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Analysis of Quality and Quantity of Complementary Feeding and Nutrition among Children of 6 to 36 Months in Maiduguri Metropolitan Council, Borno State, Nigeria

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Abstract

This paper provides a cross sectional analysis of the quality and quantity of complimentary feeding and nutrition among children of 6-36 months in Maiduguri Metropolitan Council. The role of health workers and parents in contextualities in driving, constraining or otherwise influencing complimentary feeding practices is explored through a review of the essential literature. Though this literature is found to have considerably expanded the scope of understanding around health and nutrition, research in the area is found to be lacking in methodological coherence and theoretical substance. Future efforts are needed to systematically bring together the array of insights, methodological approaches, and recommendations in this literature, as well as better bound, differentiate and systemize health and nutrition research in the area going forward. Two initial objectives are advanced through this paper in relation to this dual research imperative. They employed the survey research method. It revealed that knowledge of complementary feeding amongst women in emergencies are poor and government need to scale up support through local enlightenment programs that will boost good health and nutritional practices.

Keywords*: Complementary Feeding, Nutrition, Quality of complimentary feeding, Maiduguri Metropolitan Council, Nigeria.*

Introduction

Malnutrition is a problem confronting developing countries and this has continued to be a leading public health problem [1]. Globally, there were 165 million stunted, 99 million underweight and 51 million wasted children by the year 2012. It kills 3.1 million under-five children every year [1]. Globally, stunting among children under five years of age has fallen from 32.6% in 2000 to 22.2% in 2017 [2]. Those who survive any form of malnutrition particularly caused by poor feeding practices within the first 1000 days of life have both short term and long term consequences that leave much to be desired.

Worldwide, there are 2 types of feeding practices for children 0-23months of age which are breastfeeding and complementary feeding practices. They are unique in terms of age requirement, type and composition of the food and physiological functions. Appropriate child feeding practices and behaviors of parents have a positive effect on growth of infant and young Children [3, 4]. Transition from exclusive breastfeeding to family foods typically covers the period from 6 to 23 months of age. It is the time when malnutrition starts in many infants, contributing significantly to the high prevalence of undernutrition in children less than 5 years of Age worldwide [5], with stunting being the most prevalent form.

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Undernutrition is still a major health problem in developing countries and particularly in sub-Saharan Africa. The consequences of chronic undernutrition include stunting, wasting and underweight [6]. High level of underdevelopment, ethnic, social, religious and cultural factors are determinants contributing significantly to this Phenomena. An estimated 160 million children are affected by stunting in Africa, particularly in West, Central and Eastern Africa [7]. Severe acute malnutrition with Oedema (kwashiorkor) has the highest prevalence followed by severe acute malnutrition without oedema (marasmus) and marasmic– kwashiorkor [8].

In Nigeria, prevalence of stunting, underweight, and wasting were found to be 37%, 29% and 18% [9] by measuring the three anthropometric indices (height for age, weight for height and weight for age) which were also found to be at 37%, 23% and 7% respectively [10]. In the same vein, 44%, 32% and 11% children under five years of age were stunted, underweight and wasted respectively [11]. Infant feeding has two main components; Exclusive Breast Feeding (it involves giving only breast milk in first 6months) and Optimal Complementary Feeding (introduction of age appropriate food in terms of frequency, texture, consistency, and variety). Complementary feeding is necessary at 6 months when breast milk alone can no longer meet the nutrient needs of the infant, and which must be continued till the 2nd year of life and beyond. Complementary foods are often of inadequate nutritional quality, or they are given too early or too late, in too small amounts, or not frequently, the growth of the infant may falter [12]. Complementary foods are not introduced in a timely fashion for all children [13]. Inappropriate complementary feeding practices may result in malnutrition and cause various diseases. Almost half (45%) of all children's deaths are associated with malnutrition, while children in Sub-Saharan Africa are more than 14 times more likely to die before the age of 5 than children in developed regions [14]. Comparing two surveys in Nigeria, only 67 percent of breastfed children aged 6-9 months received complementary foods. Overall, only 10 percent of children aged 6-36 months are fed appropriately based on recommended infant and young child feeding (IYCF) practices [9] which was found to be 11% over all [10].

