PATH/Aurelio Ayala III

GHANA

GHANA PROMOTION OF COMPLEMENTARY FEEDING PRACTICES PROJECT

BASELINE SURVEY REPORT

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gain Global Alliance for Improved Nutrition

PATH

IYCN USAID's Infant & Young Child Nutrition Project

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Acronyms

BCC	behavior change communication
FGD	focus group discussion
GAIN	Global Alliance for Improved Nutrition
GDHS	Ghana Demographic and Health Survey
IEC	information, education, and communication
PATH	Program for Appropriate Technology in Health
UNICEF	United Nations Children's Fund
WHO	World Health Organization

Executive summary

Appropriate complementary feeding practices still remain a challenge in Ghana, and Brong Ahafo Region is no exception. The 2008 Ghana Demographic and Health Survey (GDHS) indicated that a large majority of young children in Ghana were not being fed appropriately; and overall, feeding practices met the minimum standards for only 36% of children aged 6-24 months. The most common problem was feeding nutritionally inadequate meals. Only 46% of children were fed the minimum number of times. Children aged 12-17 months (44%) were the most likely to be fed according to all three recommended infant and young child feeding practices, while those aged 6-8 months (28%) were the least likely to be fed according to recommended practices. In Brong Ahafo Region, 47% of children were put to the breast within one hour of delivery (GDHS 2008).

Objective/Purpose of the study

The United States Agency for International Development's Infant & Young Child Nutrition (IYCN) Project, the Ghana Health Service, the Global Alliance for Improved Nutrition (GAIN), and PATH conducted a baseline study in nine districts between June and July 2011. The objective was to provide an in-depth analysis of infant and young child feeding knowledge, practices, and behaviors as a baseline to guide the implementation of the Ghana Promotion of Complementary Feeding Practices Project, and to provide a basis for monitoring and evaluating the effectiveness of the behavior change communication campaign.

Methods

A mixed design involving qualitative and quantitative methods was used to conduct the study. Data were collected using a structured survey, in-depth interviews, and focus group discussions. The study participants were drawn from 45 communities within the nine project districts. The communities were selected based on the presence of mother support and/or church-based groups. Purposeful sampling was used to select the female caregivers of children 6-24 months. Fathers of children 6-24 months, health workers, and community group leaders were selected using convenience sampling.

Background of respondents

The respondents for the quantitative study were between 22 and 29 years of age; more than half (56.3%) had up to primary education or less. The highest form of education attained was basic, (middle or junior high school). The occupations of most of the respondents were peasant farming and fishing (55.2%), followed by petty trading (13.7%) and artisanship (12.2%). More than one in ten (11.5%) of them said they were unemployed. About 85% of participants were married. Persons who were single (never married) formed only 7% of the group. Nearly all the respondents professed one form of religion or another, with the vast majority being Christian (81.5%), followed by Muslim (11.5%).

Early initiation of and exclusive breastfeeding

More than half of the respondents (52.2%) reported that their children were put to the breast within one hour of delivery. Of this number, more than half (54.5%) reported that they put the child to the breast within 30 minutes of delivery.

Nearly 80% of respondents endorsed exclusive breastfeeding, specifying that it is good to give only breastmilk to a baby for the first six months. Documenting actual practices, however, showed exclusive breastfeeding was practiced by only 43.7% of respondents.

Complementary feeding

Only 37.6% of respondents practiced timely complementary feeding; i.e., adding other foods to breastmilk at 6 months. The remaining 62.4% either started earlier or later than 6 months. Knowledge of frequency of feeding according to recommendations was low across all child age groups, with the frequency of feeding decreasing with increased age. Amounts of food given per meal were adequate for all the age groups, with a few discrepancies, especially in the 9–11 months and 12-24 months groups. A 24-hour recall showed that respondents gave a variety of locally available foods; however, rates were low for giving animal-source proteins and dark green, leafy vegetables. Additionally, only a little more than one-third of respondents could adequately name examples of energy-rich, body-building, and protective foods.

There is a potential market for commercially fortified complementary foods. About 53% of respondents purchased commercial foods that have added vitamins and minerals. About 74% of respondents bought these products because they believe the foods will make their children healthy.

In terms of nutrient density of foods, only about a third of respondents gave porridges “thick enough to stay on the spoon.” A large proportion of children were fed thin/not-too-thick porridges.

Responsive feeding practices were not always the best, particularly for children recovering from illness. About 62% of respondents reported feeding the child in the usual way, rather than the recommended additional meal each day for two weeks.

Sources of health information for caregivers

Only 28% of respondents belonged to either a community-based group (such as a mother support group) or church-based group. Of these, about 17% were members of mother support groups, and about 45% belonged to groups within their religious organizations. More than half of the respondents (53.3%) belonging to groups were likely to have discussed issues on infant and young child feeding within their groups.

Media habits and access to infant and young child nutrition information

There were two main sources of media information available to the respondents: radio (72.2%) and community information centers (27.8%).

In-depth interviews with health workers

Generally, health workers had a fair amount of knowledge on infant and young child feeding. However, it was clear from the interviews that there is a need to strengthen their capacity and update their knowledge with current recommendations.

Conclusions and recommendations

Information from the data triangulation showed that the knowledge reported during focus group discussions with both men and women was not supported by actual practice, as reported in the survey. Most of the findings of this study fit with those of the 2008 GDHS, as well as preceding studies and other literature on infant and young child nutrition in Ghana.

The background of the respondents in the study calls for educating them using such means as local FM radio stations that broadcast in local languages, and face-to-face contact. The target population can also be reached broadly through churches and other religious gatherings.

1. Introduction

1.1 Background

In Ghana, the IYCN Project, GHS, PATH, and GAIN are collaborating to promote improved complementary feeding practices as part of broader efforts to reduce malnutrition. The goal of the joint initiative, the Ghana Promotion of Complementary Feeding Practices Project, is to improve the dietary intake of children 6-24 months of age in target communities through the promotion of improved dietary practices that are in line with the standards and policies of the government of Ghana and the World Health Organization (WHO)/United Nations Children's Fund (UNICEF) Global Strategy on Infant and Young Child Feeding. The Ghana Promotion of Complementary Feeding Practices Project will promote feeding of appropriate complementary foods by developing and implementing a behavior change communication (BCC) campaign to promote improved nutrition for infants and young children.

1.2 Geographical focus

Brong Ahafo Region is divided into 22 districts. Nine of these districts were selected, in collaboration with the Regional Health Directorate of the Ghana Health Service, as beneficiaries of this project: Sene, Jaman South, Asunafo South, Asutifi, Atebubu-Amanten, Tain, Sunyani West, Nkoranza North, and Kintampo South. BCC activities will be targeted at five communities within each district (see Appendix 1 for a list of the districts and communities).

1.3 Purpose of the baseline study

The baseline study was conducted in the nine districts between June and July 2011. The objective was to provide an in-depth analysis of infant and young child feeding knowledge, practices, and behaviors as a baseline to guide the implementation of the project, and to provide a basis for monitoring and evaluating the effectiveness of the BCC campaign.

