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## INVESTIGATING THE KNOWLEDGE, ATTITUDE, PRACTICE OF CHILD FEEDING AND NUTRITIONAL STATUS OF CHILDREN 6-24 MONTHS IN SOUTHERN IMAN, ETINAN, AKWA IBOM STATE.

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### ABSTRACT

**Background:** The intake of food and nutrients in food sustains life, promote growth and provides energy for day-to-day living. Providing nutritious food for children is among the most important things to do by parent for normal growth and development of the infants. Appropriate feeding practices are essential for the achievement of optimal growth in children. Hence the assessment of knowledge, Attitude practices of child feeding and nutritional status of children in Southern Iman, Etinan Local government area, Akwa Ibom state.

**Materials and Methods:** This was a descriptive cross-sectional study. Multistage sampling technique was employed in selecting the sample size of 354 respondents with the use of a well -structured questionnaire. Nutritional status of children was determined with the use of anthropometric instruments (Weighing scale and MUAC). Data was analyzed using SPSS statistical Package version 20.

**Result:** Findings revealed that more than half (53.67) had excellent knowledge. The knowledge on child feeding is excellent, there is positive Attitude and good practice of infants feeding but some mothers and caregivers still accept tinned foods as necessary for the growth of the children while neglecting the offer of different types of food and fruits. Breast feeding on demand is not practiced as specified by WHO and Some infants have the reading of 11-12.5cm in MUAC measurements indicating the risk of developing Severe Acute Malnutrition (SAM)

**Recommendations;** The government should intensify effort and implement various strategies to improve breastfeeding and appropriate complementary feeding recommendations and Health workers should provide personalized support and assistance to mothers and measures for monitoring IYC nutritional status for early detection and management of malnutrition.

**Key words:** Knowledge, Practice, infants and young children, child feeding, Nutritional status, Malnutrition.



## Background

Consuming food and utilizing its nutrients keeps the body living, fosters growth, and supplies energy for daily activities. One of the most crucial things parents can do to guarantee their children experience proper growth and development is to give them a healthy diet<sup>1</sup>.

According to the World Health Organization (WHO), which defines nutrition as "the intake of food, considered in relation to the body's dietary needs." Good nutrition is a major factor in determining health. Malnutrition happens when food consumption is out of proportion to the body's nutritional requirements<sup>2</sup>. Infants and young children (IYC) have a critical first 1,000 days of life during which they must receive enough nutrition to support healthy growth and development and increase their chances of survival. However, poor nutrition can impede progress and raise the risk of illnesses<sup>3,4</sup>. Future physical, psychological, and social performance of an individual is significantly influenced by diet during childhood. According to studies, a kid's first two years of life are the most crucial for growth and development<sup>5</sup>. This is because a child is more susceptible to malnutrition during this time due to high nutritional needs<sup>6</sup>. Growth throughout infancy is accompanied by certain changes in the organs' functions as well as the structure of the body. At this age, inadequate nutrition can cause immunological diseases, stunted growth, delayed development, and malnutrition with associated repercussions, as well as damage to the central nervous system<sup>7,8</sup>.

Malnutrition is the leading cause of mortality for young people worldwide. Research indicates that 10.9 million deaths

in this age range occur worldwide, and more than two thirds of these deaths are related to inadequate nutrition, with underweight being a contributing factor. The closest individuals who have a significant impact on a child's nutrition and overall health are mothers and other caregivers<sup>9</sup>.

In order to improve infant survival and optimal feeding, WHO and UNICEF developed a global strategy for infant and young child feeding. This strategy aims to increase public awareness of the key issues affecting IYC feeding, identify the steps involved in finding solutions, and provide necessary interventions. Additionally, it seeks to strengthen the commitment of NGOs and the government to IYC feeding best practices and to empower mothers and caregivers to make and carry out informed decisions about what constitutes optimal feeding practices<sup>10</sup>.

The World Health Organization (WHO) suggests that breastfeeding begin within the first hour of the baby's birth and that complementary foods be introduced safely and adequately while the baby is breastfed for up to two years of age<sup>11</sup>.

