
Care Seeking Behaviour and Hygiene Practices Among Mothers of 6-23 Month Children Old in Lafia Local Government Area, Nasarawa State, Nigeria

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Abstract: Under-5 mortality of children remains a substantial public health challenge in sub-Saharan Africa, including Nigeria. Unfortunately, some of these childhood diseases (diarrhea, pneumonia and malaria) and deaths are preventable through provision of affordable and cost-effective interventions. The study was health facility-based cross-sectional study conducted from February to July 2021 in four Primary Health Centers in Lafia Local Government Area Nasarawa state. Two hundred randomly selected mothers with children aged 6-23 months were included in the study. Structured questionnaires were developed to assess care seeking behaviours, hygiene and feeding practices among the mothers. Data was analyzed using an SPSS version 21.0 statistical software. The level of statistical significance was set at $p < 0.05$. The majority (46%) of mothers were aged between 20-29 years, 32% were civil servants, 45% had secondary education, The results shows that the main (78%) source of water was borehole, 82% stores water in plastics, 78%, 44% uses traditional pit toilet and refuse bin for waste disposal respectively. Furthermore, the study shows 80% of mothers practiced good handwashing. Two-third (60%) of the mothers always boiled water before drinking, 75% sometimes used cup or spoon for feeding babies while 42% always sterilized feeding bottles. Majority (78%) of the mothers seek care at hospital/clinic, 90% attended antenatal clinic, 48% delivered at home/TBA, 74% uses insecticides Treated Net (ITN). Out of the 45 mothers who did not use ITN, majority (96.2%) indicated it was not available. More than two-third mothers continued breastfeeding during child illness while 66% stopped continued complementary feeding. This study determined the care-seeking behavior and hygiene practice of mothers with children 6-23 months. Care-seeking and hygienic behavior was good among the mothers with most having appropriate behavior. Measures should be taken to help promote awareness among those who did not have appropriate treatment seeking behavior.

Keywords: Mortality, Illness, Careseeking, Hygiene, Feeding

1. Introduction

Under-5 mortality (U5M) or deaths of children aged between 0 and 59 months remain a substantial public health challenge in sub-Saharan Africa, including Nigeria. According to United Nations Children's Fund [1] an estimated 5.3 million under-five children died in 2018 with almost half of these deaths occurring in sub-Saharan Africa. Evidences have also indicated that children in sub-Saharan Africa are more than 15 times more likely to die before age 5 than their

counterparts in high income countries [2]. Nigeria ranked the highest with the absolute number (0.858 million) of deaths among children under five years of age in the recent global child mortality estimate [3]. In 2021, the mortality rate of children under five year old in Nigeria was estimated at 111/1,000 per live birth). This means that there were about 111 deaths of children under the age of five year per 1,000 live births. Unfortunately, some of these childhood diseases (pneumonia, diarrhea, respiratory tract infection and malaria) and deaths are preventable through provision of affordable

and cost-effective interventions like use of Long Lasting Insecticides Treated, access to affordable Health care as well as access to clean water and sanitation [4].

These diseases have huge consequences on the children's physical and cognitive abilities [5]. Therefore, utmost care should be taken to prevent diseases, recognize the danger signals, and treat them urgently. Immunization, family planning, mothers education and food supplementation, influences child growth and development, therefore it should be monitored regularly from birth. Young child feeding and caring practices though, tasking are very important and if properly practiced can make the difference between life and death, physical, psychological, and social well being of the child, and hence the community at large.

Prompt and appropriate health seeking is critical in the management of childhood illnesses. In recognition of the importance of seeking early care, the World Health Organization (WHO) and United Nations Children's Fund (UNICEF) developed the 'Integrated Management of Childhood Illness' (IMCI) strategy, which emphasizes appropriate family and community health practices are crucial for improving the health status of children and ensuring child survival in the majority of developing countries [6].

