

# Assessment of Complementary Feeding Practices and Nutritional Status of Children (0-24 months) in Akuku Toru Local Government Area of Rivers State, Nigeria

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## Authors' contributions

*This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.*

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## ABSTRACT

This study was carried out to assess complementary feeding practices of under-five children in Akuku Toru Local Government Area of Rivers State. A cross-sectional descriptive survey research was adopted for the study. The population for the study consisted of nursing mothers with children (0-24 months) attending their normal health services in seven (7) major primary health care centres in Akuku Toru Local Government Area, Rivers State. A sample size of 210 nursing mothers was selected for the study. The instrument used for data collection was a self-structured questionnaire titled "Assessment of Complementary Feeding Practices of Children Questionnaire". The questionnaire was validated by three validates. Data generated using the research instrument was analyzed using frequency, percentages and mean. The findings obtained showed that most nursing mothers initiate complementary feeding at early age and their reasons often times are pressure from their family members who do not understand the benefits of adequate breast milk and pressure from employers to resume work. Majority of the sampled nursing mothers in the study area prefer cereal/grain, fruits, vegetables, yoghurt and custard over other complementary foods used in nursing a child. Majority of the respondent agreed that the nutritional status of infants introduced to

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complementary foods at their early stage of development is usually underweight, stunting and wasting. It was also established that inappropriate complementary feeding practices adopted by nursing mothers in the study areas has insignificant effect on the nutritional status of their infants. Therefore, the study recommends that there is need for promotion of women's health and nutrition as a strategy that will benefit child nutritional status. Interventional programmes should target poorer household and mothers with lower educational level to improve complementary feeding practices of mothers. Developmental programmes should focus on empowering women in rural communities by improving of household income through creation of employment and access to credit facilities that will enable women engage in sustainable means of livelihood.

**Keywords:** Complementary feeding; malnutrition; feeding practices; breast milk.

## 1. INTRODUCTION

Complementary feeding is the corner stone of child's nutrition. This involves complementing breast milk or breast milk substitute with other foods, from the age of six months, appropriate for sustaining normal growth and development while breast feeding continues till two years or beyond. Breastfeeding, according to Okeahialam [1], offers the best nourishment for a child's optimal growth and maintenance within the first months after birth. After that, it is no more sufficient in terms of both quality and quantity for the child's proper growth and development. Complementary feeding must be done on time, which means that babies should start ingesting meals other than breast milk at the age of six months [2]. It should not be done before the age of six months or after the age of six months. It should be sufficient, which means that it should have a good nutritional value. It should be safe during preparation and administration, all measures should be taken to minimize contamination and it should be appropriate meaning that the foods should be in sufficient quantity and texture acceptable to the infant [3].

Similarly, Abeshu *et al.* [2] stated that complementary foods refer to foods and liquids other than breast milk or infant formulas. They are needed for nutritional and cognitive reasons throughout the second half of the first year of life, as well as to help with the change from breast milk to family foods. Complementary foods are anticipated to be high in energy density with adequate protein composition, required vitamins and minerals to meet the nutrient needs of the infant. Traditional complementary foods in most cases are made from mono cereal gruel such as millet, guinea corn, maize, sorghum and are deficient in essential amino acids, particularly lysine. A combination of cereal, tuber, vegetables and sea foods in formulating complementary food may help to provide the deficiency in

essential amino acids and micronutrients in mono cereal traditional complementary foods.

Malnutrition is the largest risk factor in the world for disability and premature mortality among young children, especially in developing countries. Although the condition is entirely preventable, malnutrition is a significant underlying factor in more than half of the deaths of young children in these countries [4]. Malnutrition is a background factor for deaths from diarrhea, measles, acute respiratory infection, meningitis and malaria (Pelletier, 2014). In Nigeria, 40%, 29% and 10% of children under five years of age are stunted, wasted and underweight, respectively [5]. A child in Africa is 30 times more likely than a child in Western Europe to die before reaching the age of five, and the most common cause of child death is a combination of starvation and infection [5]. Some children in low-income nations with high malnutrition rates grow normally as a result of improved schooling and home management, or their mothers' coping skills [6]. Furthermore, proper feeding techniques are just as important as providing complementary foods that meet daily nutritional needs in terms of ensuring consumption.