According to USAID<sup>12</sup>, complementary feeding is the practice of providing food to a newborn in addition to breastfeeding when the baby reaches six months of age and the breastmilk is no longer adequate to meet their nutritional demands. IYC are offered semi-solid food products manufactured from locally accessible, reasonably priced, and nutritious food throughout the complementary feeding phase, a little at a time, to help the child become accustomed to the taste and texture of the meal. The young one is fed often, and as the child becomes older, the meal portion size increases. When talking about infant and young child feeding (IYCF) practices, mothers' and caregivers'



attitudes and levels of knowledge become crucial factors to consider.

Globally, it has been reported that millions of children under the age of five die yearly and malnutrition directly or indirectly account for about 35% of all deaths among these children<sup>13</sup>. In Nigeria, about 60% of all the children dying is attributed to underlying malnutrition due to poor IYCF and hygiene practices<sup>14</sup>. As important IYCF is, it is estimated that about 41% of infant are breastfed exclusively for six months while 60% are given other foods and fluid in the early months of life<sup>15</sup>.

WHO<sup>16</sup> states that if complementary foods are not provided by the time a child is six months old or are administered incorrectly, there is going to be growth faltering. Therefore, the guideline for appropriate complementary feeding should be observed including breastfeeding through to and including age two, on demand and frequently. The primary complementary meals utilized in Akwa Ibom state are two varieties of unripe banana porridge, marsh bean porridge, and mixed grains that turn brown when combined with crayfish (soya bean flow). These complementary foods might be sufficient, but they are deficient in antioxidants, which raises the possibility of improper nutrient absorption<sup>17</sup>.

Since iron is necessary for the body's growth, it is present from birth but rapidly depletes during the first six months of life. It is found in breast milk and readily absorbed, but not in sufficient amounts for the infant. As a result, needs to be included in the meals the young ones eat. While iodized salt is necessary for family cuisine, it is not necessary to give it to newborns. This allows the child to experience the natural flavor of the food, and flavor enhancers are discouraged because they add no nutritional value and may raise the risk of developing diseases<sup>18</sup>. Mothers/caregivers in Akwa Ibom state often prefer

giving infants pap, banana porridge, boiled rice, since that is what they can afford with no record of offering fruits and vegetables to the infants of which may result to stunting, underweight, and wasting. Despite several pleas from organizations like the WHO and FAO, most infants are only exposed to family foods around the age of five months, with relatively little fruit and animal protein consumed. Lack of nutrient-rich foods during the first year of life can result in stunted growth that is not easily reversible and may harm the child's cognitive ability while lowering academic performance. Mothers and children tend to follow a monotonous diet consisting primarily of vegetables and maize-based meals. While continuing to adhere to some cultural norms Neglecting nutrient-dense foods or getting inadequate nourishment during a child's first year of life which can result in stunted growth, which is difficult to reverse, and may lower academic achievement while affecting the child's cognitive development. Availability of adequate meal for mother and child is important during the 1000 days of life. Beliefs, and taboos about food exist bordering on which foods should be given to children, adults and for pregnant women. For instance, some communities in Nigeria forbids the intake of snail by pregnant women and consumption of egg by children<sup>19</sup>.

## Methods

### Study design

A descriptive cross-sectional study design was adopted for the study. This is a descriptive cross-sectional study design involving mothers of children under five years residing in southern Iman ward four in Etinan local government area. Anthropometric measurements of weight and mid-upper arm circumference were



used to assess the nutritional condition of infants and young children.

### Study Area

Akwa Ibom state is one of the 36 states in Nigeria, located in the south-south geopolitical zone of Nigeria. There are 168,924 people living there in total; 85,760 of them are men and 83,164 are women (NPC, 2006). Eleven wards make up this area: About twenty (20) health facilities are found in Etinan local government area. Sixteen (16) primary health care facilities and four secondary health facilities (M and E Unit, 2023).