Adequate nutrition for the mother during pregnancy, the child during infancy and early childhood is very important for full human potential development to meet the crucial need of the first 1000 days of life. Exclusive breastfeeding is adequate for the first six months of life, while timely introduction of nutritionally adequate, safe, age-appropriate complementary feeding at sixth month of age is recommended for better health and development of infants [16]. The World Health Organization recommends that breastfeeding should continue with appropriate complementary feeding from 6 months to 2 years and beyond [17]. The first two years of life are a critical window for ensuring optimal child growth and development. Complementary feeding should be timely, meaning that all infants should start receiving food in addition to breast milk from 6 months onwards. It should be adequate, meaning that the complementary foods should be given in amounts, frequency, and consistency and using a variety of foods to cover the nutritional needs of the growing child while maintaining breastfeeding [18]. Children in developing countries are most vulnerable to growth faltering in the period when complementary foods are initiated as this often coincides with decreased breast milk consumption, increased micronutrient deficiencies and diarrheal illness [19]. Common inappropriate complementary feeding practices include introducing foods too early or too late, offering a limited diversity of foods and providing an inadequate quantity of food [20]. It based on the above assertions that these questions are raised: what type of complementary feeding practices are among children 6 – 36 months and is there prevalence of under nutrition among children 6 – 36 months

in Maiduguri Metropolitan Council, Borno State, Nigeria.

Therefore, the importance of favorable environmental conditions to support the provision of adequate and nutritious food for pregnant and lactating mothers and their young babies at the family, community and society levels as well as the need to have the right knowledge to carry out the recommended practices correctly for infant feeding cannot be over-emphasized. This study assess the quality and quantity of complementary feeding and nutrition among children 6 to 36 months in Maiduguri Metropolitan Council, Borno State, Nigeria.

Methodology

The study undertook a sequential mixed methods design, which consists of two phases of data collection namely quantitative survey followed by qualitative [21]. This method is important as it is well-suited to integrate wider variety of data and information. The method supports the identification of caregivers as well as health workers and the suitable nutritional programs for analysis. Where I investigated the procedures, motivations and community behind complementary feeding. I relied on the mixed research methods, including in-depth interviews with diverse individuals working in health centres, ranging from positions in management and health field workers.

Observation formed an important part of the research, in the form and capacity of a participant observer while studying the process of complimentary feeding. This technique is one of the common methodologies employed to develop a more accurate understanding of the social structure and environmental or situational factors, which motivate or restrict certain actions and decisions. The primary source of data collection was from the administration of household survey questionnaire to caregivers of children within 6 to 36 months of age. Weight and height/Length of children between 6-36months in selected household were measured to determine their nutritional status. The population of the study were households with children within 6 to 36 months of age who are residing in MMC. The study involved cross-sectional quantitative/qualitative data collection to obtain a reasonable estimate of complementary feeding knowledge and practices of care givers and knowledge of health workers providing nutrition services.

Situational Analysis of Nutrition in Nigeria: A Review of UNICEF Report

Newly released data show that the situation of children, adolescents and women in Nigeria has improved compared to previous years, but the pace of progress will have to be accelerated to reach Sustainable Development Goal (SDG) targets by 1 2030. With a population above 200 million, Nigeria is the most populous country in Africa, projected to grow to 375 million and become the third largest in the world 2 by 2050. About half the population is below 18 years of age, and every third Nigerian is an adolescent or young adult aged 10-24 years. The economy is in recovery, with a gross domestic product (GDP) growth of 3.6 per cent in 2021 and 3 2.3 (year-on-year) in the third quarter of 2022. Inflation reached 21 per cent in November 2022 4 (year-on-year) and monetary poverty is high: almost half of all children in Nigeria (47 per cent) live below the national poverty line of 376.5 Nigerian Naira per 5 days. Among children under five years, 6 out of 10 are multi dimensionally poor.

Despite these profound needs, public spending in general as a percentage of GDP is among the lowest in the world, despite increasing from 11 to 13 per cent from 2020 to 2021. It is particularly low in social sectors, where public spending per person is only US$22 for education and $15 for health, equivalent to 1.2 and 0.8 per cent of GDP, 7 respectively. Insecurity continues to affect the well-being of children in Nigeria, with high levels of domestic crime coupled with regionally based violent attacks by non-state armed groups. The

protracted conflict in the north-east and growing hostilities in the northwest have caused alarming levels of food insecurity and malnutrition. At the beginning of 2022, an estimated 12.8 million people, including 8.1 million children, were affected by conflict and violence in Nigeria.