2. Methodology

2.1 Sampling

Study participants were drawn from 45 communities in the nine project districts. The communities were selected based on the presence of mother support groups and church-based groups. In each district, purposeful sampling was used to select the female caregivers.[1] The criterion used for selecting female respondents was that they were caregivers of children 6-24 months. Fathers[2] of children 6-24 months, health workers, and community group leaders were selected using convenience sampling.

2.2 Data collection methods

Both qualitative and quantitative methods were used to conduct this study. Data were collected using a structured survey, in-depth interviews, and focus group discussions (FGDs) (see Appendix 2 for the study tools). Findings from all three sources were triangulated for the purpose of validation.

Structured survey

Each study community was divided into six sub-areas, and one caregiver was selected from each sampled household within each sub-area, for a total of six participants per community.[3]

Households in the cluster were numbered, and one was randomly selected. In a sampled household where there was more than one caregiver for the child aged 6-24 months, data collectors purposefully sampled for the interview one mother or caregiver who regularly fed the index child. In a situation where the selected caregiver had more than one child aged 6-24 months, the older one was selected as the index child.

In-depth interviews

Based on the classification of health facilities in Brong Ahafo Region, we identified and selected four categories to use in the data collection exercise: district hospitals, clinics, health centers, and Community-Based Health Planning and Services compounds. In each district, five health workers were interviewed, including two health workers from the district hospital responsible for child welfare clinics (growth monitoring sessions) and one from each of the other three facility categories.

Leaders of mother support groups and church-based groups at the community level whose activities could impact infant and young child feeding practices were also interviewed. In each district, five of these groups were randomly selected from a list of such groups within the district. Identification and sampling of the groups was done with the help of district-level health staff.

[1] "Caregiver" is defined as the person who regularly feeds the subject child.
[2] Fathers were not necessarily the husbands of the female caregivers, and were selected independently from their partner's participation in the study.
[3] "Household" is defined as people who live together in a single home and feed from the same pot.

Focus group discussions

An initial multi-stage random sampling, and later a purposive sampling, was used to select focus group participants. Five districts were sampled randomly for the FGDs: Sunyani West, Jaman South, Nkoranza North, Tain, and Atebutu-Amanten. Next, one community within each of these districts was also randomly selected from those that were not included in the structured survey. FGD participants were selected based on the fact that they were caregivers of children aged 6-24 months and they were available to participate in an FGD. About ten participants were selected for each FGD.

In all, five FGDs were conducted, three with women and two with men. Table 1 presents a summary of the data collection methods and participants.

Table 1. Summary of data collection methods.

Method	Respondents	Number of interviews or groups
Structured survey	Mothers/Primary caregivers	266
In-depth interviews	Health workers	45
	Leaders of community groups	45
FGDs (men)	Fathers of children 6-24 months	20
FGDs (women)	Caregivers of children 6-24 months	30

2.3 Quality control

All interviews were conducted in Twi, the predominant dialect of the participants. The data collection tools were translated into Twi during a two-day training for data collectors prior to the data collection. Technical terms were explained and translated to ensure consistency among all data collectors. (Appendices 3 and 4 include a list of data collectors and supervisors/team leaders, respectively.)

2.4 Data analysis

The open-ended responses in the structured survey were grouped and coded. The data were then cleaned and entered into an SPSS database. Since this was a descriptive study, frequencies and crosstabs were run. The data were analyzed in SPSS version 13 and exported into Microsoft Excel 2007. The in-depth interviews and FGDs were transcribed and analyzed using a tally system in a matrix form from which common themes emerged.

To validate the findings from the quantitative study, data from all three sources (structured survey of mothers/caregivers, in-depth interviews with health workers and community leaders, and FGDs with men and women) were triangulated with each other to gain a sense of the common issues, themes, and variations in the responses and interpretations. Qualitative data were also used to tell the story behind the quantitative findings, for more meaningful and appreciable results.

3. Findings

The findings of the study are reported under the following themes:

- Sociodemographic characteristics of study participants.
- Exclusive breastfeeding knowledge and practices.
- Complementary feeding knowledge and practices.
- Sources of health information for caregivers.
- Media habits and access to health information.
- In-depth interviews with health workers.

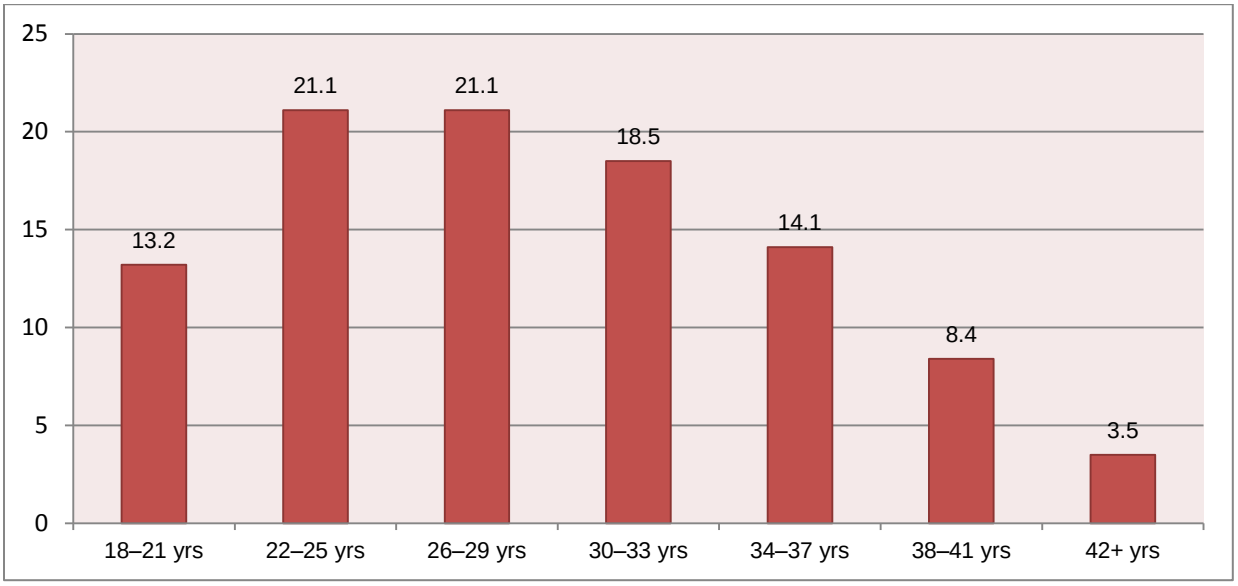
As a result of the data triangulation, the quantitative information is supported with appropriate qualitative findings, where possible. Frequencies and graphical representations of the results are presented below.

3.1 Sociodemographic characteristics of study participants

Age

The majority of respondents (42.2%) were between the ages of 22 and 29 years (Figure 1). The median age was 28 years.

Figure 1. Ages of study participants (n=227).