### Study Population

The study population comprised of mothers with their children, 6 – 24months attending the three health facilities; Primary Health Center Iwo etor, Primary Health Center, Ikot Akpantembom and Health Facility in Mbioto II in southern Iman in Etinan. The target population was the mothers and care givers. The accessible study population includes all mothers/caregivers residing and accessing the three Health Facilities in the Ward which were recruited during attendance in child welfare clinic in the three Health Facilities in the Ward during the period of study.

### 4 Inclusion and Exclusion Criteria

Inclusion and exclusion criteria for the study was considered paramount since it is a required in practice for high quality research study.

#### Inclusion criteria

All mothers/caregivers of children 6 – 24 months residing in Southern Iman, all mothers/caregivers of children 6 – 24 months accessing the facilities during the period of the study and mothers who gave their consent to the study

#### Exclusion criteria

All mothers/caregivers of children 6 – 59months who are not residence in Southern Iman and mothers/caregivers who do not attend the facility during the period of the study

#### Study Tools

Study tool occupies a critical position in this research work. An interviewer administered questionnaire on guidelines for infant and young child feeding practices. (WHO/UNICEF 2020) was adopted and modified for use in the study.

**Sample Size.** All mothers and care givers attending the 3 Health facility in the ward were the target population. The sample size was calculated by using the Cochran formular by taking the prevalence of malnutrition, 30%, assuming a 95% level of confidence and 10% nonresponse rate which yielded a sample size of 354.

**Sampling Techniques:** For the investigation, a simple random sampling procedure with Multi-stage sampling technique was employed. Southern Iman was chosen by a simple balloting method and process from among the eleven Etinan wards. The sampling fraction was calculated to select the respondents. Once the first mother was chosen at random, each subsequent mother and her child were chosen until the required sample size was reached.

**Data collection tool and procedure:** The study employed a well-structured questionnaire which contained items that have been properly designed and well framed for the purpose of the study. The question items were both open-ended and close-ended questions. Section A contains question items on the socio demographic characteristics of the respondents, Section B contains items on Knowledge of proper child feeding, Section C had Items on



Attitude towards proper child feeding while section D contains question items on child feeding practices of the respondents and Anthropometric measurements of the infant with the use weighing scale and mid upper arm circumference stripe. Mid-upper arm circumference stripe/tape was used to determine the nutritional status of the children. This instrument is special to measure the mid-upper arm circumference of infant age 6 – 24months (26cm).

Based on UNICEF guideline, the MUAC tape is marked with colors to enhance easy identification of the degree of acute malnutrition, moderate acute malnutrition and the risk of acute malnutrition. It's unit of measurement was in centimeters. The mid-point of the arm was measured and the half of arm was determined. The MUAC tape was placed round the mid-point of the arm while the end of the MUAC tape is inserted through the whole where the arrows are indicated. Reading was done with the help of the colors on the tape. Such that; Green color with calibration in-between 12.5cm to 13.5cm indicated the risk of acute malnutrition. Green color with 13.5cm and above then represented adequate nutrition. Yellow color from 11.5 to 12.5cm indicated children at risk of developing malnutrition. Red reading less than 11.5cm indicates severe acute malnutrition.

**Data Analysis:** Descriptive statistics was used in analyzing the data collected for the study. These includes: tables, frequencies, percentages and Data was entered, cleaned, sorted and coded in excel data base and then transported into SPSS Statistical package version 20.0 for analysis.

The knowledge of respondent was analyzed using a set of ten (10) questions and two point scored for each correct

answer. The respondents were rated to have excellent knowledge if scored 51% and above those who score 41% - 50% were rated to have fair knowledge while those who scored < 40% were rated to have poor level of knowledge. while 5 questions were used to assess mothers/caregivers attitude towards child feeding practices and immunization using a 5- point Likert scale of 5 (strongly agree), 4 (Agree), 3 (indifferent), 2 (disagree) and 1 (strongly disagree). The total attitude score per question for all respondents was determined as 25 for maximum score and 5 for minimum score. This total attitude score was divided by 5 and values rounded up to the nearest whole number. Values of 1 and 2 were categorized as poor attitude, 3 as indifferent and 4 and 5 as positive attitude.