However, despite these efforts at promoting child health, Often mothers or caregivers in developing countries such as Nigeria, do not have access to adequate knowledge on the danger signs regarding their children's health or appropriate treatment as well as adequate information concerning access to appropriate health services [4]. Evidences have linked factors such as socioeconomic status, education, level of income, child's age, birth order, perceived importance of early treatment, mass media exposure, residence and occupational status to poor health care utilization for children [7-12]. Recent researches at national level have centred their work on determinants of health seeking behaviour for children. Thus, there is need for studies that would consider factors at community or household level. This current work is aimed at filling this gap by examining mothers' health seeking behaviour for children and associated factors in Lafia Local Government Area, Nasarawa State, Nigeria.

2. Methodology

2.1. Study Setting and Sampling

The research design was a cross-sectional descriptive survey was conducted from February to July 2021 in four (4) Primary Health Centers (Shabu Child welfare Clinic, Doma road PHC, Kwandare CHC, and Lafia East PHC) in Lafia Local Government Area Nasarawa state were selected. The study population were nursing mothers with children 6-23 months of age. Sample size consists of 200 nursing mothers receiving health care services at the facility of the study. Simple random sampling technique was used to identify the study participants. A list of mothers with under-five children attending child welfare clinic in each PHC was prepared with the help of the health workers by the researcher. The sample

size was randomly selected from the drawn list. In total, 527 under-five children in 4 PHCs were identified of which 200 were randomly selected.

2.2. Method of Data Collection and Analysis

A semi structured researcher administered questionnaire was used to collect information from respondents. The questionnaire sought information on socioeconomic characteristics, hygienic practices in relation to the child's food preparation, food storage methods, sources of water and feeding practices. Also some of the questions focused on antenatal, place of delivery, child immunization record, among others. Data was retrieved and analysed using an SPSS version 21.0 statistical software, using frequencies and percentage.

3. Results and Discussion

3.1. The Socio-Demographic Characteristics of the Mothers

The socio – demographic characteristics of the mothers is presented in Table 1. The majority (46%) of the mothers were aged between 20-29years, civil servants (32%), secondary education (45%) with more than half (55%) having 4-6 children per household. It also indicates that 47% of the children are male and 57% female with majority (33.5%) of the children between 6-10 months.

Table 1. Demographic and Socio-economic of the mothers.

Variables	Frequency (f)	Percent (%)
Age of caregiver		
20-29 years	92	46
30-39 years	68	34
40- 49 years	26	13
Above 49 years	14	7
Total	200	100
Number of children per House-hold		
1-3	42	21
4-6	110	55
7-9	36	18
10 and above	12	6
Total	200	100
Occupation		
Civil Servant	64	32
Trader	40	20
Farming	36	18
Craftsman	8	4
Full-time house wife	52	26
Total	200	100
Level of Education		
No School	6	3
Primary school	32	16
Secondary school	90	45
post secondary education	72	36
Total	200	100
Age of Child		
1-5 months	12	6
6-10 months	67	33.5
11-15 months	55	27.5
16-20 months	21	10.5
20-24 months	45	22.5
Total	200	100

Variables	Frequency (f)	Percent (%)
Gender of Child		
Male	94	47
Female	106	53
Total	200	100

3.2. Water and Sanitation Practices Among Mothers

The water and sanitation practices among Mothers is as shown on Table 2. Most (78%) of the respondent use bore hole as main source of drinking water, this followed by open well (9.5%) and protected well (8.5%). Majority (82%) store their water in tanks while 6% stored in drum. Majority (44%) of the respondents use refuse bin as a means of refuse disposal while 30%, 26% of the respondents bush and Incinerator (burn) respectively. More than half (78%) of the respondents use traditional pit toilet, 16% of the respondents improved pit latrine.

Table 2. Water and Sanitation Practices among Mothers.

Variable	Frequency (F)	Percent (%)
Main source of drinking water		
Piped Water	6	3.0
Protected Well	17	8.5
Open Well	19	9.5
Spring	2	1.0
Borehole	156	78.0
Total	200	100.0
How do you store your water?		
Tank	10	5.0
Clay Pot	8	4.0
Plastics	164	82.0
Iron Drum	12	6.0
Iron Pot	6	3.0
Total	200	100.0
Distance from nearest water collection point		
< 10 minutes	84	42.0
10-30 minutes	42	21.0
30 min - 1 hr	20	10.0
> 1 hr	54	27.0

Table 3. Hygienic practices in food preparation.