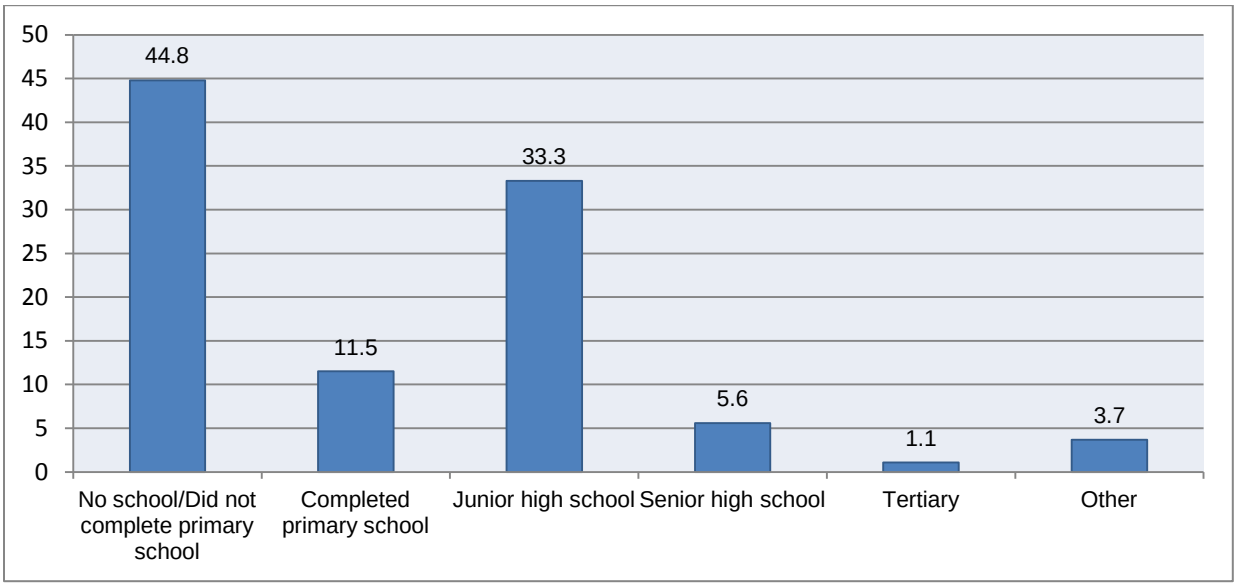


Education

More than half of the respondents (56.3%) in the nine districts had little or no education (primary school or less). Only one-third had completed basic education (middle school or junior high

school). District-specific data showed a similar result in only three of the districts: Sene, Sunyani West, and Kintampo South having respondents with tertiary level education.

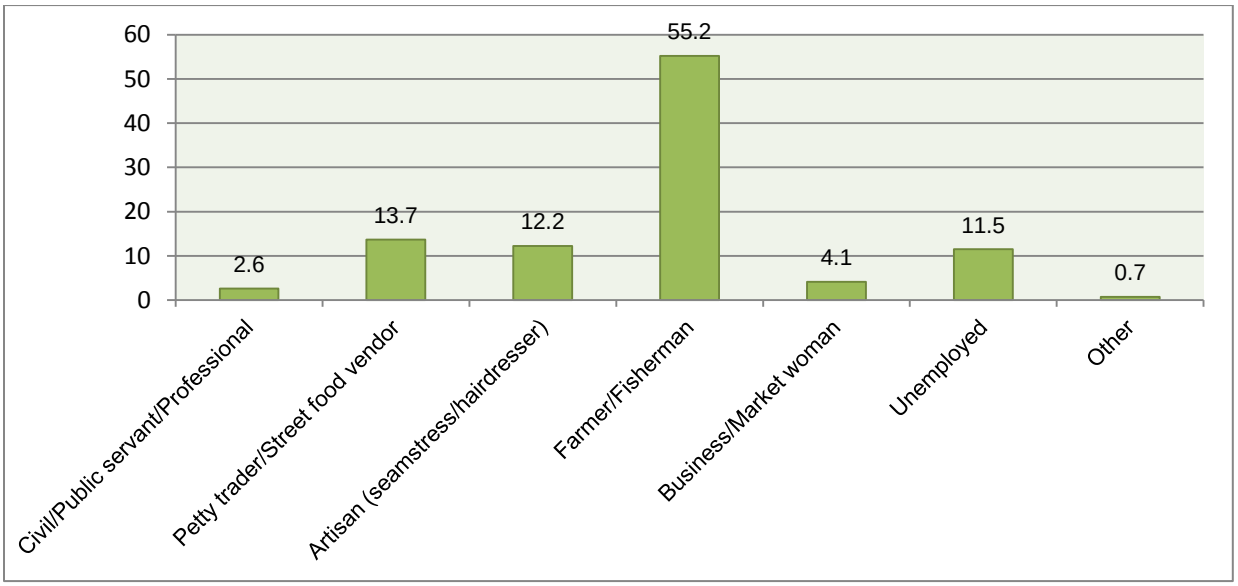
Figure 2. Educational backgrounds of study participants.



Occupation

Figure 3 shows the primary occupations of study participants. Results were similar across all districts. The majority were peasant farmers, including a few fishermen (55.2%); followed by petty traders (13.7%) and artisans (12.2%). A little more than 10% (11.5%) reported that they were unemployed.

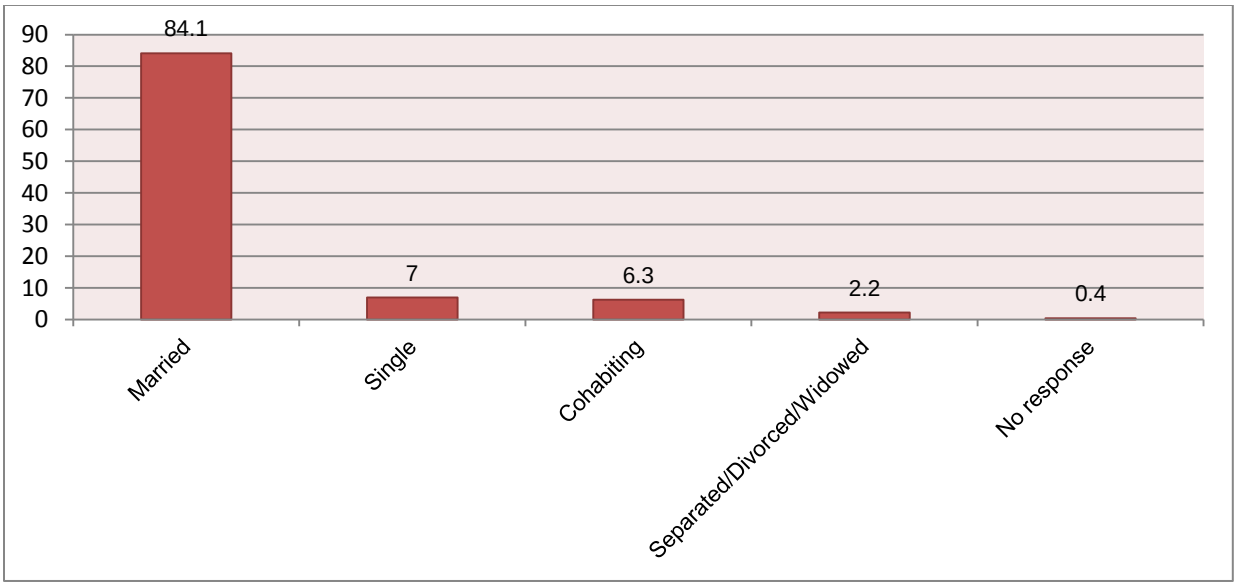
Figure 3. Primary occupations of study participants.