Six (6) questions were used to assess child feeding practices. Respondents with a total score of less than 50% (0-2) were categorized as having poor practice while scores of 50% and above were categorized as having good practice

### **Ethical Considerations**

Approval for the study was obtained from the Research Ethics Committee of the University of Port Harcourt. Appropriate permission was obtained from the Director of Primary Health Care services in Etinan Local Government and the officer in charge of each of the health facilities used for the study. Information about the study, objectives and assessment methods was given to the participant. Mothers/caregivers were offered written informed consents assigned before participation in the research. They were informed of freedom to decline and were assured that their normal health services in the health facilities will not be denied if they decline.

### **Results**

**Table 1: Socio-demographic Characteristics of Respondents**

Socio-demographic Characteristics	Frequency	Percent
<b>Age of Child (in months)</b>		
6-8	112	31.64
9-11	69	19.49
12-18	67	18.93
19-24	31	8.76
25-59	75	21.19
<b>Sex of Child</b>		
Male	142	40.11
Female	212	59.89
<b>Age of Mother/Caregiver (in years)</b>		
<19	9	2.54
20-25	103	29.10
26-30	167	47.18
31-35	75	21.19
<b>Educational Status of Mother/Caregiver</b>		
No Formal	20	5.65
Primary	57	16.10
Secondary	54	15.25
Post-secondary	223	62.99
<b>Occupation of Mother/Caregiver</b>		
Farming	51	14.41
Housewife	55	15.54
Business	199	56.21
Civil Servant	49	13.84
<b>Type of Family</b>		
Monogamy	263	74.29
Polygamy	91	25.71
<b>Number of People in the family</b>		
1-2	42	11.86
3-4	177	50.00
5-7	112	31.64
>7	23	6.50

A greater proportion 112 (31.64%) were aged between 6-8 months and 212 (59.89%) were females. Many of the mothers 167 (47.18%) were aged 26-30 years and most mothers 223 (62.99%) had post-secondary education. More than half ,199 (56.21%) of the mothers /caregivers were business women and 263 (74.29%) belonged to monogamous families. Half 177 (50.0%) of the respondents had 3-4 person's n their families (Table 1)

**Table 2. Respondents Knowledge of Proper Child Feeding Practices**

Knowledge of proper Child Feeding and Immunization	Frequency	Percentage (%)
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Breastfeeding should commence immediately after the birth of the baby	334	94.35
Colostrum, the whitish fluid that comes out of the breast of a mother after birth is not good for the child	163	46.05
Babies should be fed with only breast milk until they are at least 6 months old	286	80.79
A baby that is exclusively breastfed needs water to prevent it from becoming thirsty	135	38.14
A child can be given the food eaten by other members of the household once they are more than 6 months old	297	83.90
Hand washing before preparing the food of a baby is not important in preventing the baby from developing diarrhea	147	41.53
Tinned baby foods are necessary to ensure the proper growth of a child	273	77.12
Babies should be given their first immunization as soon as possible after birth	330	93.22
The immunization card is also used to measure how well the baby is growing	330	93.22
Measles immunization is one of the last vaccinations given to a baby in Nigeria	313	88.42
<b>Mean Knowledge Score: 6.52+/-1.16</b>		

334 (94.35%) respondents knew that breastfeeding should commence immediately after the birth baby, 191 (53.95%) knew that colostrum is good for the child. Two hundred and eighty – six (80.79%) knew that babies should be exclusively breastfed until they are 6 months old while 219 (61.86%) knew that a baby that s exclusively breastfed does not need water to prevent it from becoming thirsty. Two hundred and ninety- seven (83.90%) knew that a child more than 6 months old can be given foods eaten by other members of the household and 207 (58.47%) knew that hand washing before preparing a baby’s food is important in preventing diarrhea in children. Eighty- one (22.88%) knew that tinned foods are not necessary to ensure the proper growth of a child and 330 (93.22%) knew that babes should be given their first immunization as soon as possible after birth. Many 313 (88.42%) knew that measles vaccine is one of the last vaccinations given to a baby in Nigeria.

