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<table>
<thead>
<tr>
<th>Dikwa</th>
<th>Banki</th>
<th>Ngala</th>
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<tr>
<td>Abubakar Adamu</td>
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<td>Ahmed Usman</td>
<td>Chiamaka Amalaha</td>
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<td>Kolo Mohammed</td>
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<td>Joseph Modu</td>
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<td>Samuel Danladi</td>
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</table>
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<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>EBF</td>
<td>Exclusive Breastfeeding</td>
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<tr>
<td>FGD</td>
<td>Focus Group Discussion</td>
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<tr>
<td>HH</td>
<td>Household</td>
</tr>
<tr>
<td>IDP</td>
<td>Internally Displaced Person</td>
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<tr>
<td>IYCF</td>
<td>Infant and Young Child Feeding</td>
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<tr>
<td>KAP</td>
<td>Knowledge, Attitudes and Practices</td>
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<tr>
<td>LGA</td>
<td>Local Government Area</td>
</tr>
<tr>
<td>MICS</td>
<td>Multi Indicator Cluster Survey</td>
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<tr>
<td>PLW</td>
<td>Pregnant and Lactating Women</td>
</tr>
<tr>
<td>SBCC</td>
<td>Social Behavior Change Communication</td>
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<tr>
<td>TBA</td>
<td>Traditional Birth Attendant</td>
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<td>WASH</td>
<td>Water, Sanitation and Hygiene</td>
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<td>WHO</td>
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Abstract

The ongoing conflict in north east Nigeria continues to increase population displacement thereby worsening the existing precarious situation. With protracted conflict (now in its ninth year), the affected populations continue to be deprived of essential health, nutrition and WASH services. This increasing vulnerability is taking a toll on expectant mothers, infants and young children, leading to an increased risk of morbidity and mortality.

FHI 360 conducted a KAP survey in Ngala, Dikwa and Banki to determine the knowledge, attitudes to, and practices of IYCF in Emergency and to ascertain other health and WASH indices. A cross sectional study was done where 287 respondent’s caregivers with children 0-23 months were surveyed using quantitative methods. Participants of the focus group discussions were pregnant and lactating women and mothers and grandmother with children less than 24 months. Data was collected using the open data kit and was analyzed using SPSS 21.0

Results showed a timely initiation of breastfeeding at 84.3%, an exclusive breastfeeding rate of 33% and a minimum dietary diversity of 22.9%. 73.4% respondents practiced acceptable health seeking behavior, 80.4% had adequate knowledge of prevention and control of common rural ailments, 93% of respondents had daily access to water, 48.8% were not satisfied with the sanitation infrastructure while 87.4% had an acceptable knowledge of hygiene promotion activities

There is need to sustain and scale up ongoing interventions in survey sites. More SBCC options should be explored and community awareness and inter-sectoral collaboration should be strengthened.
1. Introduction

Now in its ninth year, the humanitarian crisis in north east Nigeria remains one of the most severe in the world resulting in widespread displacement, destruction of livelihoods and disruption of basic services hence negatively affecting access to health, clean water, adequate nutrition, food security and livelihoods. This has resulted in families being highly dependent on humanitarian assistance. OCHA reports that 7.7 million people need lifesaving assistance with 6.1 million people targeted in 2018 and 1.6 million internally displaced.\(^1\) The Cadre Harmonisé analysis – which provides an updated understanding of the food security and nutrition situation had different LGA’s in Borno still in between integrated food security phase classification 2 and 4 (IPC 2 & 4) of food and nutrition insecurity.\(^2\) The ongoing conflict continues to increase population displacements thereby worsening the existing precarious situation. With the protracted conflict, the affected populations continue to be deprived of essential nutrition and lifesaving services. This increasing vulnerability seems to be taking a toll on expectant mothers, infants and young children, leading to their increased risk of morbidity and mortality. FHI 360 has dramatically expanded its ability to meet the humanitarian needs in north east Nigeria. Since the commencement of its Integrated Humanitarian Assistance to North East Nigeria (IHANN) project in 2017, FHI 360 has reached 365,615 beneficiaries including children. This KAP survey is part of the planned routine survey to establish the nutrition, health and WASH indices in IHANN’s implementing sites and the outcome was critical in implementing a result-based management approach for planning and evidence-based decision making.

1.1 Literature Review

Suboptimal infant and young child nutrition is known to have direct link to under five mortalities. More so, exclusive breastfeeding and continuing breastfeeding up to one year prevents under five mortality by 13% and appropriate complementary feeding does same by 6%.\(^3,\)^4 A study by Karen et al, concluded that timely initiation of breastfeeding reduces neonatal mortality by 22%.\(^5,\)^6 The Joint Approach to Nutrition and Food Security Assessment (JANFSA): Anthropometry and Mortality Results revealed GAM and SAM prevalence of above 10% and 1.7%, respectively in Borno.\(^7\) Data from the multi-indicator cluster survey carried out by the Federal Ministry of Health, 2016-2017 showed that Borno State has early initiation of breastfeeding rate of 36.8%, an exclusive breastfeeding rate of 29.5% and minimum dietary diversity of 34.7%.\(^8\) In June 2018, IMC conducted a KAP survey in Dikwa and Damboa. The result of the survey showed exclusive breastfeeding of 22.7%, and timely initiation of breastfeeding as 84%.\(^9\) Additionally, living conditions, access to livelihood and basic amenities are still suboptimal in the intervening locations due to the ongoing conflict and its consequences.

The increasing influx of returnees and new arrivals in FHI 360 intervention sites is placing a strain on the current health care facilities available. There have been recent outbreaks of cholera, persistent occurrence of vaccine preventable diseases and common rural communicable diseases. Frequently, every FHI 360 facility attends to more than 100 patients per day and most facilities are unable to provide care in the evening hours after curfew. Increased displacement and new arrivals to FHI 360’s operational areas mean there is a constant need for these messages to be disseminated while ensuring the target end users are reached.

Poor WASH conditions in camps and host communities remains a priority concern for humanitarian assistance and is a leading cause of morbidity and mortality. Diarrheal disease is the
second most common health concern and can exacerbate conditions like severe acute malnutrition (SAM). The practice of open defecation remains a persistent factor, especially in overcrowded camps with a constant influx of new arrivals in Dikwa, Ngala and Banki. During FHI 360’s assessment prior to the start of IHANN project implementation, discussions with partners and community leaders revealed that some people have to walk two kilometers to fetch water and others are forced to buy from local vendors.