Marital status

Figure 4 shows the marital status of the participants. As a group, about 85% of the respondents were married. Only 7% of participants were single (never married), and 6.3% were cohabiting.

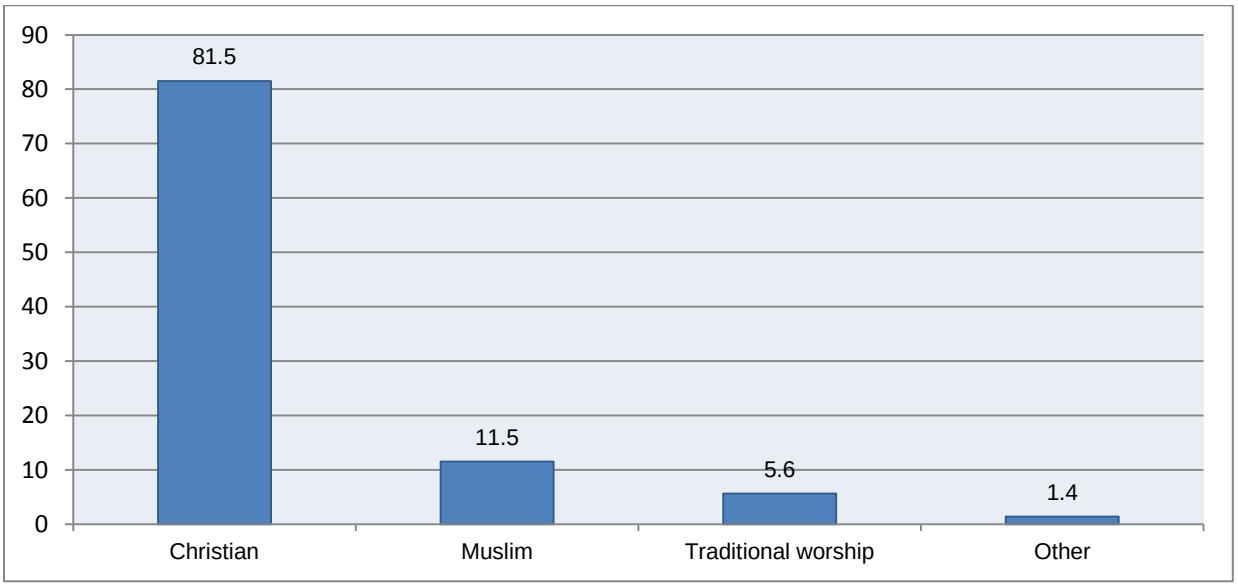
Figure 4. Marital status of study participants.



Religious affiliation

The majority of the study participants reported Christianity as their religion (81.5%). This was followed by Islam (11.5%), with a small percentage being traditionalists (Figure 5).

Figure 5. Religious affiliations of the study participants.



3.2 Exclusive breastfeeding knowledge and practices

3.2.1 Beliefs and perceptions on exclusive breastfeeding

Nearly 80% of study participants endorsed and knew some of the benefits of exclusive breastfeeding, specifying that it is good to give only breastmilk to a baby for the first six months (Figure 6). More than half mentioned that it helps babies to grow well and protects them against infections.

This was true for male FGD participants as well. For instance, all participants in the men's FGDs in Atebubu-Amanten and Tain Districts agreed that breastmilk is good food for babies for up to six months, that it will help children to grow well, and that it should be initiated right after birth.

Respondents who did not think that exclusive breastfeeding is good held the perception that children need water in addition to breastmilk, that breastmilk alone may not satisfy children.

Figure 6. Beliefs and perceptions on exclusive breastfeeding.

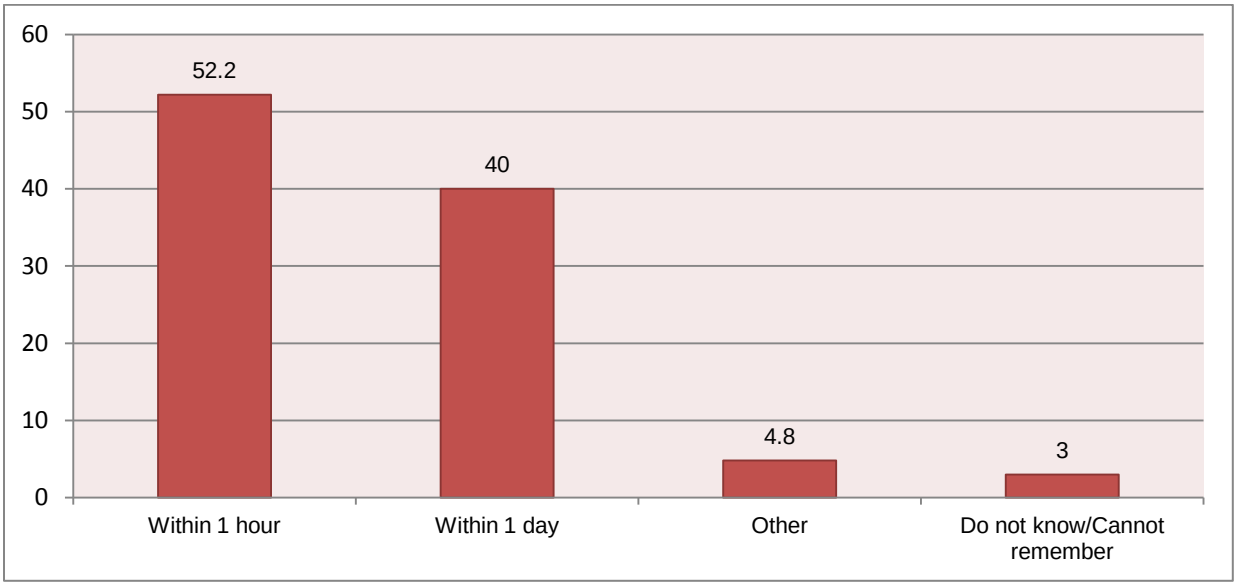
3.2.2 Initiation of breastfeeding

Respondents' practices with respect to initiation of breastfeeding are shown in Figure 7. More than half (52.2%) reported that their children were put to the breast within one hour of delivery. Of this number, 54.5% reported that they put the child to the breast within 30 minutes of delivery.[4]

> *Exclusive breastfeeding draws the child closer to the mother. It makes the child healthy and strong because the milk contains all the nutrients needed to grow and mature.*
>
> FGDs with men
> Atebubu-Amanten and Tain Districts

[4] The Ghana Health Service recommends putting babies to the breast within 30 minutes after delivery.

Figure 7. Initiation of breastfeeding by study participants.