Overall, 190 (53.67%) of the respondents had an excellent knowledge of proper child feeding practices

**Table 3: Respondents Attitude towards child Feeding Practices**

Variables	Strongly Agree n (%)	Agree n (%)	Indifferent n (%)	Disagree n (%)	Strongly Disagree n (%)
Feeding the child with only breast milk until the child is at least 6 months prevents diseases and ensures a healthy growth	269 (75.99)	67 (18.93)	4 (1.13)	9 (2.54)	5 (1.41)
Baby that are exclusively	191	102	23 (6.50)	32 (9.04)	6 (1.69)





breastfed are not thirsty and should not be given water	(53.95)	(28.21)			
Tinned baby foods are necessary to ensure the proper growth of a child	18 (5.08)	29 (8.19)	39 (11.02)	104 (29.38)	164 (46.33)
Proper hand washing before preparing the food of a baby and before feeding the baby is important in preventing diarrhea	269 (75.99)	72 (20.34)	8 (2.26)	3 (0.85)	2 (0.56)
Child immunization protects the child from the common childhood diseases	258 (72.88)	71 (20.06)	7 (1.98)	8 (2.26)	10 (3.10)

Two hundred and sixty-nine (75.99%) strongly agreed that feeding the child with only breast milk until 6 months of age prevents diseases and ensures a healthy growth, 191 (53.95%) strongly agreed that babies that are exclusively breastfed are not thirsty and should not be given water and 164 (46.33%) strongly disagreed that tinned baby foods are necessary to ensure the proper growth of a child. Two hundred and sixty -nine (75.99%) strongly agreed that proper hand washing before preparing the food of a baby and before feeding the baby is important in preventing diarrhea. About seventy-three percent strongly agreed that childhood immunization protects the child from common childhood diseases.

In all, 334 (94.35%) of the mothers/caregivers had a positive attitude towards child feeding practices and immunization, 17 (4.80%) had indifferent attitude and 3 (0.85%) had a negative (poor) attitude (Table 3)

**Table 4: Child Feeding Practices of Mothers/Caregivers**

<i>Variables</i>	<i>Frequency</i>	<i>Percentage (%)</i>
<b>What food items do you feed your babes with</b>		
Different types of Foods	117	33.05
Boiled and cooled water with breast milk	237	66.95
<b>When do you start breast feeding?</b>		
Within one hour after birth	285	80.51
2 days after birth	58	16.38
One month after birth	11	3.11
<b>Reasons for delay of commencement of breast feeding (n=)</b>		
No breast milks		
As instructed by the grand-mother		
<b>How many times do you breastfeed the baby?</b>		
5 times a day	330	64.97
Once every day	17	4.80
2 times a day	32	9.04
3 times a day	38	10.73
Just like 3 square meals	37	10.45

**How Often do you breastfeed your child?**

Every 3 hours	230	64.97
Every 2 hours	17	4.80
Once daily	32	9.04
At nights only	38	10.73
On demand	37	10.45

**How do you feed your Baby?**

With feeding bottle	196	55.37
Using cup and spoon	108	30.51
Chewing baby's food before giving the baby	50	14.12

**What is the texture of the Food?**

Watery food	46	12.99
Semi-solids	167	47.18
Thick	141	39.83

**Fruits/vegetables given to the baby**

All fruits	130	36.72
No fruit	224	63.28

One hundred and seventeen (33.05%) fed their children with different types of foods while 237 (66.95%) only fed with boiled and cooled water along with breast milk. Many 285 (80.51%) commenced breastfeeding their children within one hour after birth and 330 (64.97%) breastfeed their babies up to 5 times in a day. Only 37 (10.45%) breastfeed their babies any time the baby demands (on demand) while many 230(64.97%) breastfeed every 3 hours and 38 (10.73%) breastfeed at night only. One hundred and ninety-six (55.37%) use feeding bottle to feed their babies while 108 (30.51%) use cup and spoon and 50 (14.12%) chew baby's food before giving the baby. One hundred and sixty-seven (47.18%) feed their babies with semi-solid foods and 224 (63.28%) do not give their children fruit at all. More than half 210 (59.32%) had good child feeding practices.