1.2 Justification

Effective IYCF-E programming in addressing nutrition needs in the first one thousand days of life (first day of pregnancy till 2 years of age) is critical as this period mark the early stages of life during which there is rapid growth and development of the organs and tissues. Consequently, it is important that optimal nutrition of the child is achieved as malnutrition during the first 1,000 days (children under 2 years) of life will have dire short and long-term consequences on the individual’s growth, development and overall health status. Although there have been IYCF studies carried out in Nigeria such as the Multi-Indicator Cluster Survey and in Borno states, these studies have been limited to peri-urban, rural communities and IDP populations in different parts of Borno with none been carried out specifically in IDP camps in Ngala and Banki. Hence, there have been no assessments on nutrition behavioral change communication among the IDPs who were forced to flee their home.

Since behaviors may change especially in a bid to survive suboptimal environments, it is imperative to ascertain the index knowledge, attitudes to and practice of IYCF among IDPs who may or may not have had optimal IYCF behaviors prior to migration. Also, the study identified the hygiene level, the knowledge and control of common rural communicable diseases. The result of this study gave insight and served as a fulcrum for the ongoing FHI 360 nutrition interventions in these locations. This is key to results-based methodology in effective programming. This research unlike other KAP studies brought to light pertinent issues on IYCF including barriers to effective IYCF practices among the IDP population in Dikwa, Ngala and Banki. Aside these, it served as an informed basis to improve IYCF-E among the IDP populations in these locations and contributed to intellectual discourse on effective nutrition programming among IDPs. The outcome of this survey was critical in implementing FHI 360 approach in evidence-based planning and decision making for IHANN II, a vital step in judging the project’s performance when an end line of same survey is conducted. The outcome of this survey will be shared with OFDA.

1.3 Goal and Objectives

Goal: To assess the knowledge, attitudes to and practices of IYCF-E, health and WASH among mothers with children aged 0 to 23 months in Banki, Ngala and Dikwa IDP camps.

Primary study objectives

1. To determine mothers and care takers’ knowledge, attitudes to and practices of IYCF.
2. To identify barriers to optimal IYCF practices in target areas.

Secondary study objectives

1. To assess the knowledge of common rural communicable diseases and health seeking behavior among the IDP populations.
2. To determine the extent of hygiene practices among the IDP population
3. Primary study outcomes/measures
4. Knowledge, attitude, and practices of IYCF
5. Barriers to practicing exclusive breastfeeding and other IYCF practices

Secondary study outcomes/measures that was address each objective

1. Knowledge of common rural communicable diseases and health seeking behavior for common rural communicable diseases.
2. Knowledge of hygiene practices.

1.4 Research Questions

1. Is the knowledge of IYCF-E key messages and principles among respondents optimal?
2. What is the exclusive breastfeeding rate in the survey sites?
3. What are the common barriers militating against optimal IYCF practices in survey sites?
4. Are households consuming adequate and diverse food?
5. Do respondents have good health seeking behavior?
   Are hygiene practices in the IDP settlement optimal?

2. Methodology

2.1 Study Area

The study was conducted in Dikwa, Ngala and Banki IDP camps, in Dikwa, Ngala and Bama, LGAs, respectively in Borno State. Borno has experienced years of conflict between the military and armed opposition groups (AOGs). It occupies the greater part of the Chad Basin and shares international boundaries with Republic of Niger, Chad and Cameroon and local boundaries with Adamawa State, Gombe and Yobe States. The state has an estimated population of 4.5 million people while the population of Dikwa, Ngala and Banki are 72,426, 50,021 and 35,991, respectively. The majority of the populations reside in the IDP camps. There are little presence of host communities except in Banki which has a distinct population distribution as host communities are geographically inseparable from IDPs and returnees. The survey conducted in October 2018 marks the end of lean season in the survey locations. Kanuri is the main tribe, followed by Shuwa- Arab and Kotoko. Kanuri is the predominant language followed by Hausa.

2.2 Target Population

Mothers or caregivers with children aged 0-23 months was the target population in the household survey for the quantitative component of this study while participants for the qualitative component of this study were PLW and grandmothers of children aged 0-23 months. All target populations were IDPs who reside in Dikwa, Ngala and Banki IDPs settlements.

The following eligibility criteria were used for the study:

Inclusion criteria for IDPs:
- Officially recognized IDP camps in Ngala, Dikwa and Banki were sampled
Inclusion criteria for respondents in the quantitative component

- Mothers or caregivers with child(ren) aged 0 – 23 months
- Respondents who were in their households during the study period
- Must be an IDP.

Exclusion criteria for respondents in the quantitative component

- Mothers or caregivers with child(ren) aged 0 – 23 months who are not IDPs
- Mothers or caregivers who do not have child(ren) aged 0 - 23 months.

Inclusion criteria for participants in the qualitative component of the study

- Pregnant and lactating women.
- Grandmothers with grandchildren aged 0 to 23 months.
- Must be an IDP residing in the study IDP camps
- Knowledgeable about the existing challenges on IYCF

Exclusion criteria for participants that was participating in the qualitative component of the study

- Women who reside in the study locations but are not IDP.

2.3 Study Design and Methods

The study was descriptive cross-sectional study. Quantitative (household survey) and the qualitative (focus group discussion) methods were employed.

2.4 Sampling Frame and Sampling Plan

Banki, Ngala and Dikwa in Borno state were selected purposively as these are the locations were FHI 360 is implementing the IHANN II project.

The sampling method was multi-stage random sampling.

2.4.1 Sampling Plan - Quantitative method

A three-staged simple random sampling method was used for quantitative sampling.

First, using probability proportional to size, all nine IDP camps in Dikwa were numbered and five were selected using random number generator. All two camps in Ngala and the single IDP camp in Banki were selected for sampling.

**Stage 1** (Selection/grouping of households into Block in an IDP camp): A block is a neighborhood with people living within it, mostly having similar characteristics. 16 communities or 256 households or 1,250 persons, make up a block in an IDP camp. In each camp in Dikwa, ten blocks were selected while 17 blocks were selected in each camp in Banki and Ngala using random number generator. This was done in accordance to the probability proportional to size.
Stage 2 (Selection of tents/houses and households within a block): On arrival at a selected block, a list of all the streets/paths/lines was made and the first street/path was selected as the first to be visited. Then, all the dwelling tents/houses on the selected street/path were counted and numbered using ink marker, and the first house to be visited was also selected from among the houses on the street using random number generator. In the selected house, all households were identified. “A household was taken as a group of people that eat from the same pot”. Where there is more than one eligible household in a house, one eligible household was selected by random number generator and sampled.

Stage 3 (Selection of respondent within a selected household): The eligible woman or caregiver (a woman or care giver with a child aged between 0-23 months) within each selected household was identified and interviewed in relation to the child. Where there was more than one eligible woman or caregiver, one was selected using random number generator and interviewed. Where there was no eligible woman or caregiver in a house, the interviewer exited the house and moved to the next house.