Early initiation of breastfeeding is part of the protocol in most health facilities in Ghana, especially those designated as "baby friendly." Therefore, early initiation rates tend to be higher in communities that record high numbers of deliveries at health facilities. As shown in Table 2, about 63% of study participants delivered at a health facility, while 7% delivered at a private midwifery. About 16% were delivered by a traditional birth attendant, with another 14% reporting self-deliveries or assisted by an untrained traditional birth attendant. These data underscore the fact that early initiation of breastfeeding rates are higher at health facilities or with trained health personnel.

Table 2. Place of delivery and initiation of breastfeeding (n=266).

Type of delivery	% of respondents	Initiation of breastfeeding (%)			
		Within one hour	Within one day	More than one day	Do not know
Trained traditional birth attendant	16.3	44.2	41.9	11.6	2.3
Health facility	62.6	61.7	32.9	3	2.4
Private midwife	7	36.8	52.6	5.3	5.3
Self-delivery or untrained traditional birth attendant	14.1	32.4	62.2	2.7	2.7

3.3 Exclusive breastfeeding practices

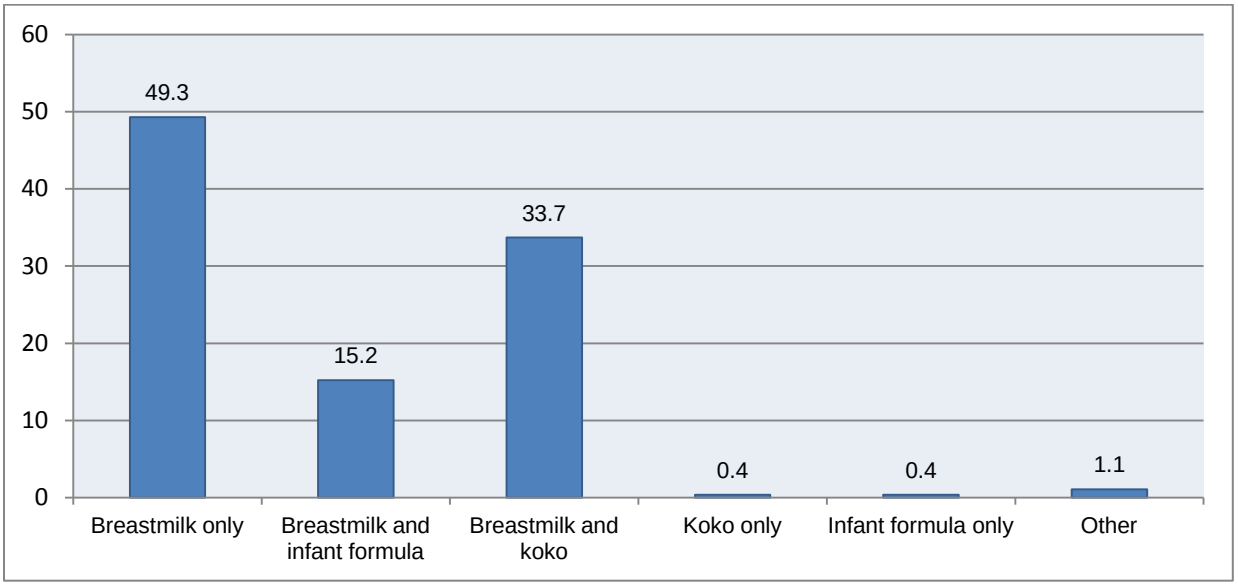
Study participants generally knew the benefits of exclusive breastfeeding. This was evident from both the survey and the FGDs. However, exclusive breastfeeding to 6 months of age was practiced by less than half of participants, as shown in Table 3.

Table 3. Exclusive breastfeeding practices.

Recommendation	Actual practice (%)	Practices other than recommended (%)
Exclusive breastfeeding (no water or other feeds for the first six months)	43.7	56.3
What foods did you give to your child within the first six months? (breastmilk only)	49.3	51.7

Figure 8 further illustrates the feeding patterns of study participants: about half (49.3%) gave only breastmilk to the child within the first six months, while a third (33.7%) supplemented breastmilk with *koko* (maize porridge), and a few (15.2%) supplemented breastmilk with infant formula over the same period of time.

Figure 8. Foods given to children within the first six months.



3.4 Complementary feeding knowledge and practices

3.4.1 Initiation of complementary feeding

The study found that only a little more than a third of the respondents (37.6%) practiced the WHO/Ghana Health Service recommendation to initiate complementary feeding by introducing solid foods in addition to breastmilk at 6 months (Table 4).

Table 4. Timely initiation of complementary feeding.

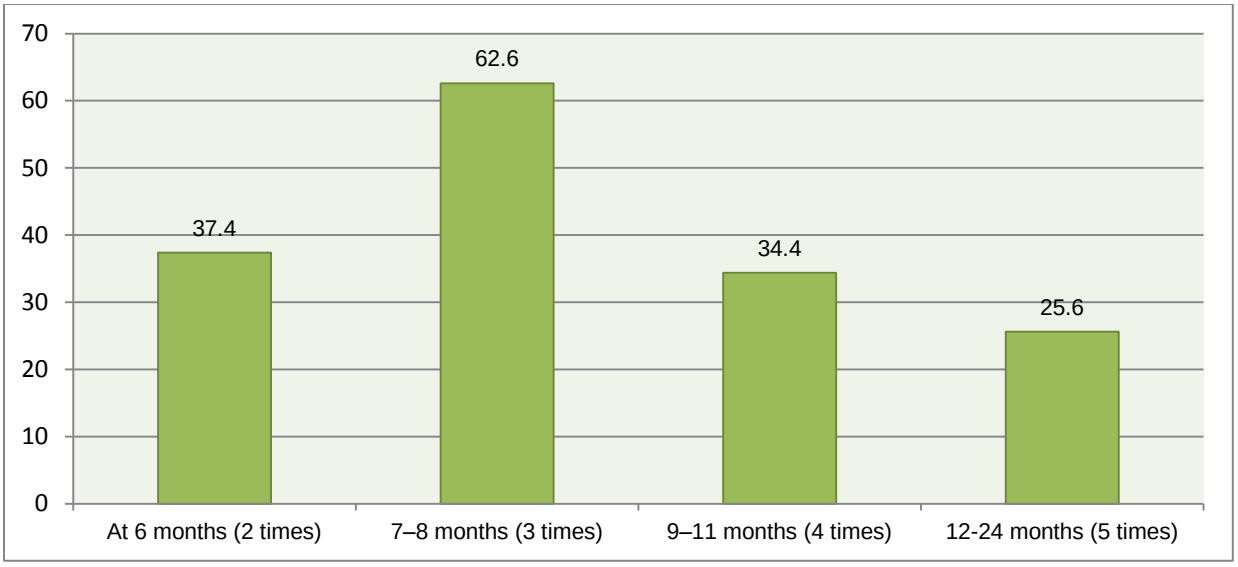
Actual practices (%)	
WHO-recommended practice: start giving complementary foods at 6 months	37.6
Started to give other foods before 6 months	26.2
Started to give other foods after 6 months	36.2

3.4.2 Frequency of feeding

The Ghana Health Service Child Health Records provide feeding recommendations for breastfed children 6-24 months, as follows: 6–8 months, two to three times a day; 9–11 months, four times a day (including one snack); 12-24 months, five times a day (including two snacks).