Malnutrition, particularly in children as a result of insufficient eating and child care, as well as disease, is a serious public health issue in the developing world, including Nigeria. Malnutrition is one of the leading causes of death for many of the world's children, accounting for more than a third of all fatalities among children under the age of five. Around 178 million children are stunted worldwide, with Africa having the second highest rates [7]. In Nigeria, 41% of children under the age of five are stunted, with the percentage increasing from 27% at 6 months to 50% at 23 months, when supplemental feeding is intensified. In Nigeria, over 23% of children under the age of five are underweight, with a

prevalence of 24% among children aged 6–23 months; wasting affects 13% of children under the age of five, and 17% of children aged 6–23 months. Obesity among children under the age of five, on the other hand, is at 9% [8]. Malnutrition has been associated to inadequate breastfeeding and supplemental feeding habits by mothers, as well as a high rate of infectious infections, in the first two years of life [9, 10]. In Nigeria, more than half of newborns are given supplemental foods before the age of six months, and these foods are frequently low in energy, protein, and micronutrients such as iron, zinc, iodine, and vitamin A [8]. Furthermore, during the supplementary feeding time, the child's eating frequency is typically low, and the amounts and quality of foods provided are typically lower than those needed for the child's age. Thus, complementary feeding process has been associated with major changes in both macronutrient and micronutrient intake of children resulting in malnutrition.

Complementary feeding is critical for the proper nutrition of babies and young children since it ensures their growth, health, and development. Appropriate child feeding techniques and parental behaviors have a positive impact on infant and young child growth [11]. In most of the countries analyzed, for example, a review of data sets from numerous Latin American countries revealed that adequate breastfeeding and complementary feeding practices were favorably associated with child height-for-age [12]. Between the ages of 6 and 23, the transition from exclusive nursing to family eating takes place. Many infants begin to suffer from malnutrition at this age, contributing significantly to the high prevalence of malnutrition among children under the age of five around the world. Complementary foods should be added to the child's diet during this time [11]. It is required to bridge the energy, iron, and other important nutrients gap between what is delivered by exclusive breastfeeding and the infant's overall nutritional needs. This gap widens as people become older, necessitating a greater input of energy and minerals, particularly iron, from sources other than breast milk [8]. Therefore, it should be timely, adequate, and be given in a way that is appropriate for the age of the child, applying responsive feeding. As the child ages, feeding practices must change in response to the child's changing nutritional requirements, motor skills, and maturing digestive and immune systems.

The fourth Millennium Development Goal (MDG) called for a two-thirds decline in child mortality by 2015. However, according to a recent assessment, Nigeria's progress toward reducing child death by two-thirds since 1990 has stalled, with an annual reduction in under-five mortality of only 1.2 percent [9]. Every year, almost one million Nigerian children under the age of five die, with an estimated 11 million children under the age of five dying worldwide. In Nigeria, an estimated 2 million children suffer from severe acute malnutrition (SAM), but only two out of every ten of these children receive treatment. Wasting and stunting are symptoms of dietary insufficiency that occur suddenly or over time. Furthermore, underweight reflects both acute and chronic dietary deficient exposures [13]. Stunting, underweight, and thinness were found to be prevalent in 41.6 percent, 18.2 percent, and 20.0 percent of school students in a rural South-eastern Nigerian community [14]. Measles, malaria, diarrhea, pneumonia, and other infections are common among malnourished children [15]. Children who are malnourished and have micronutrient deficiencies early in life have a lifelong deficit in cognitive and physical development, according to research.

It has been stated that growth has slowed as a result of a lack of complementary food in terms of quality, quantity, and frequency of meals [16]. Awogbenja & Ugwuona [17] found that nursing mothers who introduced supplemental food too early had a high frequency of under-nourished children in a research on feeding patterns and nutritional status of under-five children in northern Nigeria. Because malnutrition is a major public health issue in the country, and poor complementary feeding habits of mothers have been linked to poor nutritional status of infants, addressing the impact of mothers' complementary feeding practices on children's nutritional status could be a key strategy for reducing the strain of undernourishment [8].