On completion of the interview in one house, the interviewer exited the house, moved in the right direction, skipped next three houses to the right and entered the next house to right of the one that he/she exited, on reaching the end of the camp/path; the path to the right and the first house to the right was selected. This process was followed until the required sample size for each block was reached.

2.4.2 Sampling plan – Qualitative method.

To address the specific objectives of the study and to capture varying attitudes and beliefs, a qualitative design was employed alongside the quantitative approach. A non-probability sampling approach was performed for the qualitative survey. This was done by purposely selecting representative of individuals from PLW and grandmothers with grandchildren aged 0-23 months in the community who are knowledgeable about the existing challenges on IYCF. Three focus group discussions was organized in each settlement with 8 to 12 homogenous participants (PLW or grandmothers with grandchildren 0-23 months) for each FGD session.

A sampling frame was generated by the PI and the research assistants. The research assistants and enumerators worked closely with IDP camp and community leads of selected communities and with their help, identified respondents, confirmed eligibility, obtained informed consent and held focused group discussion with the consented IDPs. Only respondents/participants who agreed and consented to the study participated. As earlier highlighted, random sampling was used to identify the respondents for the household survey while non-probability sampling was used for the FGD. For ease of identification of the respondents, the enumerators asked questions to verify if the selected woman has a child 0 to 23 months (the respondent’s child must be alive as at the time of the survey) and an internally displaced person. The enumerators confirmed age of the children by asking for the immunization card or birth certificate of the child or by comparing the age of the child with the list of event calendar that was developed prior to the survey. This was used to confirm the eligibility of the respondent (mother/caregiver).

2.5 Sample Size Estimation

The minimum sample size was estimated using the statistical method of Kish-Leslie formula with the following assumptions: 18.9% of mothers practiced exclusive breastfeeding (SCI nutrition and
mortality report), a precision of 5%, an alpha of 5% and a 5% non-response rate. In addition, a design effect of 1.2 was assumed. Hence, a sample size of 297 mothers/caregivers with children aged 0-23 months was required for the quantitative component of the study.

Qualitative survey: 72 to 108 participants was invited to the FGD sessions to be held in the three survey settlements. The qualitative survey was made of homogenous group of women (PLW and grandmothers of children 0 to 23 months) selected in a ratio of 2:1.

2.6 Participant recruitment

2.6.1 Participant recruitment for the quantitative study

On entering a selected household, (A household was taken as a group of people that eat from the same pot), the enumerators got informed consent from the head of the household and all eligible women were identified. (Eligible woman was taken as mother or primary female caregiver with child(ren) aged 0 to 23 months). This was verified using the immunization card or the birth certificate of the respondent’s child. Also, event calendar was developed which was used to determine the age of the child, if the respondent’s child do not have any of the above requested documents. Where there is more than one eligible respondent in a house, one was selected by random number generator. The selected eligible woman or caregiver (a woman or care giver with a child aged between 0-23 months) within each selected household was identified and interviewed. Where there is no eligible woman or care giver in a house, the interviewer exited the house and moved to the next house by the right. The enumerators upon identifying the respondent obtained informed consent by reading and reviewing the consent form with the respondent and then conducted a face-to-face interview for the consented respondents. Only respondents who consented participated in the study.

2.6.2 Participant recruitment for the qualitative study

The research team collaborated with the community leads for the identification, and recruitment of FGD participants from the IDP camps. A non-probability sampling approach was performed for the qualitative study. This was done by purposely selecting representative of individuals from PLW and grandmothers with grandchildren 0-23 months in the IDP who are knowledgeable about the existing challenges on IYCF. Participants of the focus group were made up of all PLW and older women. Once the potential FGD participants was identified, the community leader informed them that “there are researchers doing research study that they may qualify for and that he/she can arrange for further information about the study if they wish” Thereafter, the research assistants met the referred IDPs, determined eligibility, introduced and explain the purpose of the study, and gave out an invitation note indicating the date and the venue where the discussion took place as well as contact details of the research assistant. The research assistant sought consent by reading and reviewing the consent form with the participant at the venue of the FGD. FGD participants was informed during recruitment stage that all the information collected was anonymous. Participant recruitment lasted for 2 days.

2.7 Data Collection

Data collection was conducted by a team of 21 enumerators with a male to female ratio of 2:5. All enumerators who took part in the research must understand English language and key words was
translated in their local languages and pidgin English. The quantitative data collection was done concurrently in the study settlements over four days, under close supervision of the research team (the PI and the research assistants). They checked each completed questionnaire for completeness and consistency. The researcher alongside the research assistants oversaw the overall monitoring and coordination of the data collection and ensuring that the research protocol was adhered to in all the settlements. The FGD held thereafter for a period of two days. The FGD sessions was moderated by the research assistants and the questions were open ended. The answers/discussion was written down by the FGD facilitators.

2.8 Training of Study team

Prior to the survey, 21 enumerators and 11 research assistants were trained by the researcher and the M and E coordinator over a period of 2 days on the quantitative component of the survey. During the training, they were taken through the survey objectives and methodology, sampling options, household and respondent selection, questionnaires, interview technique including, roles and responsibilities of the research assistants and enumerators. Likewise, they were trained on electronic data collection, specifically using the Open Data Kit (ODK) tool. Thereafter, role play was employed for practical teachings. Furthermore, 11 research assistants were trained on the FGD over a period of a day. The pretesting of questionnaires also served as an opportunity for field practice by the enumerators and research assistants.

2.9 Pilot Study

The questionnaire was pretested in two IDP camps not selected for the main survey. This was done by the researcher and selected research assistants by administering it to 30 mothers or caregivers (10% of sample size) who met the eligibility criteria for the study. Relevant adjustments was made to the questionnaire based on the observations during the pretest. The HH questionnaire and FGD interview guide was pre-tested. The participants for the pilot was consented to better understand the consent process. For the qualitative component of the study, one FGD of 8-10 participants was conducted. The discussions were written down by a note taker. The pilot study assisted in identifying any problem that could arise during the study implementation. After the pilot study, the research assistants alongside the enumerators brainstorm and resolve all identified challenges. The pilot data was used to address these potential issues before the main study was rolled out.