Table 5: Assessment of Severe Acute Malnutrition using Mid Upper Arm Circumference (MUAC)

Variables	Frequency	Percent
<b>MUAC</b>		
Red	4	1.13
Yellow	65	18.36
Green	285	80.51

Four (1.13%) of the children had mid upper arm circumference less than 11cm (Red) indicating severe acute malnutrition, SAM, 65 (18.36%) had MUAC reading of between 11-12.5 cm indicating children at risk of SAM while the majority 285 (80.51%) had a MUAC reading of > 12.5 cm no SAM or risk of SAM. (Table 5)

**Discussion of Findings.**

This chapter presents the results and discussion concerning the knowledge, attitude and feeding practice and

malnutrition with immunization status of children in southern Iman ward 4 in Etinan local government area of Akwa Ibom state. SPSS software version 20 was used to analyze the data, and the results were displayed in tables and graphs that took the



study's aims and hypothesis into consideration as well.

### **Socio-demographic characteristics of the respondents.**

A total of 354 children and their mothers/caregivers from southern Iman ward 4 in Etinan local government area participated in the study. 112 (31.64% were female. Many 167 (47.18%) mothers/caregivers were aged 26-30, still within the child bearing %) were infants, 6-8 months and majority (59.89%) age of which were still capable to care for children of this age. This is similar to a study in Nepal where majority (49.27%) of the mothers were age 26-30<sup>20</sup> and not adolescent. Adolescent mothers (15-19 years) who may likely present less responsive and more authoritarian feeding methods but rather initiate complementary foods earlier than recommended with poor feeding practices of offering infants sugary foods and less proteins foods such as bean, egg and meat like adult mothers would do<sup>21</sup>. Majority of the mothers 223(62.99%) had post-secondary education and 56.21% were business women having 3-4 person in their families.

### **Knowledge of proper feeding and immunization.**

The result from this study indicates that 334(94.35%) of the mothers knew that breastfeeding commences immediately after birth. This may be as a result of their educational level.

This runs counter to a research done in the Kingdom of Saudi Arabia, which found that just 43.6% of mothers began breastfeeding as soon as they gave birth to the baby<sup>22</sup>. This may be as a result of poor awareness on the right time for initiation and accessibility to information. On knowledge regarding colostrum, about half (53.95) responded that colostrum is good

for the child. It tends to disagree with a study in Pakistan where only 1.15% had no knowledge about colostrum and its importance in child growth and fighting of infection<sup>23</sup>. However, the knowledge of the importance colostrum in this study is lower than that of a study in Ethiopia where 95.2% mothers knew colostrum to be the first milk which protects the child from disease<sup>24</sup>. Two hundred and eighty-six (80.79%) mothers knew that babies should be breastfed exclusively until they are six months. This agrees with 71.6% mothers who were knowledgeable about exclusive breastfeeding for six months in Nepal<sup>20</sup>. Although knowledge on exclusive breastfeeding is generally high. There are some studies which still show poor knowledge in this aspect of child feeding such is what is recorded by Rana, et. al.,<sup>25</sup> with knowledge of 34.5%. This study reveals that 83.90% mothers support the offering of infant food eaten by other members of the household at 6 months. Masztalerz-Kozubek et. al.,<sup>26</sup> agrees as the report showed that children eating with their family make it possible for them to feed more regularly with more nutritious food. Shrestha<sup>20</sup> also records that many mothers knew the proper age for introduction of complementary feeding while only 9.6% mothers delayed it beyond 6 months. The respondent in this study are knowledgeable about the WHO recommendation on IYCF<sup>27</sup>. Furthermore, this result is consistent with findings of Alreshidi et. al.,<sup>28</sup> which revealed the initiation of complementary feeding at 6months and above as this can enable feeding with potential implication on the IYCF and total health status of the infant. Half (58.4%) respondent agrees that handwashing before preparation and feeding of babies helps in preventing diarrhea. This may be due to high awareness created on Hand washing in recent times due to covid -19. In line with this, Nizame et. al.,<sup>29</sup> opined that large proportion understood the importance of