Food preparation practices	Always F (%)	Sometime F (%)	Never F (%)
Washing of hand with soap and water before preparing food	160 (80)	30 (15)	10 (5)
Washing of fruits before eating	144 (72)	40 (20)	16 (8)
Sterilizing feeding bottles	84 (42)	76 (38)	40 (20)
Do you used boiled water for drinking and preparing milk formula/juice	120 (60)	62 (31)	18 (9)
Do you re-heat leftover food before serving	160 (80)	24 (12)	16 (8)
Do you used cup or spoon/fork in serving/feeding the child	30 (15)	150 (75)	20 (10)
Do you blow foods to cool before giving the child	48 (24)	108 (54)	34 (17)
Do you Hand-feed the child	20 (10)	150 (75)	30 (15)
Do you masticate/pre-chew foods before giving to the child	14 (7)	130 (65)	56 (28)

3.4. Care Seeking Behaviour Among Mothers

The care seeking behaviour among mothers is shown on Table 4. The results shows that the place where majority (78%) mother seek care during child illness is the health facility with 43% of the mothers travelling between 30 minutes to 1 hour to access health facility. The present study indicated that almost half (48%) of mothers delivered at traditional healing home (TBA), 99% of the children have received immunization, 70% have taken immunization at least four times, 99% attended

Variable	Frequency (F)	Percent (%)
Total	200	100.0
Type of toilet used by household		
Improved Pit Latrine	32	16.0
Traditional Pit Latrine	156	78.0
Open Pit Latrine	4	2.0
Designated Area	8	4.0
Total	200	100.0
How do you dispose your refuse		
Refuse Bin	88	44
bush	60	30
Burn	52	26
Total	200	100

3.3. Hygienic Practices of Mothers

The Hygienic practices of mothers during food preparation is presented on Table 3. Table below shows the Hygiene practices among the mothers. indicates 80% of the mothers always wash their hands with soap and water before preparing food, 15% wash sometimes and 5% never mind to wash their hands, 72 % mothers always washes fruits before eating, 20% washes sometime and 8 % never wash fruits before eating. Results also indicated that about 42% of them always sterilize the feeding bottle, 38% sterilize sometimes and 20 % mothers never sterilize feeding bottles before using. Furthermore, the results revealed that 60% of the respondents always boiled water for drinking and preparation of milk formula, 31% used boiled sometime while 9% never used boiled for drinking and preparing milk. Findings from this study indicated that majority (80%) of mothers always re-heat leftover food before serving, 12% re-heat sometime while 8 never re-heat leftover food, only 15% of the mothers always used cup or spoon/fork for serving and feeding the child, majority (75%) used cup or spoon/fork sometime while 10% never used.

antenatal during the last pregnancy with 90% having attended four times. The results also revealed that while majority (86%) of the mothers had knowledge about Insecticide Treated Nets (ITNs) but, only 74% is presently using ITNs, 96.2% who are not using ITNs said it is not available.

Table 4. Care Seeking Behaviour among Mothers.

Variable	Frequency (F)	Percent (%)
Where do you normally seek care when your child is seek?		
Nowhere	2	1.0
Hospital/Community Clinic	156	78.0

Variable	Frequency (F)	Percent (%)
Traditional Healing Homes	26	13.0
Chemist	16	8.0
Total	200	100.0
Distance to the nearest health center		
> 10 minutes	66	33.0
about 30 minutes	48	24.0
30 mins to 1 hr	86	43.0
Total	200	100.0
Where did you deliver this child?		
Home/ TBA	96	48.0
Hospital/Clinic	104	52.0
Total	200	100.0
Do You Take Immunization For Your Child?		
No	2	1.0
Yes	198	99.0
Total	200	100.0
If Yes, How Many Times Has Your Child Received Immunization?		
0	2	1.0
One Time	2	1.0
Two Times	12	6.0
Three Times	44	22.0
Four Times	64	32.0
Five Times	76	38.0
Total	200	100.0
Do You Go For Antenatal Care During Pregnancies?		
No	4	2.0
Yes	196	98.0
Total	200	100.0
If Yes, How Many Times Did You Go During Your Last Pregnancy?		
None	2	1.0
Two Times	6	3.0
Three Times	5	5.0
Four Times	180	90.0
Total	198	99.0
Do You Know Insecticide Treated Net (ITN)?		
No	28	14.0
Yes	172	86.0
Total	200	100.0
If Yes, Are You Using ITN?		
No	45	26.0
Yes	127	74.0
Total	172	100.0
If No, Why Are You Not Using ITN?		
Not Available	43	96.2
Not Comfortable	2	3.8
Total	45	100.0
Child Feeding Practice During Illness		
Continue With Breastfeeding		
Yes	134	67
No	66	33
Continue With Bottle Feeding		
Yes	38	19
No	162	81
Continue Complementary Feeding		
Yes	68	34
No	122	66

