developmental milestone of children [6] Globally, under -five year old children do have on the average 3.2 episodes of diarrhea and consequently 1.87 million children die from dehydration, especially in Asia, Africa and Latin America [3].

In Nigeria, the prevalence of diarrhea is 18.8% [7] and in 2014, it was ranked the 4th leading cause of death of under-five children in the country [8]. Cross River State has a diarrhea prevalence of 8% among under-five children according to Nigerian Demographic and Health Survey [9].

Diarrhea is normally transmitted through the ingestion of food and water contaminated by fecal matter or by organisms acquired via person-to-person contacts [10]. There are reports of body surfaces colonization of neonates at birth, by multidrug resistant Gram negative organisms [11] obtained from organisms colonizing the maternal vagina in pregnancy during the course of labor and delivery [12]. To this extent, Caregivers must ensure washing of hands with soap and water before feeding the

children after body contact with under-five children under their care. This is premised on the fact that good hygiene practices, especially hand washing with soap and safe disposal of feces could reduce incidence of diarrhea by 35% [1]. Diarrhea prevention through safe water, sanitation and hygiene interventions works by achieving reduction in feco-oral transmission of pathogens acquired through contaminated hands and environment. There are reports 5% reduction in incidence of diarrhea achieved through getting safe water at source, 19% through quality water intervention, 36% through sanitation interventions and 47% through hand washing with soap [13,14]. In another study [15], it was reported that occurrence of diarrhea was least 28.2% among respondents who practiced use of water cistern toilets as a means of human waste disposal as compared to 82.4% in people who practiced open defecation. Aside from causing a reduction in incidence of diarrhea, water, sanitation and hygiene interventions have added advantage of preventing intestinal parasitic infections which are widely reported to have synergistic effects with malnutrition [16-20].

Dehydration is a cardinal clinical feature of diarrhea. In under-five children, it manifests with dryness of the mouth and skin, sunken anterior fontanel, sunken eyes, sleepiness, crying without tears, fatigue, increased thirst, irritability, reduced urination and urine volume [21]. Prompt identification of symptoms of diarrhea by Caregivers and timely commencement of oral rehydration therapy using oral rehydration solution (ORS) or appropriate home available fluids are effective measures at correcting dehydration and reducing mortality arising from childhood diarrhea in the community [22].

It was reported that poor knowledge and practices, negative attitudes of Caregivers and their misdirected approach towards diarrhea management and prevention allowed progression to severe dehydration and death [23,24].

This study was to ascertain the basic knowledge of childhood diarrhea and the impact on the health-seeking practices of caregivers of under-five children in Calabar-South, Calabar, Nigeria.

2. MATERIALS AND METHODS

2.1 Study Design

It was a descriptive cross sectional study designed to ascertain caregivers' basic knowledge of childhood diarrhea and its impact on the health-seeking practices of under-five children-Caregivers in Calabar-south, Calabar, Nigeria. It was carried out between 10th November, 2018 and 18th April, 2019.

Six wards were chosen from the 12 wards in the study area by casting lots. Ten streets were randomly selected from each of the 6 chosen wards to sum up to 60 streets. Eleven compounds were selected randomly per street to give a total of 660 compounds. A household with an under-five child or children was randomly selected per compound to give 660 households. A caregiver from each of the selected households was voluntarily enlisted into the study, giving a total of 660 respondents. Semi-structured questionnaires were interviewer-administered to respondents to obtain data which were weighted and summed up to produce numerical breakpoints, interpretable to poor, fair and good basic knowledge of childhood diarrhea among under-five Caregivers in the study area.

2.2 Study Area

The study was done in Calabar-South Local Government Area of Cross River state of Nigeria with headquarters at Anantigha. It is a rapidly growing semi urban area with limited public amenities. Its current population estimate is 888,939 using the 2.6% population growth rate of 2006 [25]. The Local Government Area has one general hospital, 27 primary health centers and a number of private clinics spread through its component 12 wards. These health facilities are grossly under-staffed and ill-equipped. The multi-ethnic inhabitants are mostly civil servants, traders, farmers and students.