The study showed that the majority of respondents did not know the appropriate age-specific frequency of feeding solid foods. It also appeared that particularly as the child grew older, after 1 year, the frequency of feeding according to the recommendations decreased (Figure 9).

Figure 9. Knowledge on feeding frequency of complementary foods.



3.4.3 Amount of food per meal

The WHO/Pan American Health Organization 2003 guidelines recommend the quantity of complementary food for children 6-24 months as follows: 137-187 g/day at 6–8 months, 206-281 g/day at 9–11 months, and 378-515 g/day at 12-24 months. Based on these recommendations, the Ghana Health Service used common household measures such as ladles for determining the quantities of complementary foods to be given to infants and toddlers, for easier comprehension and compliance. The recommendations for 6 months, 7–8 months, 9–11 months, and 12-24 months are, respectively, one stew ladle, one soup ladle, one to two soup ladles, and two soup ladles for porridges and other semi-solid foods.

Table 5 shows the amount of complementary foods given, as reported by caregivers. Generally, caregivers gave according to the recommendations, with the exception of children aged 9–11 months and 12-24 months. Children in these categories were fed far less than the recommended amounts. Only about half of the children aged 9–11 months were fed according to the recommendation.

Table 5. Amount of complementary food given per meal.

Age	Recommended by the Ghana Health Service per meal	Met recommended quantity per meal (%)	Gave more than recommended per meal (%)	Gave less than recommended per meal (%)
6 months	1 stew ladle	28.6	71.4	-
7–8 months	1 soup ladle	29.9	46	24.1
9–11 months	1-2 soup ladles	19.5	27.9	52
12-24 months	2 soup ladles	9.4	21	69.6

3.4.4 Feeding a variety of foods to children 6-24 months

Table 6 provides information on the kinds of foods that caregivers reported giving in the 24 hours preceding the survey. From the recall, 81.1% of children aged 12-24 months were given breastmilk, while nearly 50% of children of all ages and 50% or more of infants 9 months and older were given dark green, leafy vegetables. Another important, positive finding: family foods were gradually introduced to infants, thus children were being fed locally available, traditional foods. There was also an indication that a variety of foods were being fed to the children. This was echoed by some of the women in the FGDs.

> *In addition to breastmilk, we give local dishes like palm nut soup with soya beans, banku and groundnut soup, fufu with soup, kontomire* [cocoyam leaf] *with soya beans, and fish soup. We also give them oranges and pineapple.*
>
> FGD with women
> Sunyani West District

The 24-hour recall also showed that children were fed carbohydrate-based foods, such as porridges, root tubers, and bread, particularly within the 12-24 month group. This is consistent with the normal feeding pattern of the average Ghanaian. Table 6 indicates that the children were not being given adequate sources of protein. For instance, eggs were eaten by only a quarter to a third of the children in the 24 hours preceding the survey. Fewer caregivers reported giving vitamin A-rich foods.

Table 6. 24-hour recall.

Food	At 6 months (n=13)	6-9 months (n=63)	9-12 months (n=44)	12-24 months (n=148)	General (n=268)
Breastmilk	100%	96.8%	100%	81.1%	88.5%
Water	84.6%	96.8%	100%	98%	97%
Commercially fortified foods[5]	23.1%	19%	9.1%	4.7%	9.6%
Other liquids (sugar water, coffee, tea, soft drinks)	7.7%	4.8%	2.3%	18.2%	12.3%
Energy-rich foods					
Bread, rice, noodles, or other foods made from grains	30.8%	38.1%	56.8%	69.6%	58.1%
Yams, cassava, cocoyam, or any other foods made from roots	15.4%	33.3%	54.5%	72.3%	57%
Porridge	92.3%	61.9%	65.9%	68.2%	67.4%

[5] Commercially fortified food is defined as food with added minerals and vitamins for children.

Food	At 6 months (n=13)	6-9 months (n=63)	9-12 months (n=44)	12-24 months (n=148)	General (n=268)
Any oils, fats, or butter, or foods made with any of these	15.4%	12.7%	22.8%	26.4%	21.9%
Any sugary foods (chocolates, sweets, candies, pastries, biscuits, cakes)	15.4%	14.3%	20.5%	30.5%	24.4%
Body-building foods					
Infant formula	30.8%	20.6%	9.1%	4.7%	10.4%
Tinned, powdered, or fresh animal milk	0%	12.7%	9.1%	16.2%	13.3%
Eggs	38.5%	20.6%	27.3%	27%	25.9%
Fresh or dried fish	46.2%	28.6%	43.2%	52%	44.8%
Liver, kidney, heart, or other organ meats	15.4%	4.8%	6.8%	8.1%	7.4%
Any meat (beef, pork, lamb, goat, chicken, or duck)	15.4%	9.5%	27.2%	29.8%	24.1%
Any foods made from beans, peas, lentils, or nuts	15.4%	14.3%	34.1%	29.1%	25.6%
Cheese or yogurt	7.7%	1.6%	2.3%	4.7%	3.7%
Protective foods					
Fruit juice[6]	23.1%	14.3%	29.5%	18.9%	19.6%
Carrots or sweet potatoes (yellow or orange inside)	0%	6.3%	6.8%	6.1%	6%
Any dark green, leafy vegetable	30.8%	31.7%	54.6%	50%	49.2%
Ripe mangoes or pawpaw (or other vitamin A-rich foods available)	23.1%	14.3%	9.1%	20.2%	17%
Any other fruits or vegetables	15.4%	14.3%	27.3%	20.2%	24.4%