3.5. Breastfeeding Practices Among the Mothers

The breastfeeding practices of the respondents are presented in Table 5. The result shows that breastfeeding is a common practice among the Mothers. As at the time of this study majority of the respondents (72%) were still breast feeding, 81% fed baby with colostrums (97.5%), 82% initiated breastfeeding within one hour of delivery while 88.0% of the

mothers breastfed on demand. The study also revealed that none (0%) of mothers intend to stop breastfeeding before 5 months while most (81%) of the mothers intend to breast fed beyond one year.

Table 5. Breast-feeding Practices among Mothers.

Variables	Frequency (f)	Percent (%)
Have you ever breast your child		
Yes	200	200
No	0	0
Total	100	100
Are you still breast feeding your child		
Yes	144	72
No	56	28
Total	200	100
Did you feed the baby with the first milk (colostrums)		
Yes	162	81
No	38	19
Total	200	100
Do you give only breast milk to your child		
Yes	84	42
No	116	58
Total	200	100
Initiation of Breast-feeding		
Within 30 minutes after delivery	100	50
Within 1 hour	64	32
Within 2 hours	20	10
Within 24 hours	10	5
Within 48 hours	6	3
Total	200	100
Breastfeeding Duration		
On the average, about how many times do you breast feed your child		
2 times	4	2
3-4 times	2	1
5-6 times	10	5
7-8 times	8	4
>8 times	0	0
On demand	176	88
Total	200	100
When do you intend to stop the child completely		
<5 months	0	0
6- 12months	18	9
13-24 months	162	81
> 24 months	20	10
Total	200	100

3.6. Bottle Feeding Practices Among the Mothers

The bottle feeding practices among the mothers is presented in Table 6. The present study indicated that majority (67%) of the mothers practiced bottle feeding. Out of the 134 mothers that practices bottle feeding the result shows that more than half (53.7%) introduced bottle feeding before 6 months and 13.4 less than 1 months. It was observed that most of these mothers (28.9%) bottle fed their babies twice a day while 23.9 %, 19.4%, 10.3% bottle fed once, 3-4 times and 6-8 times per day respectively.

Table 6. Bottle Feeding Practice among Mothers.

Variables	Frequency (f)	Percent (%)
Have you ever use feeding bottle		
Yes	134	67
No	66	33
Total	200	100

Variables	Frequency (f)	Percent (%)
When did you start bottle-feeding		
< one month	18	13.4
< 3 months	6	4.5
3-4 months	26	19.4
5-6 months	22	16.4
> 6 months	62	46.3
Total	134	100
How long have you bottle fed your child		
1-5 months	46	34.3
6-10 months	28	20.9
11-15 months	18	13.4
16-20 months	12	9
21-24 months	30	22.4
Total	134	100
How many times you bottle feed per day		
Once	26	19.4
2 times	38	28.4
3-4 times	32	23.9
5 times	12	9
6-8 times	14	10.3
>8times	12	9
Total	134	100

3.7. Pre-lacteal Feeding Practice Among Mothers

Pre-lacteal feeding practice among mothers is presented in Table 7. More than one-third (32.5%) indicated that they gave their babies other foods before breastfeeding 67.5% did not. Majority (44.6%) of the mothers reported that they gave glucose water to their child, while 26.2%, 18.4%, 10.8% gave plain water, milk formula and honey respectively. The results also revealed that most (44.6%) introduced water at 5-6 months of age and more than half (56%) introduced water before their children is 5 months. About 4 out of 10 mothers introduced complementary foods after the age of 6 months which is contrary to WHO/ UNICEF (2008) recommendation on appropriate complementary feeding.