2.3 Sample Size

Sample size for this study was determined using the formula [26]

$$N = \frac{Z^2pq}{d^2}$$

Where

N= Sample size

Z = 1.96 (i.e. 95% confidence interval)

D = 0.03 (margin of error)

p = 0.08 (prevalence of diarrhea in under five) [9]

q = 1-p = 0.92

The initial sample size of 314.11 was doubled to 628, to increase its significance and further increased to 660 to account for a perceived non response rate of 5%.

2.4 Inclusion Criteria

A respondent must:

- currently be an under-five Caregiver
- be of either sex
- have ability to communicate
- give informed consent

2.5 Exclusion Criteria

A subject was excluded from the study if he or she

- refused to give consent
- had severe hearing impairment
- was not at the time of the study a Caregiver to an under-five year old child.

2.6 Data Collection

Semi-structured questionnaire (Fig. 1) was interviewer-administered to collect data from the respondents. It consisted of Parts A, B and C. Part A elicited information about Caregivers' socio-demographic data. Part B elicited information on Caregivers' basic knowledge of childhood diarrhea and part C enquired about caregivers' health-seeking practices of Caregivers. To ensure the validity of the questionnaire, it was adapted from items in already standardized questionnaires and policy documents from the UNICEF/World Health Organization [7] and appropriately modified to suit the objectives of this study.

A: Socio-demographic data of caregivers

1. Gender of caregiver: [a] Male [] [b] Female []
2. Age of Caregivers [a] 15-20 [], [b] 21-25 [], [c] 26-30 [], [d] 31-53 [], [e] 36 and above []
3. Caregiver's educational level [a] No formal education [], [b] Primary [], [c] Secondary [], [d] Tertiary []
4. Occupation: [a] Trader [], [b] Artisan [], [c] Farmer [], [d] Businessman [], [e] civil/ public servant [f] Unemployed [], Others specify _____
5. Marital status: [a] Married [], [b] Single [], [c] Divorced [], [d] Widowed []
6. Monthly income: [a] Below 18,000 [], [b] N18,000-N50,000 [], [c] N50,000-N100,000 [], [d] N100,000 and Above
7. Religion: Christianity [], Islam [], Others _____
8. Number of children between 0-59 months [a] 1 [], [b] 2 [], [c] 3 [], 4 and above []
9. Age of child: _____(months)
10. Gender of child: Male [], Female []

B: Knowledge of caregivers about acute childhood diarrhea

S/N	Yes	No	I Don't know
1			
	Diarrhoea is caused by:		
	Drinking Contaminated water		
	Eating contaminated food		
	Eating with dirty hands		
	Eating stale/spoilt food		
	Feeding with dirty utensils		
2			
	Diarrhoea is transmitted through:		
	Files and insects		
	Defecating in the open field		
	Bottle feeding		
	Dirty hands and fingers		
	Rats and rodents		
3			
	Diarrhoea can be prevented through:		
	Washing hands after visiting latrine		
	Washing hands before food preparation		
	Washing hands after handling child's faeces		
	Drinking clean water		
	Wash hands before feeding a child		
	Handle food hygienically		
	Store water in clean container		
4			
	The best management of diarrhoea is?		
	Hospital treatment		
	Oral rehydration salts		
	Breast milk		
	Homemade fluids		
	Stop feeding entirely		
	Traditional healers		
	Prayers		
	Nothing		

5. Diarrhoea is indicated by: [a] Loss of stretchiness of the skin [], [b] Passage of more than 3 loose stools with or without blood in 24 hours [], [c] Thirst and dry mouth [], [d] Sunken eyeballs [], [e] Tearless eyes [], [f] I do not know []

C: Health-seeking practices of under-five children caregivers

6. Did you follow up post-natal care for your child? [a] Yes [], [b] No [], [c] Don't know []
7. Has your child completed the immunization schedule corresponding to age? [a] Yes [],

- [b] No [], [c] Don't know []
8. Was exclusive breastfeeding practiced on this child [a] Yes [], [b] No [], [c] I don't know []
9. If yes, for how long: [a] less than 4 months [], [b] 4 months [], [c] 5 months [], [d] 6 months []
10. Has your child ever suffered from diarrhea: [a] Yes [], [b] No [], [c] I don't know []
11. If yes, how old was he/she when he/she last had diarrhea _____ months
12. Was your child admitted in the hospital during this period? Yes [], No []
13. What is your first intervention during an episode of diarrhea? Send to hospital [a] Give homemade fluids [], [b] Feeding breast milk [], [c] Give traditional herbs [], [d] Administer Oral Rehydration salts []

Fig. 1. Questionnaire on Caregivers' socio-demographic data, knowledge of acute childhood diarrhea and health-seeking practices

2.7 Data Processing

Caregivers' socio-demographic profile was evaluated by collating and calculating the percentage responses to questions 1-10 of the questionnaire (Fig. 1 part A).