3. DATA MANAGEMENT PLAN SUMMARY

Data was collected using a structured interviewer-administered questionnaire for the quantitative data. The questionnaire was adapted from the Food and Agriculture Organization of the United Nations. Guidelines for assessing nutrition-related knowledge, attitudes and practices (Annex 1)\(^9\) and WHO guideline for KAP survey\(^10\). The questionnaire was designed in English and had five sections; Section A: IYCF Practices, Section B: Knowledge of IYCF; Section C: Attitude to IYCF, Section D: Health Seeking Behavior. Section E: WASH & Hygiene promotion. The questionnaire was scripted and uploaded on humanitarian Open Data Kit (ODK) Kobo Collect platform, then downloaded and administered using android devices. Data was captured using an android phone and sent to the Kobo Collect platform in real time from the survey sites. When this is not possible due to unavailability of network/data services, the enumerators transmitted the data immediately upon returning from the field sites. At the end of each day, the PI downloaded the data from the
kobo collect platform and checked the data for accuracy and completeness. Incomplete data or wrong data was flagged for recapture. To ensure minimal incomplete data, all relevant and compulsory questions in the questionnaire was coded as “required”, hence these questions must be answered before the electronic device allowed the enumerator to move to the next question. Qualitative questions for the FGD were open ended. Questions and answers sessions were recorded using an electronic device and transcribed at the end of the session. All data generated from the study was archived. The final data set was stored, maintained and archived and accessible to the researchers, project leads or other authorized persons.

4. Data Analysis plan Summary

Quantitative data was analyzed using SPSS version 21.0 and expressed using descriptive statistics such as frequencies, percentages, bar charts, pie charts and tables. This was done by the FHI 360 Monitoring and Evaluation team with support from the PI. The above-mentioned approach was employed to analyze the quantitative data from women with children 0 – 23 months. The analysis

- Determined mother and care takers’ knowledge and attitudes to IYCF-E in target location.
- Determined IYCF practices among children aged 0 – 23 months.
- Assessed the knowledge of common rural communicable diseases and health seeking behavior among the IDP populations.
- Determined the WASH practices among the IDP population
- Provided information on barriers to optimal infant and young child feeding in target area.
- Outcomes from the analysis was.
- Proportion of children 0 – 23 months in these IDP camp settings with optimal infant and young child feeding practices
- Barriers to practicing exclusive breastfeeding and other IYCF indicators
- Proportion of IDPs with adequate knowledge and preventive approaches to common rural communicable diseases.
- Proportion of IDPs with optimal hygiene practices.

The approach also examined the practices of IYCF-E, the health seeking behavior and knowledge of common rural communicable diseases and other key indices in hygiene promotion. Continuous variables was described using means and standard deviations while categorical variables was describe using frequencies and percentages. Knowledge and practices of IYCF-E, Health seeking behavior and knowledge of hygiene promotion was scored, based on the score, health seeking behavior and knowledge of hygiene promotion was graded as poor, fair or good for respondent’s who scored less than 50%, 50 – 69% and 70% and above respectively. Qualitative data was grouped, tabulated, triangulated and reported in participants words.

4.1 Indicator Definitions

The WHO definition of the different core and optional indicators for infant and young child feeding that was derived from this study is captured in the table below.
## 4.2 Core indicators

<table>
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<tr>
<th>Indicator</th>
<th>Definition</th>
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<tbody>
<tr>
<td>i. Early initiation of breastfeeding</td>
<td>Proportion of children born in the last 24 months who were put to the breast within one hour of birth</td>
</tr>
<tr>
<td></td>
<td>Calculated as: Children born in the last 24 months who were put to the breast within one hour of birth</td>
</tr>
<tr>
<td></td>
<td>Children born in the last 24 months</td>
</tr>
<tr>
<td>ii. Exclusive breastfeeding under 6 months</td>
<td>Proportion of infants 0–5 months of age who are fed exclusively with breast milk</td>
</tr>
<tr>
<td></td>
<td>Calculated as: Infants 0–5 months of age who received only breast milk during the previous day</td>
</tr>
<tr>
<td></td>
<td>Infants 0–5 months of age</td>
</tr>
<tr>
<td>iii. Continued breastfeeding at 1 year</td>
<td>Proportion of children 12–15 months of age who are fed breast milk</td>
</tr>
<tr>
<td></td>
<td>Calculated as: Children 12–15 months of age who received breast milk during the previous day</td>
</tr>
<tr>
<td></td>
<td>Children 12–15 months of age</td>
</tr>
<tr>
<td>iv. Introduction of solid, semi-solid or soft foods</td>
<td>Proportion of infants 6–8 months of age who receive solid, semi-solid or soft foods</td>
</tr>
<tr>
<td></td>
<td>Calculated as: Infants 6–8 months of age who received solid, semi-solid or soft foods during the previous day</td>
</tr>
<tr>
<td></td>
<td>Infants 6–8 months of age</td>
</tr>
<tr>
<td>v. Minimum dietary diversity</td>
<td>Proportion of children 6–23 months of age who receive foods from 4 or more food groups as listed</td>
</tr>
<tr>
<td></td>
<td>i. Grains, roots, tubers</td>
</tr>
<tr>
<td></td>
<td>ii. Legumes and nuts</td>
</tr>
<tr>
<td></td>
<td>iii. Dairy products like milk and yoghurt</td>
</tr>
<tr>
<td></td>
<td>iv. Flesh food (meat, fish)</td>
</tr>
<tr>
<td></td>
<td>v. Egg</td>
</tr>
<tr>
<td></td>
<td>vi. Vitamin A</td>
</tr>
<tr>
<td></td>
<td>vii. Other Vitamins</td>
</tr>
<tr>
<td></td>
<td>Calculated as: Children 6–23 months of age who received foods from ≥4 food groups the previous day</td>
</tr>
<tr>
<td></td>
<td>Children 6–23 months of age</td>
</tr>
<tr>
<td>i. Minimum meal frequency</td>
<td>Proportion of breastfed and non-breastfed children 6–23 months of age who receive solid, semi-solid, or soft foods (but also including milk feeds for non-breastfed children) the minimum number of times or more</td>
</tr>
<tr>
<td></td>
<td><em>The expected number of meals depends on whether children are breastfed leading to two calculations as follows</em></td>
</tr>
<tr>
<td></td>
<td>- <em>If children are breastfed: 2 times meal/snacks for 6 – 8 months, 3 times for 9 -23 months.</em></td>
</tr>
<tr>
<td></td>
<td>- <em>If they are not breastfed: 4 times for 6 – 23 months.</em></td>
</tr>
<tr>
<td><strong>Breastfed children 6–23 months of age who received solid,</strong></td>
<td><strong>Calculated as:</strong> semi-solid or soft foods the minimum number of times or more during the previous day</td>
</tr>
<tr>
<td>-------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>ii. Minimum acceptable diet</strong></td>
<td><strong>Proportion of children 6–23 months of age who receive a minimum acceptable diet (apart from breast milk)</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Calculated as:</strong> the minimum dietary diversity and the minimum meal frequency during the previous day</td>
</tr>
<tr>
<td></td>
<td><strong>Calculated as:</strong> or a food that was fortified in the home with a product that included iron during the previous day</td>
</tr>
<tr>
<td><strong>iii. Consumption of iron-rich or iron-fortified foods</strong></td>
<td><strong>Proportion of children 6–23 months of age who receive an iron-rich food or iron-fortified food that is specially designed for infants and young children, or that is fortified in the home.</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Calculated as:</strong> Children born in the last 24 months who were ever breastfed</td>
</tr>
<tr>
<td><strong>v. Continued breastfeeding at 2 years</strong></td>
<td><strong>Proportion of children 20–23 months of age who are fed breast milk</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Calculated as:</strong> Children 20–23 months of age who received breast milk during the previous day</td>
</tr>
<tr>
<td><strong>vi. Age-appropriate breastfeeding</strong></td>
<td><strong>Proportion of children 6–23 months of age who are appropriately breastfed</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Calculated as:</strong> as well as solid, semi-solid or soft foods, during the previous day</td>
</tr>
<tr>
<td><strong>vii. Predominant breastfeeding under 6 months</strong></td>
<td><strong>Proportion of infants 0–5 months of age who are predominantly breastfed</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Calculated as:</strong> as the predominant source of nourishment during the previous day</td>
</tr>
</tbody>
</table>
### viii. Duration of breastfeeding