Currently in Nigeria, but also in many developing countries, interventions mainly address the issue of what to feed infants [3]. Although early childhood malnutrition can be attributable to poverty and lack of resources, family and caregiver characteristics, such as education and household management or coping skills of the mother, can determine normal growth and development. Lack of knowledge regarding appropriate foods and feeding practices can contribute to malnutrition to a greater degree than lack of food. It is not only providing the

appropriate combination of complementary foods to meet the child's nutritional needs that is important, but also feeding practices such as frequency of feeds and feeding style need to be considered. However, there has not yet been information known about the current complementary feeding practice in a study area. Therefore, this study aimed to assess the complementary feeding practice of infants and young children aged 5 months and below.

## **2. METHODOLOGY**

### **2.1 Research Design**

The research design for this study is descriptive cross-sectional study with a target population of nursing mothers with infants (0-24 months) in Akuku Toru Local Government Area, Rivers State. Descriptive cross sectional research design involved collecting data from respondents to answer questions concerning the current status of the subject of the study and also involves a one-time observation of variables.

### **2.2 Study Area**

The study area is Akuku Toru Local Government Area in Nigeria, Rivers State. Akuku-Toru is a Local Government Area in Nigeria located in Rivers State. The town of Abonnema is where the organization's headquarters are located. It covers 1,443 km<sup>2</sup> and had a population of 156,006 people according to the 2006 census [18].

### **2.3 Population of Study**

The population of the study comprised all the nursing mothers with children (0-24 months) attending the clinic for normal health services including routine immunization, growth monitoring and nutrition counseling. Mothers of the children were recruited to provide information on feeding practices of the study children. Seven (7) major primary health care centres in Akuku Toru Local Government Area, Rivers State were selected during the period of this research work. These seven (7) major primary health care centres are; Abonnema Comprehensive Health Centre, Abonnema General Hospital, Obonoma Model Primary Health Centre, Abissa Primary Health Centre, Elem-Sangama Primary Health Centre, Idama Primary Health Centre and Soku Cottage Hospital.

### **2.4 Sample and Sampling Techniques**

The sampling technique the study adopted is convenient sampling technique. Here the samples are selected based on the availability and accessibility. Based on the above, the study conveniently selected respondents from the entire population based on their availability and accessibility in the different health centres. The researcher conveniently selected 30 nursing mothers from the seven major primary health care centres in Akuku Toru Local Government Area, with children within 0-24 months that visit these primary health care centres for their health. Therefore, the sample size of this study is 210 respondents.

### **2.5 Research Instrument**

The instrument for data collection is a structured questionnaire. Enumerators who were trained for this purpose were used for field data gathering. The research instrument was structured into five (5) broad sections namely A, B, C, D and E.

### **2.6 Validity of the Instrument**

To ensure the validity of the instrument, the questionnaire was submitted to the project supervisor and other lectures in the department of Food Sciences and Technology for a thorough scrutiny and suggestions, correction and amendment.

### **2.7 Reliability of the Instrument**

To ensure that the research instrument is reliable, it was distributed to some selected respondents. After two weeks, the test was carried out again on the same set of respondents after which the data collected was computed using simple tables and percentages.

### **2.8 Administration of the Instrument**

The researcher personally administered the questionnaire to the respondents with the help of research assistant, who carefully read out the instructions to them, to ensure that the entire study area is fully covered; completed instrument was collected immediately after completion by the respondents.

## 2.9 Method of Data Collection

The researcher used direct delivery method to administer the questionnaire to the respondents. The research assistants were educated by the researcher on the purpose of the study and how to administer the questionnaire. Weight and height measurements of the children were also recorded for the evaluation of nutritional status. The researcher and research assistants administered the questionnaire to the respondents and collected it back immediately on completion. The reason for the use of research assistants was to facilitate the quick distribution and retrieval of the questionnaire copies from the respondents.

## 2.10 Method of Data Analysis

The data obtained in the course of the study from the sampled respondents through the use of structured questionnaire was analyzed using frequency, percentage, cumulative percentage, mean and standard deviation with the aid Statistical Package for Social Sciences (SPSS). Anthropometric indices were calculated using reference medians recommended by WHO and classified according to standard deviation units (z-scores), and based on the WHO criteria to estimate anthropometric indices (WAZ, HAZ and BAZ) according to the NCHS/WHO method which assesses a child's nutritional status [19].