The items used to calculate the caregivers' basic knowledge of acute childhood diarrhea in under five children were all the questions in the section of the questionnaire (Fig. 1, part B): (Q1a, Q1b, Q1c, Q1d, Q1e, Q2a, Q2b, Q2c, Q2d, Q2e, Q2f, Q3a, Q3b, Q3c, Q3d, Q3e, Q3f, Q3g, Q4 and Q5). Scores were assigned to each response accordingly and later summed up to get the total score for each individual. For Q1a (yes = 2, no = 1, don't know = 0), for Q1b (yes = 2, no = 1, don't know = 0), for Q1c (yes = 1, no = 2, don't know = 0), for Q1d (yes = 1, no = 2, don't know = 0), for Q1e (yes = 1, no = 2, don't know = 0), for Q2a (yes = 2, no = 1, don't know = 0), for Q2b (yes = 2, no = 1, don't know = 0), for Q2c (yes = 2, no = 1, don't know = 0), for Q2d (yes = 2, no = 1, don't know = 0), for Q2e (yes = 2, no = 1, don't know = 0), for Q2f (yes = 2, no = 1, don't know = 0), for Q3a (yes = 2, no = 1, don't know = 0), for Q3b (yes = 2, no = 1, don't know = 0), for Q3c (yes = 2, no = 1, don't know = 0), for Q3d (yes = 2, no = 1, don't know = 0), for Q3e (yes = 2, no = 1, don't know = 0), for Q3f (yes = 2, no = 1, don't know = 0), for Q3g (yes = 2, no = 1, don't know = 0), for Q4 (Hospital treatment = 2, Oral rehydration salts = 3, Breast milk = 1, Stop feeding entirely = 0, Traditional healers = 1, Prayers = 1, Nothing = 0) and for Q5 (Dryness of the skin = 1, Passage of more than 3 loose stools with blood in 24 hours = 2, Thirst and dry mouth = 1, Sunken eyeballs = 1, Tearless eyes = 1, I do not know = 0). Scores between 1–14 represented poor basic knowledge of childhood diarrhea in under-five children, scores between 15–28 represented fair basic knowledge of childhood diarrhea in the population under study while scores ≥ 29 represented good basic

knowledge of childhood diarrhea in the same population.

Percentage Caregivers' health-seeking practices were derived by calculating the percentage responses to each of the options of questions 6-13 of the semi-structured questionnaire (Fig. 1 part C).

2.8 Statistical Analysis

Data were entered and analyzed using the Microsoft Excel 2007 and Statistical Package for Social Sciences (SPSS) software version 20 and the analysis captured frequency distributions of variables, graphical representations, charts and tables. The association between variables and the hypothesis was tested using chi – square tool of statistical analysis.

3. RESULTS

3.1 Socio-demographic Data

A total of 650 Caregivers participated in this study giving a percentage response of 98.5%. Females constituted 583(89.7%) and males 67(10.3%). Majority, 205 (31.5%) were within the ages of 31-35 years. More than half of the respondents 334 (51.4%) were married, single 145 (22.3%), divorced 27 (4.2%), widowed 47 (7.2%) and 97 (14.9%) were cohabiting. 72 (11.1%) of the respondents had no formal education, 149 (22.9%) had primary education while majority of the respondents 300 (46.2%) had secondary education; those with tertiary education accounted for 129 (19.8%) (Table 1).