<table>
<thead>
<tr>
<th>Median duration of breastfeeding among children less than 36 months of age</th>
</tr>
</thead>
<tbody>
<tr>
<td>The age in months when 50% of children 0–35 months did not receive breast milk during the previous day</td>
</tr>
</tbody>
</table>

### ix. Bottle feeding

<table>
<thead>
<tr>
<th>Proportion of children 0–23 months of age who are fed with a bottle</th>
</tr>
</thead>
</table>
| Calculated as: Children 0–23 months of age who were fed with a bottle during the previous day
Children 0–23 months of age |

### x. Milk feeding frequency for non-breastfed children

<table>
<thead>
<tr>
<th>Proportion of non-breastfed children 6–23 months of age who receive at least 2 milk feedings</th>
</tr>
</thead>
</table>
| Calculated as: who received at least 2 milk feedings during the previous day
Non-breastfed children 6–23 months of age |

## 5. Study monitoring

The research assistants with support from the PI was in charge of the overall monitoring and coordination of the data collection, and ensuring that the research protocol is adhered to in all settlements.

Key roles included.

- Ensured that data was collected daily, collated and all information, including hard copies of documents were returned daily.
- Communicated with IDP camp manager
- Performed selection of participants as per the protocol
- Organized orientation session for FGD participants
- Ensured all questionnaires + checklists are appropriately handled and checked daily for completeness and consistency.
- Avail necessary materials for the enumerators
- Ensured that all the necessary survey supplies, and forms are collected before leaving HH/Camp and each day before going out to the field for data collection
- Randomly checked daily the completed guidelines to ensure that all questions were asked, and the responses were neatly and legibly recorded
- Prepared debriefing notes for the PI on the problems encountered, if any; and
- Forwarded to the PI all completed survey questionnaires the same day
• Provided technical assistance for the enumerators
• Verified the consistency, completeness of the HH questionnaires

6. Ethical considerations and Approval

The protocol for this study was approved by the Northeast Nigeria Nutrition in Emergency information management technical working group.

6.1 Confidentiality

The interviewers did not discuss the respondents’ answers with anyone, except to the researcher or research assistants when clarification is needed. For all the study components (interview and FGD), no personal identifiers such as name, address, telephone and hospital identification number were documented on the study tools and during the recruitment processes. There was no way to link a specific questionnaire to a specific respondent. During the Household survey, the respondent and the enumerators sought for a comfortable place or corner in the house to ensure privacy during the question and answer sessions. A high level of confidentiality and security was strictly adhered to in handling the data from the study.

6.2 Informed Consent

Verbal informed consent was obtained from all respondents and FGD participants. Only respondents or participants who voluntarily accepted to form part of the research subjects was participate in the HH interview or the FGD.

For this study, only participants 18 and above participated in this study.

6.3 Potential risk

This survey was an interviewer-based survey, hence there was no direct or indirect potential risk to the study participants.

6.4 Potential benefit

During the study, the enumerators neither taught the respondents and participants nor provided the answers, hence there was no knowledge gain. However, participants in the FGD was provided with refreshment during the discussion. The refreshment included soft drinks and snacks.

6.5 Limitations

This study used geographical cross-sectional data and may not reflect the overall IYCF-E, health seeking behavior and WASH status in Borno state. There is no baseline study in these IDP camps against which it can be compared. Furthermore, there is high chance of recall bias and wishful misstatement. The sample size was not sufficient to disaggregate according to age or geographic location. In some instances, sub-group based on age (e.g. 0-5 months) is reported for information purposes, although it may not be representative statistically.

7. Results and Discussion

7.1 Socio-demographics characteristics
A total of 287 households participated in this KAP survey. 304 questionnaires were administered. Of these, 287 questionnaires were properly answered, giving a response rate of 94.4%. Mothers/primary caretakers were the primary respondents of the survey. From the result, the mean age of respondents in years was 28.6 +/- 6.1 standard deviation. 115 of respondents had children below 6 months while 172 had children 6 to 23 months. The male to female ratio of respondent’s children were 50.5% : 49.5%. 72.5% (208) of the respondents had no source of livelihood and depended solely on humanitarian assistance for daily sustenance. 69.3% of respondent’s highest level of education was koranic school, 20.2% did not have any form of education, 8.7% attended primary school while only 1.7% had post primary education. 54.7% of respondents belong to or have attended IYCF support or care group meeting while 45.3% have not.

7.2 Caretakers Knowledge of IYCF Principles

Assessing knowledge is a basic step in SBCC. Although knowledge does not translate to immediate change in beliefs, norms and customs in IYCF practices, it has been identified as the fulcrum upon which BCC rests. Knowledge of the four IYCF principles was assessed. These comprised of initiation of breastfeeding within 1-hour of birth (early initiation), exclusive breastfeeding until 6 months, complementary feeding from 6 months and continued breastfeeding until 24 months and beyond.

From the data collated and analyzed (Figure 1), caretakers had more knowledge on early initiation and exclusive breastfeeding as compared to the knowledge on complementary feeding from six months and continuing breastfeeding until 24 months and beyond.