## 3. RESULTS AND DISCUSSION

### 3.1 Demographic Variables of the Children and Mothers

Table 1 shows the demographic characteristics of the children and mothers. The result showed that the age of the children who were 0-6 months at interview recorded 17 (8.50%), 7-12 months were 25 (12.50%), 13-24 months were 17 (8.50%), 25-36 months were 33 (16.50%) while children who were more than 37 months recorded 108 (54.00%). The distribution of the study showed that the largest percentage of the children were more than 37 months. The result of the respondents also showed that 8 (4.00%) of the mothers were public servants, 22 (11.00%) were civil servant, 15 (7.50%) were professionals, 30 (15.00%) were artisans, 15 (7.50%) were students, 66 (33.33%) were unemployed while 44 (22.22%) were traders. In terms of qualification, 29 (14.50%) of the mothers had no formal qualification, 41 (20.50%) had

primary qualification, 88 (44.00%) had secondary, 24 (12.00%) had tertiary while 18 (9.00%) had post-tertiary qualification. The result also showed that mothers who had 1-2 children recorded 64 (32.00%), 3-4 children recorded 91 (45.50%) while 45 (22.50%) of the mothers had 5 children and above.

### 3.2 Complementary Feeding History

Table 2 showed results obtained on the age nursing mothers initiate complementary feeding to their infants. Result obtained showed that 160 (80%) of the sampled nursing mothers introduce complementary feeding at 0–5 months, 30 (15%) of the sampled nursing mothers initiate complementary feeding to their infants at 5 – 10 months, while 10 (5%) of sampled nursing mothers in Akuku Toru LGA, Rivers State went for the option that they introduce complementary feeding to their infants at 10 – 15 months.

Table 3 present data generated and analyzed on the reasons behind the early initiation of complementary feeding to infants by nursing mothers. Hence, it was realized that 40 (20%) of sampled nursing mothers in the study area opined that the reason for early initiation of complementary feeding is because of their inadequate knowledge on the benefit of breast milk, 10 (5%) of the sampled nursing mothers went for insufficient breast milk production as reason, 90 (45%) of total sampled nursing mothers identified pressure from family members of reason for early initiation of complementary feeding while 60 (30%) opined that pressure from employers to resume work could be the reason for early initiation of complementary feeding to infants.

Table 4 present result obtained on respondents' opinion as to whether mothers with male child initiate complementary feeding early than mothers with female child. Result illustrated above showed that 65(32.5%) of the sampled nursing mothers strongly agreed to the statement made, 100(50%) agreed to the above statement, 20(10%) disagreed to the statement, while 15(7.5%) strongly agreed to the statement made. Hence, it could be reasonable said that majority of the sampled nursing mothers in the study area were of the opinion that mothers with male child initiate complementary feeding early than mothers with female child.

**Table 1. Demographic variables of the children and mothers**

<b>Variables</b>	<b>N=200</b>	<b>%</b>
<b>Age of child at interview</b>		
0-5 months	17	8.50
6-10 months	25	12.50
11-15 months	17	8.50
16-20 months	33	16.50
21-24 months	108	54.00
<b>Total</b>	<b>200</b>	<b>100</b>
<b>Occupation of mother</b>		
Public servant	8	4.00
Civil servant	22	11.00
Professional	15	7.50
Artisan	30	15.00
Student	15	7.50
Unemployed	66	33.00
Trader	44	22.00
<b>Total</b>	<b>200</b>	<b>100</b>
<b>Highest qualification of mother</b>		
No formal qualification	29	14.50
Primary	41	20.50
Secondary	88	44.00
Tertiary	24	12.00
Post-tertiary	18	9.00
<b>Total</b>	<b>200</b>	<b>100</b>
<b>No. of children</b>		
1-2	64	32.00
3-4	91	45.50
5 and above	45	22.50
<b>Total</b>	<b>200</b>	<b>100</b>

**Table 2. Age nursing mothers initiate complementary feeding**

<b>Options</b>	<b>Frequency</b>	<b>Percentage (%)</b>
0 – 5 months	160	80
5 – 10 months	30	15
10 – 15 months	10	5
<b>TOTAL</b>	<b>200</b>	<b>100</b>