Table 7. Pre-lacteal feeding Practices among Mothers.

Variables	Frequency (f)	Percent (%)
Do you give anything to the baby before breastfeeding		
Yes	65	32.5
No	135	67.5
Total	200	100
When do you start to give water to child		
From birth	6	9.2
1-2 months	8	12.3
3-4 months	22	33.9
5-6 months	29	44.6
Total	65	100
What do you give your baby apart from breast-milk		
Plain water	17	26.2
Glucose water	29	44.6
Honey	7	10.8
Milk formula	12	18.4
Total	65	100
At what age do you start to give your baby other foods		
< 1 month	12	6
1-2 months	17	8.5
3-4 months	55	27.5
5-6months	39	19.5
>6 months	77	38.5
Total	200	100

3.8. Commonly Used Complementary Among the Mothers

Figure 1: shows the commonly used complementary by the respondents. The results revealed that 34% of the foods given to the children belonging to the cereals/grain, 8% roots/tuber, 14% legumes/nuts and seeds, 12% from meat and fish products, 14% milk group and 18% vegetables and fruits among others foods give to the infants.

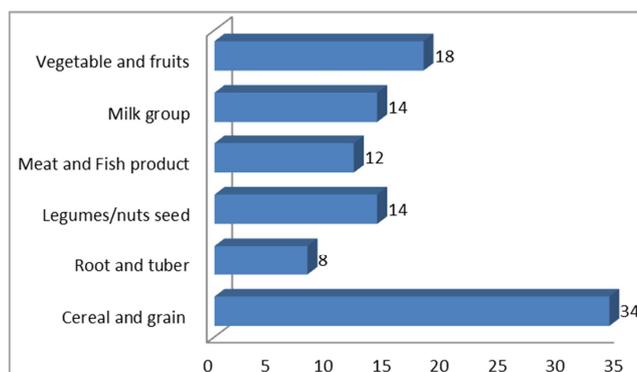


Figure 1. Complementary foods used by mothers.

4. Discussion

Majority (80%) of the mothers wash their hands before preparing food and 72% wash fruits before eating while 60% boiled water before drinking and before preparing milk/ juice. This hygienic practices could be attributed to the nursing mothers level of education and exposure, which seriously promote the child physical and mental well-being. Results of a study in northwestern Nigeria showed that only 28% of mothers washed their hands before preparing foods, and 19% always sterilized feeding bottles [14]. Findings in this study also that showed a reasonable proportion (20%) of mothers either sometimes or never re-heat their children food thereby allowing several hours (>3hours) to elapse between when food was prepared and when the child consumed the food. This practice is one of the major factors that may predispose food contamination and food poisoning. According to the fundamental principle for food hygiene and safety, the longer prepared food stays (>3hours) within ambient temperature, the more the environment is conducive for foodborne pathogens multiplication [13]. This in turn leads to high rate of infectivity. WHO [14], reported an increase in the incidence of diarrhoea (58.1%) in children whose prepared food was kept longer than 3 hours before consumption than those (43.8 %) kept for at most 3 hours. This therefore calls for intensive food hygiene education for the mothers.

In this study, the health-seeking behavior of the respondents was found to be appropriate 78%, of the mothers seeking care in the hospital when their child is sick, 98% attended antenatal care clinic, 99% of children immunized and 74% using Insecticides Treated Nets (ITNs). From the findings in this study one may deduce that the high rate (98%) of antenatal care attendance by mothers may have imparted positively to mothers' health care seeking behaviour for their children especially the high immunization (99%) observed in this study.

This is because children of women who attended antenatal care are more likely to receive immunization and seek medical care when sick. Women are also affording the opportunity of obtaining information on maternal and child health promotion during antenatal care visits.