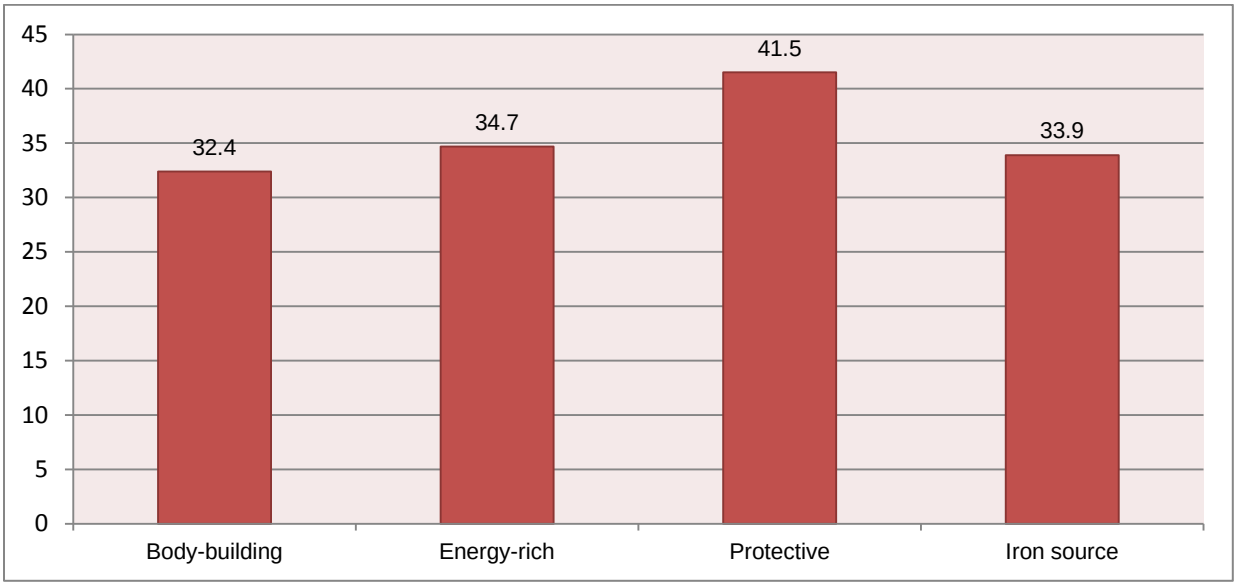
Knowledge of three food groups

Ghana Health Service programs at the community level encourage caregivers to give children a variety of foods prepared from locally available and affordable ingredients. Community programs also encourage caregivers to know which foods provide energy, body-building, and protection against infections—commonly called the three food groups. As depicted in Figure 10, only a little more than a third of the study participants knew about the three food groups.

The 2008 GDHS stated that 78% of children younger than 5 years of age were anemic. This prompted the study to find out caregivers' knowledge of good food sources of iron (Figure 10). Only about a third knew some sources of iron.

[6] Fruit juice within this context loosely describes drinks in boxes locally manufactured for children, which may or may not contain real fruit juices.

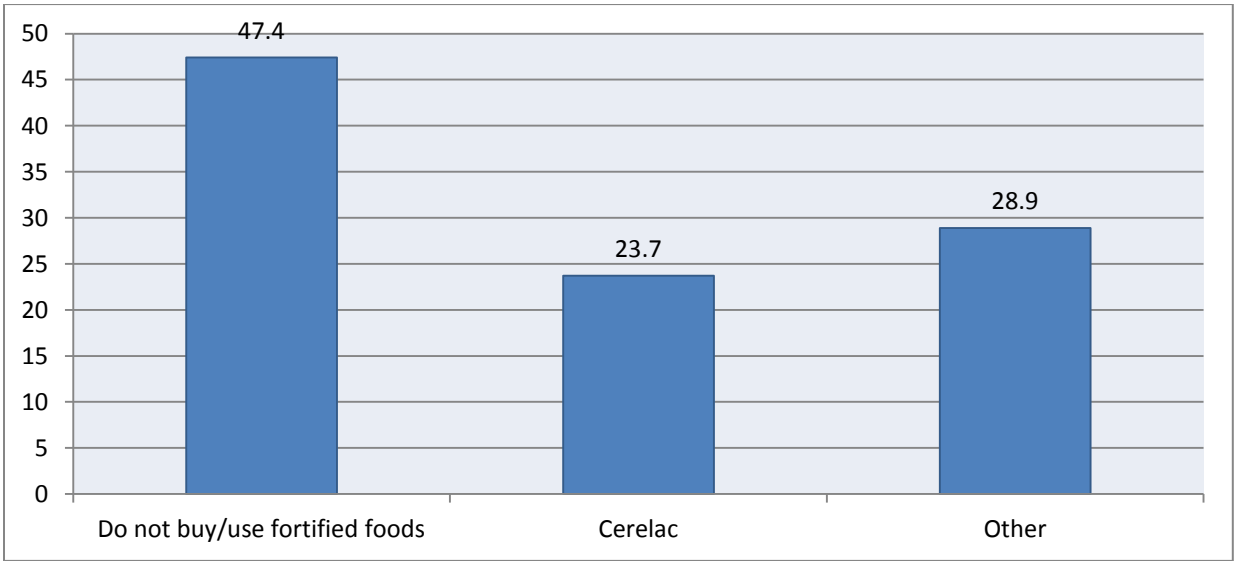
Figure 10. Study participants' knowledge about the three food groups.



3.4.5 Use of commercially fortified complementary foods

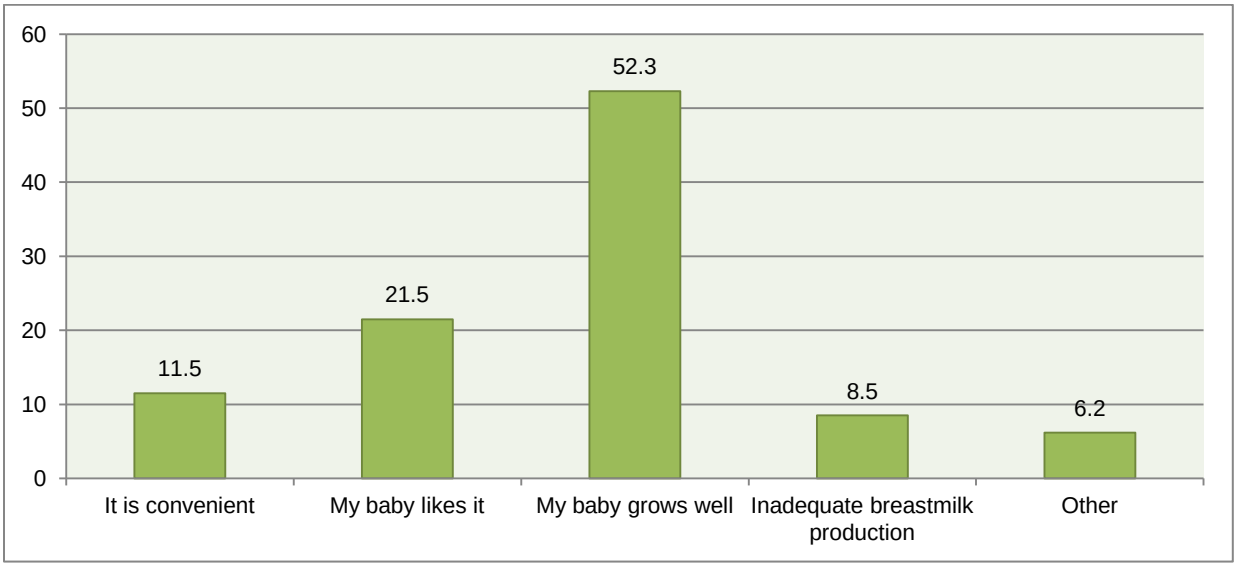
The study investigated potential market readiness for commercially fortified foods. Respondents were asked whether they give fortified food to their children. Fortified food was explained as food that has added vitamins and minerals, and is specially made for children. Figure 11 shows that 47.4% of respondents indicated that they did not give fortified foods. Other respondents (23.7%) mentioned giving foods which had added vitamins such as Cerelac (an instant cereal made by Nestlé®) and locally manufactured products (28.9%), for a potential market of about 53% of the population.

Figure 11. Use of commercially fortified complementary foods.