Source: Field Survey, 2021

**Table 3. Reasons for early initiation of complementary feeding**

<b>Options</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Inadequate knowledge on the benefit of breast milk	40	20
Insufficient breast milk production	10	5
Pressure from family members	90	45
Pressure from employers to resume work	60	30
<b>TOTAL</b>	<b>200</b>	<b>100</b>

Source: Field Survey, 2021

**Table 4. Mothers with male child initiate complementary feeding early than mothers with female child**

Decision	Frequency	Percentage (%)
Strongly Agreed	65	32.5
Agreed	100	50
Disagreed	20	10
Strongly Disagreed	15	7.5
<b>TOTAL</b>	<b>200</b>	<b>100</b>

Source: Field Survey, 2021

**Table 5. Types of complementary foods utilized by nursing mothers in the study area**

Complementary food used	Frequency	Percentage (%)
Cereal/grain	185(15)	92.5(7.5)
Pureed meats	95(105)	47.5(52.5)
Cheese	75(125)	37.5(62.5)
Fruits	195(5)	97.5(2.5)
Vegetables	180(20)	90(10)
Yoghurt	200	100
Fats/Oils	50(25)	150(75)
Custard	200	100

Source: Field Survey, 2021.

Note: The figures in the parenthesis represent the number and percentage of nursing mothers that do not utilize the specified types of complementary foods

Table 5 showed data analyzed on the types of complementary foods utilized by nursing mothers in the study area. Result obtained from the analysis conducted showed that 185 (92.5%) of the sampled respondents used cereal/grain, while 15 (7.5%) do not utilized cereal/grain. Similarly, 95 (47.5%) nursing mothers in the study area utilized pureed meats as complementary food, while 105 (52.5%) do not used pureed meat as complementary food. It was also realized that 75 (37.5%) of the sampled respondents utilized cheese, while 125 (62.5%) do not utilized cheese as complementary food. 195 (97.4%) of the sampled nursing mothers use fruits as complementary food, while 5(2.5%) of the sampled respondents do not use fruit as complementary food. 180 (90%) of the sampled respondents utilize vegetables as complementary food, while 20 (10%) of the total sampled nursing mothers do not adopt vegetables as complementary food. More so, all the nursing mothers in the study were of the opinion that they utilize yoghurt as complementary food. As per the use of fat/oil, 50 (25%) of the total sampled respondents opined that they utilize fat/oil as complementary food, while 150 (75%) do not utilize fat/oil as

complementary food. Finally, it was realized that all the sampled respondents opined that they utilized custard as complementary food when nursing their infants. Based on the above statistical representation, it is deduced that majority of the sampled nursing mothers adopt cereal/grain, fruits, vegetables, yoghurt, and custard as complementary food when feeding their infants.

Table 6 illustrates data analyzed on the complementary feeding practices adopted by nursing mothers in the study area. It was realized that the average mean value obtained is greater than 2.50 (3.64 > 2.50). Therefore, it can be reasonable concluded that virtually all the nursing mothers in the study area agreed that 2 – 3 times per day at 0 – 5 months of age, 3 – 4 times per day at 9 – 11 months of age, 1 – 2 times per day at 12 – 24 months of age, with additional nutritious snacks, and 2 – 3 times per day at 6 – 8 months of age are complementary feeding practices usually adopted nursing mothers to ensure child wellbeing in the study area.

**Table 6. Mean rating of respondents' responses on complementary feeding practices adopted by nursing mothers in the study area**

<b>Complementary feeding practices</b>	$\bar{X}$	S.D	Remark
2 – 3 times per day at 0 – 5 months of age	3.77	0.33	Accept
3 – 4 times per day at 9 – 11 months of age	3.42	0.64	Accept
1 – 2 times per day at 12 – 24 months of age	3.77	0.33	Accept
1 – 2 times per day at 12 – 24 months of age, with additional nutritious snacks	3.73	0.35	Accept
2 – 3 times per day at 6 – 8 months of age	3.53	0.44	Accept
<b>Average Mean</b>	<b>3.64</b>		

Source: Researcher's Computation, 2021

**Table 7. Mean rating of respondents' responses on the effect of inappropriate complementary feeding practices on nutritional status of infants**