7.3 Knowledge of other key IYCF Practices

In addition to assessing the caregiver’s knowledge on the above core IYCF principles and practices, caregiver’s knowledge on newborn feeding, colostrum advantages and breastfeeding frequency was assessed. Overall, 70 percent of respondents were aware that breastmilk is the first food a newborn should receive, 70.4% knew the benefit of colostrum and 65.9% were aware that children 0 to 6 months should be fed on demand. (Figure 2).
7.4 Practice: Timely Initiation of Breastfeeding.

Initiation of breastfeeding is recommended to start within the first hour of life and has been proven to contribute to optimal infant nutrition and a decrease in neonatal mortality by up to 22%. From the data presented (Figure 3), 84 percent of caregivers reported breastfeeding their babies within one hour of birth. This is consistent with the figures from a survey conducted by IMC in Dikwa and Monguno in June 2018 which stood at 84.2%. Across all the surveyed sites, reasons for delayed initiation of breastfeeding as chosen by the respondents from options in the questionnaire included delayed establishment of lactation and sickness of the mother or child. 66.9% of respondents confirmed that their children were fed with colostrum while 33.1% respondents either threw it away or could not recall if their children were fed on the colostrum in the first few days of life. Key decision makers on when to initiate breastfeeding were the caregivers (27.5%), the healthcare worker (26.8%) and the caregivers’ mother or mother in-law (26.1%). Furthermore, husbands (4.9%), TBAs (12.2%) and others (2.4%) contributed in decision-making with regards to early initiation of breastfeeding. From the above figures, it is evident that caregivers and their mothers, mother in-law and husbands play a major role in determining both positive and negative IYCF practices during the child’s early days.

7.5 Practice: Exclusive Breastfeeding
33 percent of caregivers of children 6-23 months reported feeding their children only breastmilk for their first six months (Figure 4). Some reasons given by caregivers for not exclusively breastfeeding their babies included perceived inadequate breastmilk, hence they believe their babies cannot survive on breastmilk alone. More so, extreme climatic conditions (hot temperature), in Borno state, is believed to cause dehydration of the infant hence reinforcing caregiver’s perception that breast milk may not provide the fluid needs of their children under 6 months. Further data from focus group discussions highlighted the difficulty faced by women in practicing exclusive breastfeeding which included psychological and physical stress due to displacement from their villages and life in IDP camps with little or no source of livelihood interlaced with insecurity. Although 65.2% of sampled women believed that there are many benefits of exclusive breastfeeding and 59.6% accepted that EBF can be practiced effectively in their homes, this was not in agreement with the result from the aggregate data on practices of exclusive breastfeeding. Hence, both increase in knowledge of, and improved attitudes to EBF has not translated into an excellent practice of exclusive breastfeeding.

Figure 4: Exclusive Breastfeeding (n=115)

7.6 Practice: Timely Introduction of Complementary Feeding

Timely introduction of complementary feeding is essential to the adequate growth and development of the child. This is also a key contributor to the wellbeing of a child in the first 1,000 days of life. Timely introduction of complementary feeding was assessed in children six months and above by asking their caregivers at what age they introduced complementary foods. 30.3 percent of children were introduced to complementary feed at six months (Figure 5). Conversely, 15.0% of caregivers introduced their children to liquid and semi-solid food before six months of age, 51.5% introduced their baby to complementary feeds after six months while 3.1% could not recall when their children were introduced to complementary foods.
7.7 Practice: Bottle Feeding

Figure 6 below shows the rate of bottle feeding. Aggregate data showed 16.7% bottle feeding. Hence the need to further disseminate IYCF key messages as there are serious risk posed by bottle feeding especially in camps where sanitation practices are suboptimal.

7.8 Practice: Minimum Dietary Diversity (n=172)

The dietary diversity of foods given to children aged 6-23 months was assessed using the 24 hours dietary recall method. 82.6% of respondent’s children consumed grains, roots or tubers in the last 24 hours, followed by legumes/nuts at 30.8% in the last 24 hours, 18% ate meat or fish products
while only 11% consumed vitamin-A rich fruits and vegetables. From the analyzed data, the aggregate minimum dietary diversity across the survey sites stood at 22.9%.

![Minimum dietary diversity](image)

*Figure 7: minimum dietary diversity (n=172)*

### 7.9 Attitude to IYCF Practices (n=287)

#### Table 2: Attitude to IYCF Practices

<table>
<thead>
<tr>
<th>Variables</th>
<th>Yes (%)</th>
<th>Maybe (%)</th>
<th>No (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Can malnutrition be prevented in your child?</td>
<td>66.2</td>
<td>22.6</td>
<td>11.1</td>
</tr>
<tr>
<td>Is malnutrition serious constraint to the healthy growth of your child?</td>
<td>67.6</td>
<td>24</td>
<td>8.4</td>
</tr>
<tr>
<td>Are there perceived benefits of adequate nutrition?</td>
<td>50.9</td>
<td>35.9</td>
<td>13.2</td>
</tr>
<tr>
<td>Perceived advantages of breastfeeding?</td>
<td>65.2</td>
<td>26.1</td>
<td>8.7</td>
</tr>
<tr>
<td>Perceived benefits of exclusive breastfeeding?</td>
<td>57.1</td>
<td>26.5</td>
<td>16.4</td>
</tr>
<tr>
<td>Can exclusive breastfeeding and complementary feeding be done effectively in your house?</td>
<td>59.6</td>
<td>16.4</td>
<td>24</td>
</tr>
<tr>
<td>Any Perceived benefit to complementary feeding?</td>
<td>9.4</td>
<td>3.8</td>
<td>0.3</td>
</tr>
<tr>
<td>Perceived barrier to adequate nourishment of the baby?</td>
<td>46.7</td>
<td>16.7</td>
<td>36.6</td>
</tr>
<tr>
<td>Bold to breastfeed your child whenever at anytime?</td>
<td>80.1</td>
<td>NA</td>
<td>19.9</td>
</tr>
</tbody>
</table>

Since IYCF is geared towards behavior change, knowing the stage of behavior change in the sample population as contained in the health belief model is paramount. Therefore, attitudes to
IYCF practices among the respondents were assessed and results were triangulated with data from focus group discussions.

The majority (66.2%) of the respondent women believed that malnutrition can be prevented and that it is a serious constraint to the growth of the child. Likewise, many (50.9%) believe that there are benefits of adequate nutrition and exclusive breastfeeding. However, this belief did not translate to an equivalent practice in exclusive breastfeeding, hence the need to further probe the cause of the lag through focus group discussions. 59.6% of the respondents agreed that exclusive and complementary feeding can be practiced effectively in the house, however, there are considerable barriers to effective practicing of complementary feeding ranging from loss of livelihood to little or no income. Generally, majority (80.1%) of women demonstrated confidence to put their baby to breast regardless of where they are at a time.