handwashing with soap and water before preparation and feeding of infant but observed that people did not wash their hand before carrying this activity. It agrees with the findings of Luby, et. al.,<sup>30</sup> that handwashing before food preparation is particularly an important opportunity to prevent diarrhea in children, but disagrees with the observation of Luby, et al<sup>31</sup> that less than 1% persons wash their hands with soap and water before eating or feeding the infant. Hand washing can prevent diarrhea in children therefore, intervention to increase the knowledge on handwashing should be targeted so as to improve the practice. Regarding the knowledge on immunization immediately after birth, majority (93.22%) asserted that children should be given immunization immediately after birth. Almutairi<sup>32</sup> also reported a high knowledge score of 86% about the administration of immunization as soon as possible with consideration on multiple educational method to support the practice practices. Adedire et. al.,<sup>33</sup> confirms that mothers many mothers are aware of the age at which the first dose of immunization is given but few are yet to know this but Oladepo, et. al.,<sup>34</sup> disagrees and attest that mothers had a little knowledge on the order and timing of immunization for children. Only 2% and 22.6% were reported to be knowledgeable about immunization of children with BCG at birth and Hepatitis B at birth, 6, 10 and 14 weeks respectively.

### **Attitude towards infant feeding**

Attitude of mothers towards IYCF was assessed and majority (75.99%) strongly agreed that breastmilk prevents disease and ensure proper growth. breastfeeding is a well- known method of feeding infants. this may be because Breastfeeding is very important for optimal growth of children and it is necessary for their survival. Study by Muleka et. al.,<sup>35</sup> supports the findings that breastfeeding offers prevention

against disease. It is the best source of nutrition to infant early in life as reported by other studies<sup>36</sup>. Many mothers strongly agree that babies who are exclusively breastfed are not thirsty and should not be given water. This agrees with WHO recommendations that a child should be exclusively breastfed for 6 months without water. Eighty percent (80%) of breastmilk is water especially the first breast milk taken by the child in each feed. Giving water to the baby may cause the baby to take less breastmilk due to early satiety with water or stop breastfeeding too early. It also exposes them to risk of diarrhea as the water may be unclean causing the baby to develop other infections and malnutrition. Giving water to babies may reduce the quantity of breastmilk produced by the mother, therefore babies exclusively breastfed are not to be given water before 6 months because breastmilk provides all the water the baby needs during this period<sup>37</sup>. Overall attitude towards infant feed was positive (99.15%) in contrast with 51.0% finding of favorable attitude<sup>38</sup>.

### **Child feeding practices**

More than half (59.32%) of the respondent had good child feeding practices in this study. The practice towards infant feeding is adequate due to increase knowledge on IYCF. This is contrary to a study by Shrestha<sup>20</sup> showing the inadequacy and inappropriateness of feeding practices by mothers.

Some feed their children with different types of food, meaning that great number of children are not receiving adequate complementary feeding, this can increase the risk of malnutrition in children. Feeding children with one type of food is detrimental to growth and development. Fredrick et. al.,<sup>39</sup> submitted that majority of the children (73%) were monotonously fed with thick porridge made from maize which can be responsible for high



exposure to aflatoxin B1 which may increase the development of hepatocellular carcinoma with co-infection of Hepatitis B. Bimpong et. al.,<sup>40</sup> attested to the idea that more than half (56.5%) of mothers ensure dietary diversity and enrich their infant diet. On determining the practice of complementary feeding, only 10.5% met the minimum dietary diversity which only 8.5% received minimum adequate diet for their age. Minimum dietary diversity was also reported to be low (31.5%) in Akpabuyo area in Cross-River state and these children had higher odds for underweight while those who were not receiving minimum feeding frequency were more likely to be stunted. This study reveals that only 37 (10.5%) mothers breastfeed their infants on demand in accordance with WHO recommendation. Breastfeeding on demand offers opportunities for babies to initiate breastfeeding while the mother continues the feeding until the baby is satisfied. The infant who are breastfed on demand get enough milk which enable the development of cognitive and emotional development. This is opposed to strict schedule feeding<sup>41</sup>. In contrast, Sultana et. al.,<sup>42</sup> reveals that more than half of the mother breast feed infant on demand. Similarly, breastfeeding on demand is also high (75.8%) in East-Africa<sup>43</sup>. This is considerably high as oppose to this study. It may be that mothers are not aware that infant should be breastfed on demand and their occupation may exert influences on giving the baby breastmilk whenever they need it. More than half (55.3%) of mother's use feeding bottle to feed infants whereas few (30.51%) use cup and spoon. This could be due to inability to create enough time and attention to infants feeding, therefore the mother may want to feed the infant quickly and move over to other business.