<b>Inappropriate complementary feeding practices &amp; nutritional status of infants</b>	$\bar{X}$	S.D	Remark
Infants introduced complementary foods at age 2 – 3 months had 2 times higher risk of being stunted	3.42	0.64	Accept
Infants introduced to complementary foods at age 0 – 1 month had 3 times higher risks of being wasted and underweight	3.12	0.34	Accept
Infants who did not receive the minimum meal diversity had 29% higher risk of stunting	3.17	0.33	Accept
Infants who did not receive the minimum meal frequency had 3 times higher risk of stunting	3.77	0.33	Accept
Infants who did not receive the minimum meal frequency had 93% higher risk of wasting and underweight	3.13	0.34	Accept
<b>Average Mean</b>	<b>3.32</b>		

Source: Researcher's Computation, 2021

Table 7 above presents statements made on the effect of inappropriate complementary feeding practices on nutritional status of infants. According to the above statistical representation, the majority of the sampled respondents agreed that infants introduced to complementary foods at age 2–3 months had a 2 times higher risk of stunting, infants introduced to complementary foods at age 0–1 month had a 3 times higher risk of being wasted and underweight, infants who did not receive the minimum meal diversity had a 29 percent higher risk of stunting, and infants who did not receive the minimum meal diversity had a 3 percent higher risk of stunting. The finding of Udoh & Amodu [9] supports the above assertion, where it was realized that inappropriate complementary feeding practices adopted by nursing mothers determines the nutritional status of their infants. Similarly, Okpala *et al.* [20] realized that nursing mothers' early introduction of complementary foods to their infants results in high prevalence of underweight, wasting and stunting among infants.

### 3.3 Nutritional Status of the Children in the study Area

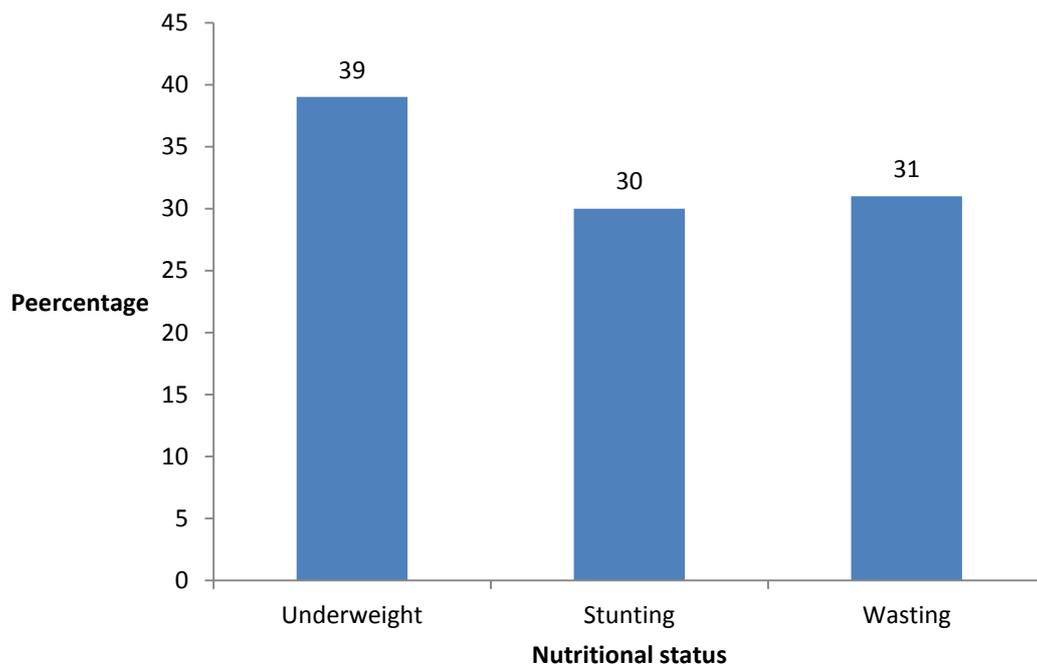
Fig 1 shows the nutritional status of the children in the study area. Regarding the weight-for-age scores, 62 (31%) of the children were below -2 SD (wasting). According to the height-for-age score, 60 (30%) of children were below -2 SD (stunting). By assessing the BMI-for-age, 78 (39%) of children were below a -2 SD (underweight). The stunted rate in this study is higher than the study of Ayogu *et al.* [14] who reported 41.6% and 20.0% for stunting and thinness among school children in a rural South-eastern Nigerian community. Alamu *et al.* [21] also reported that 37.4% of children in Akwa Ibom State were stunted which is higher than the value (30%) obtained from this study. The finding of this study is also higher than the prevalence of wasting (16.2%) reported by Gebre *et al.* [13]. Stunting is caused by long-term deficiency of nutrient intake and frequent infections. It is a marker of chronic malnutrition which subsequently has significant effect on the cognitive development and other aspects in children. The high prevalence of stunting in the