7.10: Focus Group Discussions

The focus group discussion explored the barriers to knowledge of IYCF principles and practices, the attitudes to key IYCF practices and to discover norms and practices that may positively or negatively affect IYCF-E. Nine focus group discussions (three in each LGA) were organized. They comprised of PLW and mothers with children below 24 months in a group and grandmothers of children below 24 months in another group in a ratio of 2:1. Information obtained from the FGDs is as captured in headings 6.11 to 1.14.

7.11 Barrier to IYCF Information

While grandmothers and PLW alike were aware of the sources of information on child care and feeding practices, concerns were raised on language barriers and reduced access to health facilities as a key factor which slowed the spread of information on IYCF practices. This resulted from languages such as Kanuri and Shuwa being the dominant language of the beneficiaries, which contrasts with the predominant Hausa language use for information, education and communication in the state. This has however reduced through the use of IYCF facilitators and lead mothers who are locals and were trained to further pass down the information in local dialects. Likewise, the presence of health facilities and community support groups were noted to have reduced barriers to IYCF information. Furthermore, focus group discussants mentioned limited access to radio and television which also serve as sources of information on IYCF and health messages as among the barriers to IYCF information.

7.12 Attitudes to Early Initiation of Breastfeeding

In order to ascertain time of initiation of breast feeding, grandmothers were asked the best time to initiate breastfeeding and their opinion on early initiation. Some demonstrated little knowledge on best time to initiate breastfeeding and little knowledge gain from health workers with regards to mothers starting breastfeeding an hour after birth. There was a strong belief among some FGD participants that the colostrum is harmful, causes diarrhea, can lead to death and should not be given to the child, leading to this yellowish milk (colostrum) frequently discarded in the first three days of life while the baby is placed on water or cow milk only.

7.13 Barrier to Exclusive breastfeeding and breastfeeding frequency
Furthermore, barriers to exclusive breastfeeding were assessed. Until now, there has been a considerable knowledge gap on the importance of exclusive breast feeding. Cultural beliefs such as “water is essential to life, the inadequacies of breastmilk both in quantity and quality all hindered good practices of exclusive breastfeeding among FGD participants. It is important to note that most women see domestic activity such as farming, reduced maternal nutrition resulting from loss of livelihood and limited financial support from their husband as a major barrier to exclusive breastfeeding. Likewise, most women perceived that their breast milk is not flowing very well, hence not enough for the child. This belief is a major set-back to exclusive breast feeding as the caregiver’s resort to other means of feeding to ensure their children are well fed. Fear of death of the child due to thirst as water is considered very essential to life and gives blood, pressure from caregiver’s mothers and in-laws, mother’s undernutrition status and sickness of the caregiver were all noted to discourage EBF. Some of the discussants believe that cow's milk makes the child stronger than breast milk and that mother’s do not have enough breast milk for the child to only depend on as the mother attends to other activities including farming. More than these, there were beliefs that feeding the child on breastmilk only would inadvertently lead to a decrease in the child’s intellect and induce constant hunger in the mother. While, some are aware of the constant campaign of exclusive breastfeeding in the first six months by health professionals, others are not.

Although the majority believe that breastmilk should be given up to 24 months at an acceptable frequency, most rely on crying as a signal to initiate breastfeeding. During the FGD, significant proportion of the PLW raised concerns of pressure from their mothers, in-laws and husband as the barrier to EBF. This concern against EBF was proven true as some grandmothers insisted on the inadequacies of breast milk and the perceived consequences of EBF, and specifically the dangers of feeding the newborn with the colostrum. In all, there was a unanimous belief that the knowledge gained through constant and continued exposure to teachings on IYCF would produce positive results as more PLW have welcomed best IYCF practices.

7.14 Positive Cultural Behaviors.

During the FGD, grandmothers, PLW and older women alike believed that eating more local foods such as tuwo masara (corn flour dish), tuwo dawa (guinea corn/sorghum dish), miyan kuka (Baobab soup), and some traditional medicine has the potency of increasing breastmilk production and breast milk flow. Aside these, other foods like pap, meat and vegetables were believed to increase breastmilk flow. While some of these may not have direct scientific proof, the researcher neither discouraged nor supported the belief.

7.15 Health Seeking Behavior (n=287)

From the analyzed data, a majority (93%) of the respondents sought healthcare from clinics, while a very small proportion (7%) sought treatment with traditional healers and patent medical store.
In Fig 8, majority (80.5%) of the respondents indicated that walking distance to the nearest health facility is less than 30 minutes, and 19.5% had more than 30 minutes walking distance to the health facility. As seen in Fig 9, 42.9% visit the clinics twice or more a year, 9.4% less than once per year, 12.2% visited once while 35.5% visited as needed. Systems such as mobile clinics or health post should be put in place to reach the 0.3% population with walking distance of more than a day to the clinic. FGDs showed that many caregivers first give either traditional medicine or orthodox medicines like paracetamol or flagyl and seek for health care services at clinics if the sickness persist.

7.16 Knowledge of common rural communicable diseases

<table>
<thead>
<tr>
<th>Knowledge of common rural communicable diseases</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge of malaria symptoms</td>
<td>223</td>
<td>77.7</td>
</tr>
<tr>
<td>Knowledge of malaria prevention</td>
<td>160</td>
<td>55.7</td>
</tr>
<tr>
<td>Knowledge of diarrhea prevention</td>
<td>213</td>
<td>74.2</td>
</tr>
<tr>
<td>Knowledge of vaccine preventable disease</td>
<td>208</td>
<td>72.5</td>
</tr>
</tbody>
</table>

*Table 3: Common rural communicable diseases (n=287)*
Knowledge of common rural communicable diseases were assessed using four variables which included knowledge on malaria symptoms, malaria prevention, diarrhea prevention and knowledge of vaccine preventable diseases. From the presented data (table 3), knowledge of malaria symptoms, diarrhea prevention and vaccine preventable disease were all above 70 percent whereas knowledge on malaria prevention was lower, around 56 percent. This is in tandem with the FGD which revealed limited knowledge on malaria prevention. Knowledge of common rural communicable diseases was scored, based on the score, knowledge was graded as poor, fair or good for respondent’s who scored less than 50%, 50 – 69% and 70% and above respectively. Analysis (Figure 10) showed that 67.9% had good knowledge of common rural communicable disease, 12.5% had fair knowledge while 19.5% had poor knowledge of common rural ailment.