Most (67%) of the nursing mothers continue with breastfeeding during illness. It is evident that during illness children prefer more fluid than solids. According to Hareesh and Jyotsna [4], the need for fluid often increases during illness therefore children should be offered and encouraged to take more fluid, and breastfeeding on demand should continue. WHO and UNICEF recommended that a child should be encouraged to eat some foods as well during the period of illness in order to maintain nutrient intake and enhance recovery, offered his/her favourite foods, and the foods should be soft and appetizing. Because the amount eaten at any one time is likely to be less than usual they further advised that the mother should give smaller meals more frequently and when appetite improves, the mother should offer an extra portion at each meal or add an extra meal or snack each day (14).

Breastfeeding is a common practices among mothers, in this present work all of them (100%) said that they have breast-feed before, but only (72%) of them are still breastfeeding as at the time of the current research. Different reasons have been added to this in other works [15, 16]. This includes sickness, nature of the nursing mother job, while some believe traditionally that the child is old enough to sucking breast milk. The results obtained in this study is in agreement with NDHS [17] which reported that breastfeeding and use of prelacteal feeds is widely practiced among women in Nigeria across communities. Pre-lacteal feeds were reported across communities, while breastfeeding was generally initiated in the first day after birth. Water, sometimes with traditional herbs added, was reported to be the most common prelacteal feed but in this study the main prelacteal feed is glucose water (44.6%). A good proportion (26.4%) of the mothers gave water to their baby probably because they feels that the water in the breast milk is not enough to satisfy the baby's need for water. About 44.6% of the caregivers that give water introduced water to babies between 5-6 months after delivery. According to the NDHS [17] report respondents in all communities reported giving water to babies along with breastmilk. Some reported introducing thin gruels or other liquids from 3 months forward. In that report respondents gave various reasons for giving water and introducing other liquids and foods.

Majority (82%) of the mothers initiates breastfeeding within the first 30 minutes after delivery, this is higher than 48.2% reported in Anambra State [18] and higher than 78.5% reported [16]. for mothers in Niger state, Nigeria which is contrary to trend of late initiation of breastfeeding reported in Nigeria [19, 20]. The benefits of early initiation of breastfeeding to the infants cannot be overemphasized. This benefits include the consumption of colostrum that has anti-infective properties which confers passive immunity to the child thereby lower the risk of neonatal death. This is confirmed by a study in Ghana; about 22% of newborn deaths were prevented if babies started breastfeeding within one hour after birth [21]. Other benefits to

a child are lowered risk of respiratory illness, asthma, acute otitis media, childhood leukemia, gastrointestinal infections, obesity and sudden infant death syndrome. While the advantages of breastfeeding to mothers are outcomes include reduced risk of Post-partum Hemorrhage, Type 2 diabetes, postpartum depression, endometrial cancer, breast and ovarian cancer [22]. Most of the mothers give their babies breast milk when the baby cry, that is on demand. High rate of on demand breastfeeding (88%) observed in this study is lower than that reported in Anambra state (92.5%) [18], Owerri Urban (93.8% and 92.3%) [23]. Demand feeding has a positive influence on breastfeeding Chiang, 1989).

Majority (44.6%) of the nursing give glucose water to babies due number of reasons. which has been dwell upon extensively by other researchers. It was observed that 18.4% (approximately 2 out of 10) of the infants were fed on infant formula, which could be as a result aggressive promotion of breast milk substitute in the country, workload of mothers, low income level, large family size, lack of support and beliefs of mother that breastmilk is insufficient to meet the requirement of their infants. The challenge with feeding infants with formula which include food sensitivities and allergies some children undergo food intolerance which is defined by reproducible symptoms when in contact with the offending food or the child may develop an abnormal immunologic reaction to food. Foods such as cow's milk, eggs, soy and wheat are associated with allergic reactions in infants. Another challenge is child refusal to take food which may occur because the child displays highly selective behaviours, suffers from colic which in turn interferes with feeding or the infant is afraid at the sight of food or drinks.

5. Conclusion

The study shows that a very high percentage of the mothers practiced early initiation of breastfeeding, sanitation and hygiene practices and exhibit good care seeking behaviour. However, prelacteal feeding especially the use of glucose water as well as plain water is still a challenge among the mothers. Therefore, healthcare providers need to intensify awareness on not only the importance of breastfeeding but also the adequacy of breastmilk.

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