3.2 Caregivers' Basic Knowledge of Childhood Diarrhea in Under-Five Children

It was observed that the occurrence of acute childhood diarrhea was marginally higher among respondents with good knowledge of acute

Table 1. Caregivers' socio demographic data

Variables	Frequency (n = 650)	Percentage
Gender of caregiver		
Male	67	10.3
Female	583	89.7
Age of caregiver		
15-20	99	15.2
21-25	179	27.5
26-30	124	19.1
31-35	205	31.5
36 and older	43	6.6
Caregiver's educational status		
No formal education	72	11.1
Primary	149	22.9
Secondary	300	46.2
Tertiary	129	19.8
Occupation of caregiver		
Petty trader	110	16.9
Artisan/Apprentice	136	20.9
Farmer	54	8.3
Business Person	84	12.9
Civil/Public servant	152	23.4
Unemployed	114	17.5
Marital status of caregiver		
Single	145	22.3
Co-habiting	97	14.9
Married	334	51.4
Divorced	27	4.2
Widowed	47	7.2
Monthly income of caregiver		
Below N18,000	274	42.2
N18,000 – N49,999	225	34.6
N50,000 – N100,000	122	18.8
N100,000 and above	29	4.5
Religion		
Christianity	577	88.8
Islam	73	11.2
Number of children aged(0 – 59 months)		
One	215	33.1
Two	344	52.9
Three	91	14
Age of child		
Less than a month old	19	2.9
1 – 12 months old	276	42.5
13 – 24 months old	222	34.2
25 – 36 months old	79	12.2
37 – 48 months old	54	8.3
Gender of child		
Male	352	54.2
Female	298	45.8

diarrhea (50.3%) than respondents of 3 or more bouts of loose stools within with fair knowledge of acute diarrhea (50%). 24 hours 578 (88.9%), thirst and mouth (Fig. 2). Majority of respondents identified dryness 13 (2%), sunken eyeballs 52 that diarrhea is best indicated by passage (8%).

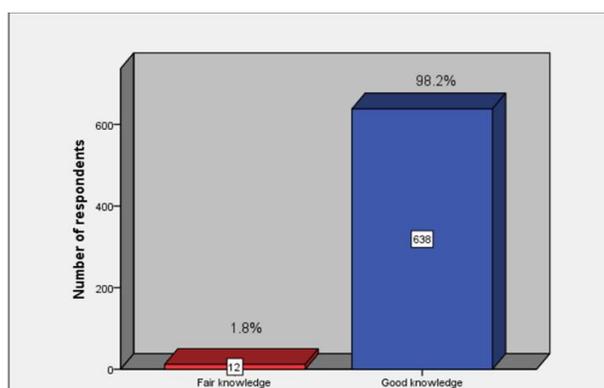


Fig. 2. Caregivers' basic knowledge of acute childhood diarrhea in under-five children

Table 2. The health-seeking practices to acute childhood diarrhea among Caregivers of under-five children in the study area

Variables	Frequency (n = 650)	Percent (%)
Did you follow up post-natal care for your child?		
Yes	336	51.7
No	261	40.1
Don't know	53	8.2
Has your child completed the immunization schedule corresponding to age?		
Yes	604	92.9
No	0	0
Don't know	46	7.1
Was exclusive breastfeeding practiced on this child		
Yes	333	51.2
No	317	48.8
Don't know	0	0
Duration of exclusive breastfeeding		
Less than 4 months	58	17.4
Four months	53	15.9
Five months	34	10.2
Sixmonth	188	56.5
Total	333	100
Has your child ever suffered from diarrhoea		
Yes	327	50.3
No	283	43.5
Don't know	40	6.2
Where did you go for care during this episode of diarrhoea		
Traditional healer	19	6.1
Church	6	1.9
Pharmacy	53	16.9
Patent drug store	59	18.8
Hospital	45	14.3
Administered drug at home	132	42
Total	314	100
How old was your child when he/she last had diarrhoea		
5 – 14 months	241	75.1
15 – 24 months	73	22.7
25 – 34 months	0	0
35 months and above	7	2.2
Total	321	100

Table 3. Caregivers health-seeking practices (cont'd)