Nigeria's birth registration efforts are now showing progress, with 57 per cent of children under age five registered (about 19.6 million children), compared with only 47 per cent in 2016/17. National data reveal no gender disparity in these numbers; however, children are less likely to be registered if they live in rural areas or poor households. In addition, there is large variation across states, with birth registration rates ranging from 27 to 92 per cent. The under-five mortality rate is 102 per 1,000 live births, a notable reduction from 120 in 2016/17 but still far from the SDG target of 25 per 1,000 live births. One-third of these deaths (34 per 1,000 live births) occur within the first 28 days of life. While skilled birth attendance at the time of delivery increased from 43 per cent in 2016/17 to 51 per cent in 2021, access to this important life-saving intervention is still very limited.

According to the preliminary report of the 2022 National Food Consumption and Micronutrient Survey, 33 per cent of all children under five are 9 stunted, compared with 37 per cent in 2018. This, however, also differs by state with stunting being highest in the north-west (48 per cent) and the north-east (35 per cent). Additionally, severe acute malnutrition affects 3 per cent of all children under 10 five. Access to improved water and sanitation is progressing. About 76 per cent of the population now has access to an improved drinking water source, compared with 64 per cent in 2016/17. The use of improved sanitation facilities has also increased considerably, from 36 per cent in 2016/17 to 56 per cent in 2021. Many still do not have any of these facilities, and open defecation is practiced by over 38 million people. The out-of-school rate for primary-level education saw limited improvement, dropping from 27.2 per 11 percent in 2016/17 to 25.6 per cent in 2021. Again, vast differences exist between states: seven states have rates above 50 per cent and only 15 states are below 10 per cent. Nationally, 58 per cent of children from the poorest households are out of school. Most school children, both girls and boys, transition to lower secondary school (84 per cent), which is a significant improvement from 67 per cent in 2016/17.

However, only 67 per cent of girls and 69 per cent of boys' complete lower secondary education.

What National Progress for Children in Nigeria have been made?

Under-five mortality rate 102 per 1,000 live birth Skilled birth attendant present at birth 51 per cent Access to improved drinking water 76 per cent Use of improved sanitation facilities 56 per cent Birth registration for children under five 57 per cent 4 5 While many indicators of children's well-being do not display strong gender differences nationally, Nigeria ranked 123 on the Global Gender Gap Index in 2022. Nigeria has the third highest prevalence of female genital mutilation in the world with a national average of 15 per cent among 15–49-yearold girls and women Adolescent girls face harmful practices and gender discriminatory social norms that limit their agency and bodily autonomy. Nigeria has the third highest prevalence of female genital mutilation in the world, with a national average of 15 per cent among girls and women aged 15-49 years. Adolescent girls lack modern employment skills and lag in internet access and use (21 per cent compared with 38 per cent for boys). Child marriage is declining in 2021, 34 per cent of women aged 20-49 were married before the age of 18, compared with 44 per cent in 2016/17. However, given Nigeria's rapid population growth, UNICEF predicts that early marriage will affect 29 million girls and young women by 2050. Children in Nigeria have an extremely

high risk of 13 exposures to climate and environmental shocks.

UNICEF has worked to increase child survival by combating the lagging immunization rates among children in Nigeria. With the National Primary Health Care Development Agency, GAVI, the World Health Organization, and the Bill and Melinda Gates Foundation, we developed a "zero-dose" strategy to reach children in the 100 most deprived local government areas in 18 states, laying the foundation for targeted intervention. Strengthening the health care system, expanding access to underserved populations, and focusing on primary health care – including newborn, child, adolescent, maternal and reproductive health – were key to reaching children and their families. Gains were made by strengthening the health system through focus on Primary health care Reproductive, maternal, newborn, child and adolescent health Expanding access to underserved populations.

Health and Nutrition

In keeping with UNICEF's global nutrition strategy, the emphasis has shifted from the treatment of malnutrition to its prevention. Vitamin A supplementation is one key preventive intervention that promotes child development and lowers the risk of cognitive delays and child mortality due to malnutrition. For the first time in five years, two rounds of Vitamin A supplementation were successfully completed in Nigeria in 2022: 35 million children received one dose and 23 million children received two doses of Vitamin A. This constitutes a massive increase from the 9.8 million reached with only one round of vitamin A supplementation in 2021. This achievement was made possible with the State and National Primary Health Care Development Agencies and by utilizing campaign.