Fifty (14.12%) responded that they chew food before giving it to their babies. This

was not expected in present days. It may be due to the influence of culture in Southern Iman ward 4 and the involvement of grandparent in feeding of infant. Pelto, et. al.,<sup>40</sup> reported similar findings of pre-masticated food for infants where 65 females practice chewing food to their infant and 22% did it very often. Majority (69%) of caregivers were also found to practice prechewed feeding for their infant 4-6 month in East Africa<sup>43</sup>. Also, Pittman<sup>45</sup> found that in South Africa more than two-third of mothers and other caregivers prechew food for their infant thereby increasing the risk of HIV transmission if they were HIV positive. Some mothers fed their babies with semi-solid. Mothers who practice this may have understood the WHO recommendation of feeding infants with semisolid food as complementary feeding when the child is up to six months in contrast with findings of national demographic health survey NDHS<sup>46</sup> of which the prevalence of giving semi-solid food was 72.8%<sup>47</sup>. Findings similar to that of the present study reveals that 32.2% infant receive semi-solid or solid food and about 63.8% were not given in the first 6 months<sup>48</sup>. Many (63.28%) mothers in this study do not give fruit at all to their infant. It may be that they lack the knowledge that their babies can take fruits, meaning that only a few mothers see the need to offer their children fruits. In line with this finding, Daman<sup>49</sup> reported that only 28% mothers provided fruits of all types such as apple and banana to their infant. Aguayo<sup>50</sup> also reveal that limited number (33.2%) of children were fed with fruits and vegetables rich in vitamin A. This may be due to mother's idea that infants may not be able to eat fruits

#### **Assessment of SAM using Mid- upper arm circumference MUAC**

Infant in this study were found to have their MUAC reading between 11-12.5cm, indicating the risk of developing severe



acute malnutrition. These children were moderately malnourished (wasting). These could be the children who were not fed with different types of food thus at risk of being malnourished. Zehra, et. al.,<sup>51</sup> agrees thus reporting 13.6% infant with MUAC cut-off point of <11.5cm. MUAC cut-off point between 11.5cm-12.5cm is recommended to use for diagnosing moderate acute malnutrition (wasting) in children<sup>52</sup>. In evaluating the nutritional status of the children using MUAC, Asif, et. al.,<sup>53</sup> confirms the overall level of undernutrition of 8.30% based on MUAC measurement higher girls than in boys. Eaton- Evans<sup>54</sup> point out that MUAC measurement above 13.5cm is normal for IYC while MUAC less than 12.5cm indicate malnutrition. Children with moderate acute malnutrition may finally come down with severe acute malnutrition where there is no intervention.

### Study Limitation

This research work was conducted in a rural setting and most of the respondents were not literate enough to read and

understand the questions. Limited time constituted a constraint to the study. However, the constraints were eliminated through the use of trained research assistance who administer the questionnaire. The researcher source for money to get required materials available in order to achieve the set objectives Time was created out and managed properly in order to conclude the research work at the stipulated time.

### Conclusion

The knowledge on child feeding is excellent, there is positive Attitude and good practice of infants feeding. Some mothers and caregivers still accept tinned foods to be necessary for the growth of the children while neglecting the offer of different types of food and fruits. Breast feeding on demand is not practiced as specified by WHO and some infants had 11-12.5cm in MUAC measurement indicating the risk of SAM. More effort is expected to ensure improvement in the nutritional status of children in the community

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