Variables	Frequency (n = 650)	Percent (%)
Primary source of drinking water for your household		
Stream/River	0	0
Well	6	0.9
Borehole	467	71.8
Pipe-borne water	177	27.2
Rain water	0	0
Do you treat your water in any way to make it safer to drink		
Yes	281	43.2
No	369	56.8
Don't know	0	0
How water was treated		
Boiling	228	81.1
Chlorine	53	18.9
Filtering	0	0
Total	369	100
Do you wash your hands after changing your baby's diapers		
Always	313	48.2
Sometimes	244	37.5
Never	93	14.3
Do you wash your hands with soap and water before preparing your child's meals?		
Always	333	51.2
Sometimes	317	48.8
Never	0	0
Do you sterilize your infant's feeding utensils?		
Always	476	73.2
Sometimes	141	21.7
Never	33	5.1

Most respondents rightly identified acute childhood diarrhea in this population to be caused by drinking contaminated water 631 (97.1%) and eating contaminated food 650 (100%). Respondents also identified eating stale/spoiled food 650 (100%), feeding with dirty utensils 624 (96%) as leading to diarrhea in under five children. About 617 (94.9%) believed that diarrhea is transmitted through flies and insects, through defecating in the open field 283 (43.5%), through bottle feeding 496 (76.3%), through dirty hands and fingers 638 (98.2%) and through rats and rodents 324 (49.8%). All respondents were of the opinion that diarrhea could be prevented through washing of hands after visiting latrine 650 (100%), washing hands before food preparation 650 (100%), washing hands after handling child's feces 650 (100%), washing hands before feeding a child 650 (100%) and handling food hygienically 650 (100%). In the event of episode of childhood diarrhea, some respondents were of the opinion that best intervention would be to visit the hospital 36.9% (240), administration of oral rehydration solution 56.8% (369).

3.3 The Health-seeking Practices to Acute Childhood Diarrhea among Caregivers of Under-five Children in the Study Area

The first intervention ideal for an episode of diarrhea as indicated by some caregivers was administration of traditional herbs 4.2% (27) or feeding with breast milk 2.2% (14). Some caregivers chose to seek health-care from traditional healers 6.1% (19), churches 1.9% (6), pharmacies 16.9% (53), patent drug stores 18.8% (59), hospital 14.3% (45), or self medication at home 42% (132). Most caregivers followed up post natal care (PNC) for their children 51.7% (336) and as such most under-five children were exclusively breastfed for 6 months 56.5% (188), 5 months 10.2% (34), 4 months 15.9% (53), or less than 4 months 17.4% (58). Percentage Caregivers who completed immunization schedule for age of their children was 92.9% (604). Water boiling was the most chosen means of water treatment 81.1% (228) seconded by chlorination 18.9% (53).

4. DISCUSSION

The respondents were dominantly females 583(89.7%) and 508(78.1%) of them clustered within (21-35) age bracket. This age bracket falls within safe obstetric age range with limited obstetric challenges. In this study, 638 (98.2%) of respondents had good basic knowledge of childhood diarrhea in under-five children, 12 (1.8%) had fair basic knowledge, no group was rated as having poor basic knowledge. This was a cherished development where social amenity framework existed that would enable translation of knowledge into intervention practices. It was observed that the occurrence of childhood diarrhea was marginally higher among respondents with good knowledge of acute diarrhea (50.3%) than respondents with fair knowledge of diarrhea (50%). In this study therefore, basic knowledge of diarrhea was not a statistically significant predictor of occurrence of diarrhea (p-value = 0.647, df = 2, and $\chi^2 = 0.870$). This observation was in conformity with the report of a study [27] which was that mothers with good basic knowledge of diarrhea could identify with ease symptoms of diarrhea in children under their care and promptly report such, as opposed to mothers with fair or poor basic knowledge of childhood diarrhea who would likely miss the presenting symptoms and identification of the condition and therefore not reporting it. This might explain the higher rate of occurrence of diarrhea among children of Caregivers with good basic knowledge of diarrhea than Caregivers with fair basic knowledge as reported in this study.