platforms, integrating Vitamin A supplementation with immunization services, and bringing together stakeholders at different levels – such as Nutrition International in 7 states, Helen Keller International in 4 states, and Accelerating Nutrition Results in Nigeria with World Bank International Development Assistance in 13 states. UNICEF stresses that integrating health, nutrition and child protection campaigns accelerates the achievement of results for children. To capitalize on this approach, routine immunization, COVID-19 vaccines, Vitamin A supplementation, and birth registration campaigns were conducted in 25 states reaching over 30 million children. Expanding cold chain capacity also ensured the availability of vaccines at all levels. This translated to supporting the administration of over 90 million COVID-19 vaccines in 2022, resulting in 63 million Nigerians being fully vaccinated. UNICEF is also vigorously promoting outreach and mobile strategies in nutrition to ensure greater accessibility to nutrition services for populations that live far from the fixed sites to increase admissions. UNICEF supported the State Primary Health Care Development Agency in setting up 485 outreach sites in the Northeast and 162 in the Northwest states. Integrated Campaigns Reached 30 Million Children in 25 States with Routine Immunizations, Covid-19 Vaccines, Vitamin A And Birth Registrations UNICEF supported the National Primary Health Care Development Agency to scale up services 10.

Vitamin A supplementation 35 million children received one dose 23 million children received two doses Scaling the mid-upper arm circumference approach at the community level 96 per cent of children were cured of severe acute malnutrition Due to ongoing conflict, UNICEF worked to ensure access to quality health care for children and families in humanitarian contexts in the north-east region of Nigeria, supporting more than 5 million medical consultations in 2022. Recently, that work was extended to the north-west to respond to the growing needs of displaced populations. For example, six states in the north-east and north-west were supported by UNICEF, the Government, and partners to diagnose the risk of

acute malnutrition: a simple measurement of the arm enabled families to diagnose malnutrition at home and follow-up with treatment at the community level. To meet the increased need for ready-to-use therapeutic food, UNICEF enabled and expanded private sector partners to locally produce ready-touse therapeutic food. As a result, the pipeline for the life-saving commodities was secured and lead times were shortened. In 2022, almost 600,000 children were reached with life-saving nutrition treatment, achieving a 96 per cent recovery rate for severe acute malnutrition. Major contributions to evidence generation were made, including the release of the 2021 MICS findings; the preliminary report of the National Food Consumption and Micronutrients Survey; and a barrier analysis on the causes of low iron and folic acid consumption rates. In addition to advocacy at state and federal levels, UNICEF leveraged its role as Co-Chair of the Scaling up Nutrition Development Partners Group and as a member of the National Council of Nutrition to unlock financing, resulting in the government's release of $1.8 million in 17 focal states. To improve nutrition and food security, UNICEF, FAO and WFP continued to support the Government in implementing commitments from the 2021 Food Systems Summit and Nutrition for Growth Summit. To improve access and uptake of HIV services, UNICEF worked closely with WHO, UNFPA and UNAIDS through the Joint United Nations Team on AIDS for high-level advocacy and technical support. 12 Lessons Learned: Game changer strategies for increasing immunization coverage were integrating delivery methods, mobilizing communities, and strengthening the vaccine supply chain.

Discussion and Results

Data collected were presented and discussed thematically. Discussions were based on the objectives of the study and the research questions raised.

Table 1. Complementary Feeding Indicators and Related Feeding Practices of Mothers in MMC

Characteristics	**N**	**%**
Introduction of solid, semi-solid or soft foods		
Met	110	83.4
Not met	22	16.6
Minimum dietary diversity		
Met	44	33.5
Not met	88	66.5
Minimum meal frequency		
Met	48	36.7
Not met	84	63.3
Minimum acceptable diet		
Met	34	26.1
Not met	96	73.9
Bottle feeding		
Yes	41	34.1
No	80	65.9
Milk feeding frequency for non-breastfed child		
Met	4	7
Not met	31	93
Still breastfeeding		

Yes	111	84.2
No	21	15.8
Age of introducing complementary food		
<6 months	63	49
6 months	24	19
>6 months	38	30
I don't Know	3	2
Washed Hands after cleaning defecated Child		
Yes	88	67.6
No	42	32.4
Reasons for starting complementary foods		
Hospital instruction	24	18.4
For good growth	11	8.2
Baby was not satisfied	41	30.7
Breast milk was not enough	8	5.8
Always crying	36	27
Others	12	9.4
First complementary food offered to child		
Infant formula	26	20
Custard	31	24.2
Guinea corn (Pap)	61	47.3
Other foods	11	8.5
Feeding the Child who refuses certain foods		
Force	28	21.5
Play with the baby and introduce slowly	82	62.3
Leave him/her alone	7	5.6
Get another food he/she likes	14	10.3
Feeding the Sick Child		
Increase the feeds	79	62
Decrease the feed	49	38
Hand washing with soap before feeding child		
Yes	68	52.3
No	62	47.7