study area might be an indication of inappropriate feeding of infant.

Wasting on the other hand is usually a marker of acute malnutrition. It can also result from infections that are associated with diarrhea [22]. Under weight is defined as low weight-for-age and it reflects past (chronic) and present (acute) under nutrition. Children with z-scores <-2.00 are said to be under weight. From this study, it was observed that 39% of the children had z-score below -2.00. This prevalence is low when compared to the value of 53.86% reported by Singh *et al.* [23] for under-five children in India. In another study, Olodu *et al.* [24] reported prevalence of underweight among under-fives as 29.5% which is higher than the study finding (26.67%). The prevalence reported in this study is also higher than the prevalence of 24.8% reported by Gebre *et al.* [13] for under-five children in pastoral communities of Afar Regional state, Northeast Ethiopia.

**Test of HO<sub>1</sub>:** There is no significant association between inappropriate complementary feeding practices and under nutritional status of infant.

The computed value of t-test using SPSS version 22 is 2.569 while the tabulated value of “t” is 1.98. Since the t-cal > t-tab (2.569 > 1.983), the formulated null hypothesis which states that there is no significant association between inappropriate complementary feeding practices and under nutritional status of infant is rejected while the alternative is accepted. Therefore, it can be concluded that there is a significant association between inappropriate complementary feeding practices and under nutritional status of infant. The above finding is in line with the result obtained by Oluwaseun *et al.* [25] that inappropriate complementary feeding is largely responsible for infant undernutrition. In corroboration, Aripin *et al.* [26] also reported that there is a significant association between complementary feeding practices and nutritional status of infants. Most times, malnutrition among infants is largely attributed to complementary practices adopted by the nursing mother [11]. Complementary feeding techniques that are successful need the use of high-quality, readily available and cheap foods that are nutrient-dense, as well as supplementation and nutrition education for mothers.



**Fig. 1. Nutritional status of the children in the study area**

Source: Field Survey, 2021

**Table 8. t–test comparison on the significant association between complementary feeding practices and nutritional status of infant**

Respondents	N	Std. err	t-cal.	t-crit.	P – value	Decision
Nursing mothers	200	0.8548	2.569	1.983	0.0005	Accept (H <sub>0</sub> )

Source: Data Analysis using SPSS Version 22

#### 4. CONCLUSION

The high prevalence of undernutrition especially wasting and underweight were found in this study to be prevalent amongst children (0-24 months) in Akuku Toru Local Government Area of Rivers State. A greater percentage of nursing mothers in the study area prefer giving their infants complementary foods like cereal/grain, vegetables, yoghurt and custard. The study further revealed that children were at a high risk of malnutrition when introduced to inappropriate complementary feeding practices such as the complementary feeding at age 0-3 months, and not receiving the minimum meal frequency and diversity. The study also revealed a significant association between inappropriate complementary feeding practices and nutritional status of infants.

#### 5. RECOMMENDATIONS

The following recommendations are made based on the finding of the study:

- i. Intervention efforts to improve nutritional status of infants through nutrition and educational inputs should emphasize optimal infant’s breastfeeding practices.
- ii. Developmental programmes should focus on empowering women in the selected communities by improving of household income through creation of employment and access to credit facilities that will enable women engage in sustainable means of livelihood.
- iii. There is need for promotion of women’s health and nutrition as a strategy that will benefit child nutritional status.

#### COMPETING INTERESTS

Authors have declared that no competing interests exist.

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