![Figure 10: Grading of knowledge of common rural communicable disease (n=287)](image)

**7.17 Water Supply:**

93% of respondents had daily access to at least one water source compared to 7% who did not. Among the multiple water sources, public standpipe (70%), followed by tube well borehole (41.1%) were most accessible to the respondents while unprotected dug wells (2.1%) and unprotected springs (3.1%) accounted for the least sources. Other sources of water accessible to respondents are private water sources (10%), protected springs (8%), protected dug wells (4.2%), and surface water at 1%. Walking distance to these water sources were less than 30 minutes for 73.2% of respondents and more than 30 minutes for 26.8% of the respondents. 55.7% of respondents report that their households use above 20 liters of water per person each day, while 21.6% use between 10 to 20 liters, 11.1% between 5 to 10 liters and 11.5% using 5 or less liters of water. These estimates may or may not reflect the reality as the data were collected as a simple estimate.

From the analyzed data, 82.9% of respondents were aware that their drinking water was chlorinated while 17.1% were not. 48.1% of the respondents confirm that they treat their water at home while 51.9% do not treat their water at home. Of the 138 respondents who treat their water at home, 79% do so with chlorine (aquatab), 3.6% boil the water, use of water filters such as
ceramic sand water filter and straining through cloth accounted for 22% while 1.4% use other methods to treat their water at home.

7.18 Sanitation Infrastructure:

Figure 11 shows the site/distance of the toilet facilities from households. From the presented data, nearly 40% had their toilet facility in dwelling or in their compound. Equally, respondents whose distance of household from toilet facility were less than 20 meters (either public or private) were by far more than those whose toilet facility were beyond 20 meters. Most (87.8%) households use pit latrines. Pit latrines used by 42.5% of the respondents is floored/slab while 38.3% use pit latrines that do not have slab/floor. Furthermore, 31% use VIP latrines with floors, makeshift latrine accounted for 4.2%, open defecation 7.3%, and other toilet facilities not specifically mentioned accounted for 4.9%.

22.3% expressed excellent satisfaction with their toilet facility, 18.8% moderate satisfaction while 32.4% and 16.4% were extremely unsatisfied and somewhat unsatisfied respectively with the toilet facility. 10.1% expressed no opinion.

7.19 Hygiene Promotion

92.3% (n=265) of respondents have been taught the importance of latrine use and hand washing using soap at critical times in the last six months. Sources of knowledge gain among these respondents were mostly by community volunteers 94.7% (n=251). Knowledge gained during key WASH celebration days such as global handwashing, world toilet and world water days accounted
for 3.4% while radio and billboard contributed 0.8% and 0.4%, respectively. Other varying sources of knowledge contributed to 0.8%. Subsequently, knowledge on hygiene promotion messages were assessed using different variables. First, knowledge on handwashing occasions were assessed using a set of questions which included but not limited to (after going to toilet, after attending to child that defecated or sick person, before and after preparing food). Knowledge of critical times to wash hands and acceptable hand washing practices was scored, based on the score, they were graded as poor, fair or good for respondent’s who scored less than 50%, 50 – 69% and 70% and above respectively. From the aggregated data, 67.2% of respondents had good knowledge of critical times to wash their hands, 20.6% fair knowledge while 12.2% had poor knowledge of critical times to wash their hands. Further analysis showed that 71.1% had acceptable hand washing practices, 18.8% had fair practices while 10.1% had poor hand washing practices. 73.5% respondents washed their hands with water and soap, 14.3% do same with water and ash/sand, 11.5% with water only while 0.7% use other methods.

Figure 12: Knowledge of Hygiene Promotion Practices

To ascertain the knowledge of causes of diarrhea, selected questions which included drinking unsafe water, eating with dirty hands, not covering food from flies and others were applied. 31% had excellent knowledge on the causes of diarrhea, 34.1% good knowledge and 34.8% had poor knowledge. 84.3% of respondents believe that good hygiene such as washing hands after going to toilet and before preparing food, covering of food against flies, not defecating in open places, keeping the house clean can reduce the chances of exposure to disease. 12.9% believe that it is necessary for good self-esteem while 2.8 gave other varying reasons. Knowledge of hygiene promotion practices was scored, based on the score, knowledge was graded as poor, fair or good for respondent’s who scored less than 50%, 50 – 69% and 70% and above respectively. The aggregated data on hygiene promotion was scored and graded, 60.6% had excellent knowledge, 26.8% had good knowledge while 12.5% had poor knowledge on hygiene promotion practices.

8. Conclusion and Recommendation

8.1 Conclusion

In recent times, the survey sites witnessed outbreaks of cholera, a GAM rate above the critical threshold and upsurge in vaccine preventable disease. From the analysis and result presented above, most of the respondents have good to excellent knowledge of key principles of IYCF,
health and hygiene promotion. As of now, attitudes to IYCF practices is suboptimal as are several key IYCF practices. From the presented data, most respondents have good health seeking behavior. Water supplied is suboptimal and a significant proportion of respondents are not satisfied with the sanitation infrastructure and majority of the respondents have at least good knowledge on hygiene promotion. While some of IYCF indicators and association between socio demographics and out-come indicators were not explored, the result revealed that more work needs to be done towards optimizing health, nutrition and WASH practices as contained in the Sphere handbook and towards achieving the sustainable development goals. Also, the result further revealed the need to increase expand the program reach of IYCF activities most especially in Dikwa LGA.

8.2 Recommendations

1. There is need to sustain and scale up IYCF activities in all survey sites.
2. Explore additional means of social and behavior change communication such as mass media through radio jingles or community television broadcast to pass on audio-visual IYCF messages.
3. FHI 360 should liaise with other partners who are implementing Food security and livelihood programs for referral of beneficiaries. Likewise, FHI 360 should commence community cooking demonstration where beneficiaries are taught to prepare feasible, safe and nutritious food using locally available food items or food items received from partner agencies.
4. The program should be expanded to incorporate activities targeting not only pregnant and lactating women, but other key decision makers in the household such as men and the elderly women.
5. Other methods of health education and promotion should be explored to further teach the beneficiaries on the prevention and control of common communicable diseases.
6. There is need to increase awareness to IDPs on hand washing, the danger of drinking water from unsafe water sources and open defecation which are the root causes of many diarrheal and water-borne diseases. WASH, Health and Nutrition should strengthen health and hygiene/sanitation campaigns in the communities targeted. The CVs and CHEWs should work together to intensify mobilization and create awareness among the targeted population in the camps and host communities.
7. Since IDPs received health and hygiene messages from varied sources; there is the need for continued collaboration with all WASH actors on harmonization of existing hygiene messages, approaches and appropriate communication methods to maintain consistency. Harmonize, tools, streamline and intensify monitoring for behavior change.
8. There should be a formative research to understand the determinants, barriers and facilitators of behaviors and the roles of various household and community members in promoting them.

9. Subsequent surveys should explore other key nutrition and WASH indicators not addressed in this survey.
List of References