Source: Field Survey,2022

Table 2. Prevalence of under Nutrition amongst Children 6-36 Months by Sex in MMC

Indicator	**Males %**	**Females %**	**All % (95% CI)**
Wasting (WFH < −2 z-score)	32	17	25.95 (21.5–30.4 95% CI)
Severe wasting (WFH < −3 z-score)	10.2	1.2	7.25 (3.5-11.0 95%CI)
Overweight and obesity (WFH > +2 z-score)	4	7	7.1 (2.9-8.4, 95%CI)
Underweight (WFA < −2 z-score)	40.1	18.4	31.8 (24.1-39.5, 95% CI)
Severe underweight (WFA < −3 z-score)	10	3.8	7.4 (4.9-10.0, 95%CI)
Stunting (HFA < −2 z-score)	27.2	22.2	24.5 (18.7–30.4 95% CI)
Severe stunting (HFA < −3 z-score)	3.2	1.8	3.7 (1.5–5.8 95% CI)

Source: Field Survey,2022

Table 1. showed the Complementary Feeding outcome in MMC. The proportion of infants 6–8 months of age who were receiving solid, semi-solid or soft foods was 83.4%. The rate of feeding children 6-24months the minimum dietary diversity was 33.5%; this rate was lower for infants 6–11 months (24.6%) than older children aged 12–23 months (43.2%). The minimum meal frequency rate was 36.7%; higher among children aged 6–11 months (74.4%) compared with children aged 12–23 months (45.5%). The rate of minimum acceptable diet was 26.1%, which was lower at age 6–11 months (20.7%) compared to older children 12–23 months (22.2%). Bottle feeding rate during the previous 24 h as reported by caregivers was observed to be 34.1%, higher at age 6–11 months 40.5 % than at age 12–23 months 16.0%. Milk feeding frequency for non-breastfed children was 7.0% and higher at the age 6–11 months than 12–23 months 7.5 and 6.7% respectively.

A-third of the mothers (30.7%) believed their baby was not satisfied with breast milk hence the reason to start complementary food. Some mothers started complementary feeding because of instructions given in hospital (18.4%), while 5.8% started complementary feeding because breast milk was not enough; 27.0% reported that baby was always crying as such they began feeding the child with complementary foods. The most common first complementary foods mothers offered to their babies were guinea corn (pap, 47.3%) and custard (24.2%). About 20.0% of mothers gave infant formula as the first complementary feed.

With respect to feeding the Child who refuses certain foods, majority of the mothers, 62.3% confirmed that they play with the child and introduce complementary feeds slowly while 21.5% of the mothers opined that they force the child when he/she refuses certain foods.

Regarding hand washing with soap and water before feeding the child, 52.3% of the respondents agreed that they carry out this practice while 47.7% of the mothers were not practicing this during the survey.

Nutritional Statues of Children 6-36 months

From the study, the prevalence of wasting was 25.95% (95% CI 21.5–30.4), overweight and obesity was 7.1% (95% CI 2.9–8.4), underweight was 31.8% (95% CI 24.1–39.5) stunting was 24.5% (95% CI 18.7– 30.4).

Wasting was more common among males (32%) compared with females (17%), underweight more among males than females 40.1 vs 18.4%. Stunting was 27.2% for males and 22.2% among females. Overweight in terms of sex distribution was less common among males compared with females (4 vs 7%). According to age of the children, wasting was most prevalent among infants in the age group 9–11 months old (28.0%) than infants aged 6–8 months (25.4%) and children aged 12-23months (20.5%), underweight was common among the age group 9–11 months than 6–8 months and 12-23months (31.3 vs 31.7% vs 29.6%), in reverse, stunting was most prevalent among 12–23 months old infants than 9–11 months and toddler 6-8moths (34.2 vs 19.7% vs 16.0).