The Caregivers in their response to part of the enquiries that were used to rank their level of knowledge about childhood diarrhea were of the opinion that the ideal option to managing a case of diarrhea was to report to the hospital 407 (62.6%), administration of oral rehydration solution 229 (35.2%) or resorting to praying 14 (2.2%). However, the same respondents failed to express this level of knowledge in their health-seeking practices during episodes of diarrhea in children under their care. In this study, during episodes of diarrhea, Caregivers admitted to administration of traditional herbs 4.2% (27) or feeding with breast milk 2.2% (14). Some caregivers chose to seek health-care from traditional healers 6.1% (19), churches 1.9% (6), pharmacies 16.9% (53), patent drug stores 18.8% (59), hospital 14.3% (45), or self medication at home 42% (132) The health-seeking behavior did not reflect their knowledge

base of childhood diarrhea. We reasoned that these findings might be attributed to inadequate social amenity framework consisting of primary healthcare centers and community pharmacy, pipe borne water system, water-closet toilet system, public garbage disposal dumps, planned water drainage system, public water treatment plans as well as public diarrhea therapy centersto promote translation of knowledge to practice. Secondly, in Nigeria, as is the case in Calabar-South, public and private hospitals are scarce and expensive and some mothers with good knowledge of childhood diarrhea might be constrained to resort to alternative means of care instead of presenting to hospital with their under-five children with diarrhea.

Majority of respondents 578 (88.9%) in this study rightly identified passage of ≥ 3 bout loose or watery stool within 24 hours as best indication of diarrhea in under five children. This is in conformity with the findings of Asenso-Mensah and co-workers [28] who also reported that majority of respondents identified passage of three or more loose stools within a space of 24 hours as best indication for diarrhea. The prevalence of diarrhea as reported in this study was 50.3% (327). This figure is higher than 1.5% prevalence reported in Jos, Nigeria [29], 6.1% reported among under-five children in Mkuranga, Tanzania [30], 8% reported in Cross River State of Nigeria and the 18.8% reported for Nigeria as a Federation [9,23]. It is however similar to the report of a studies conducted in Edo state (62.5%), Ethiopia 167 (41.5%), and in Kashmir, India (55.2%) [31,32]. The reason for this wide variation could not be adduced.

It was the finding in this study that 229 (35.2%) of the respondents that administration of ORS to their children during episodes of diarrhea was the ideal management option. The value is higher compared to the values of 26% reported in Iran [19] and 14.8% by another study [33].

Vaccination against a disease would stimulate the individual to build up sufficient immunity to protect against the occurrence of such disease. The vaccination/immunization coverage for children as revealed in this study was impressively, 92.9% (604) with potential for improvement. A total of 336 (51.7%) respondents reported to have followed up post natal care (PNC) for their children. This is similar to the 81% vaccination/immunization coverage for age, reported by Ogbo and his colleagues [34] but less than the 45% coverage reported by another

study [35]. While we commended relevant agencies for generating the level of awareness that warranted this impressive immunization coverage we were however worried that occurrence of diarrhea was still high even among respondents with good basic knowledge of childhood diarrhea. This raised concern over the efficiency of the cold chain vis-à-vis the potency of the vaccines in circulation in the study area. Our worry was reasonable amidst the fact there was dearth of social amenities including sustainable power supply in the study area.

5. CONCLUSION

Respondents in this study had fair to good basic knowledge of childhood diarrhea but this did not reflect in their health-seeking practices as only 14.3%(45) reported to hospital when under-five children in their care had episodes of diarrhea and 42%(132) resorted to self-medication. Percentage occurrence of childhood diarrhea in the study area was high even among respondents with good basic knowledge of childhood diarrhea (50.3%). These findings might be attributed to inadequate availability of social amenity framework comprising primary healthcare centers and community pharmacy, pipe borne water system, water-closet toilet system, public garbage disposal dumps planned water drainage system etc constraining translation of knowledge to diarrhea intervention practices.

DEFINITION OF OPERATIONAL TERMS

- **Dehydration:** It is a condition when the child loses too much water and salt from the body.
- **Rehydration:** The correction of dehydration with oral rehydration salts (ORS) or home prepared solution. ORS is a mixture of clean water, salt and sugar.
- **Oral Rehydration Therapy (ORT):** The administration of fluid by mouth to prevent or correct the dehydration that is a consequence of diarrhea.

CONSENT

660 Caregivers were enlisted on giving consent. Semi-structured questionnaires were used to collect data from respondents.

ETHICAL APPROVAL

Ethical approval was received from the Cross River State Health Research Ethics Committee, Ministry of Health, Calabar, Nigeria.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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