Table 3. Standard of Complementary Feeding amongst Children 6-36 Months in MMC

Introduction of solid, semi-solid or soft foods									
Met	20	78	0.04	37.8	110	0.8	24	110	0.04
Not met	45.6	11		25.2	22		35.1	22	
Minimum dietary diversity									
Met	28	30	0.4	20.6	44	0.011	19.6	44	0.041
Not met	26.8	84		41.4	88		24.5	88	
Minimum meal frequency									
Met	27.2	83	0.85	32.5	48	0.9	22.5	48	0.038

Not met	30	44		36	84		29	84	
Minimum acceptable diet									
Met	29.6	33	0.8	23.2	34	0.03	17.4	34	0.038
Not met	26.3	95		38.5	96		24.2	96	
Bottle feeding									
Yes	24.5	88	0.57	29	41	0.477	23	41	0.789
No	31.6	41		37.4	80		25.7	80	
Milk feeding frequency for non-breastfed child									
Met	0	1	0.44	0	4	0.362	30.3	4	0.582
Not met	23.7	19		22.5	31		23	31	
Hand washing with soap before feeding child									
Yes	22.8	74	0.03	30.9	88	0.062	23.6	88	0.575
No	30.9	55		36.6	42		24.6	42	
Child sick in the previous 1 month									
Yes	26.8	61	0.2	38	61	0	26.4	61	0.868
No	26.8	68		29.2	68		21.6	68	
Child ever immunized									
Yes	27.5	122	0.944	36.3	115	1	25.7	115	0.688
No	32.1	3		30.3	17		15.2	17	
Mother's age									
<20	18.5	20	0.221	26.5	20	0.072	21.5	20	0.749
20–30	23.2	81		28.7	81		20.5	81	
>30	37.5	30		45.4	30		28	30	

Source: Field Survey,2022

Table 3 showed the Association between children aged 6-36 months' nutritional status indicators and complementary feeding indicators are presented in Table 3. There was a significant association ($p < 0.05$) between timely introduction of solids with the nutritional status indicator wasting. Wasting was observed to be more prevalent (50%) among children who did not receive timely solid, semi-solid or soft foods compared with children who received solid, semi-solid or soft foods (25.6%).

The minimum dietary diversity was significantly associated with underweight. Children who did not receive the minimum dietary diversity were more underweight (38.2%) than children who received the minimum dietary diversity (23.8%). Similarly, children who did not receive the minimum acceptable diet were significantly more underweight (36.0%) than their counterparts who received the minimum acceptable diet as recommended (25.7%).

The feeding indicator's introduction of solid, semi-solid or soft foods, minimum dietary diversity, and minimum meal frequency showed significant association with stunting. Children who were not receiving solid, semi-solid or soft foods at 6–8 months of age were more stunted than children who received complementary foods at 6–8 months (35.1 vs 24.0%); stunting was also more prevalent among children 6-24months who were not receiving the minimum dietary diversity (24.3%) relative with those who received the minimum dietary diversity (19.6%). Likewise, those who did not receive the minimum meal frequency were more stunted (29%) compared with children who met the minimum feeding frequency criteria (22.5%).

Wasting in children was higher among those whose mothers do not wash hands with soap before feeding the child (33.9%) relative to

infants whose mothers washed hands with soap before feeding child (22.8%).

Implication for Policy Implementation

Standard nutrition strategy to achieve universal health coverage. The paper observed that strengthening routine immunization coverage across the country and continue polio eradication, Support the National Plan of Action on Food and Nutrition to reduce stunting and wasting and Focus on the first 1,000 days of life, including support to pregnancy and nutritional programmes and ensure children in humanitarian situations have access to quality preventive and responsive services specifically in nutrition and health will go a long way in changing lives.

Conclusion

The findings of this study revealed that malnutrition is a serious health problem among children aged 6 – 36 months. Wasting, being underweight and stunting are prevalent with variations based on gender and age. Additionally, children who did not receive timely introduction of solid, semi-solid or soft foods, minimum dietary diversity, or meal frequency according to age were more likely to be underweight, stunted or wasted respectively.

Recommendations

1. Government should provide platform in educating women in emergencies. Education Increases the quality of learning through teacher professional development, curriculum reforms, mother tongue instruction, management information systems, and the active engagement of parents and communities in terms of nutritional services.
2. Government and other stakeholders should Scale up SOCIAL POLICY by Supporting social transfers (cash and in-kind support) to facilitate access to health services and survey and provide real-time data to inform policy, programmatic and management decision on nutrition.
3. Strengthen community approaches to total sanitation and efforts to eradicate mal nutritional practices and to ensure the sustainability of water services in rural communities; develop and implement policies and equitable and gender-responsive access to quality nutrition.

Conflict of Interest

There is no conflict of interest.

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