When asked why they gave commercially fortified foods (Figure 12), study participants' primary reason for doing so was the perception that these foods promote the growth of their babies (52.3%). Others reported that their babies like these foods (21.5%). A few (8.5%) mentioned that they could not produce adequate breastmilk, while 11.5% said the foods are convenient.

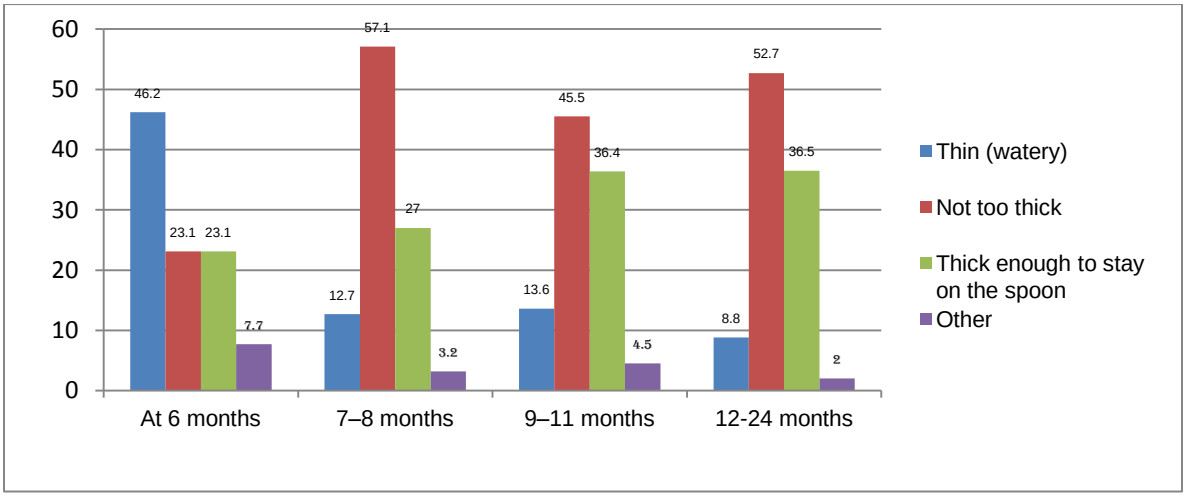
Figure 12. Reasons for giving fortified foods.



3.4.6 Nutrient density

Porridges are the usual first foods that infants are given in Ghana. Caregivers are usually encouraged to prepare porridges that are nutrient dense and thick enough to stay on the spoon. Using visuals that showed three different thickness levels of porridge—thin/watery, not too thick, and thick enough to stay on the spoon—the study found that around one-third of caregivers reportedly gave "thick enough" to children after 6 months of age (Figure 13). Generally speaking, the thickness of porridges increased as the child's age increased.

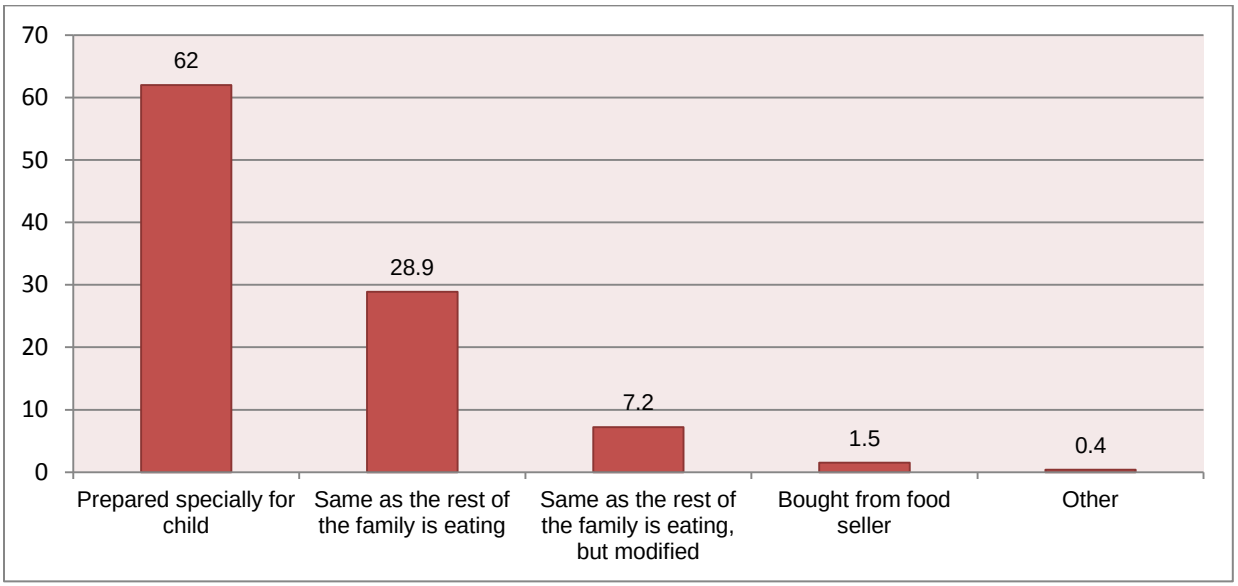
Figure 13. Thickness of porridge given, by age.



3.4.7 Responsive feeding

Almost all the respondents (98.1%) reported that they prepared food at home rather than purchasing it from food vendors. Children's food was either prepared separately (62%) or family food was modified (7.2%), or respondents gave children the same food served to the family (28.9%) (Figure 14). In other words, more than two-thirds of the respondents were feeding children a recommended way: by preparing special foods or by modifying family foods.

Figure 14. Types of foods given to children 6-24 months.



The study also investigated how feeding was done with a child who refused to eat a meal the day preceding the survey, the sick child, a child with reduced appetite, and the child recovering from illness. Table 7 shows that the reported responsive feeding practices were not always the best, particularly for a child recovering from illness. Force-feeding was mentioned in all four responsive feeding situations assessed. Some respondents also stopped feeding when the child refused a meal. The area that needs the most corrective attention is when the child is convalescing: nearly 86% of respondents who specified an action acted wrongly in this situation. About 62% of them reported feeding the child in the usual way, rather than the recommended additional meal each day for two weeks, an action only 7.4% of them undertook.

Table 7. Responsive feeding practices reported by caregivers.

Responsive feeding practice	Helpful practices specified	%	Unhelpful practices specified	%
When child refused to eat a meal yesterday	Gave alternative/changed food	8.3	Force-fed child	8.3
	Breastfed, gave solid food, breastfed again	12.4	Stopped feeding	20.7
	Talked to the child	4.7	Punished child	0.6
	Sang to child	5.6		

Responsive feeding practice	Helpful practices specified	%	Unhelpful practices specified	%
When child was sick	Fed slowly and patiently	35.2	Stopped feeding	3.3
	Fed child's favorite food	17.8	Force-fed child	11.1
	Breastfed more often	38.9	Punished child	0.4
			Put child to sleep	1.5
When child had reduced appetite	Fed slowly and patiently	31.1	Stopped feeding	8.5
	Fed child's favorite food	20.4	Force-fed child	12.6
	Breastfed more often	35.6	Put child to sleep	0.7
When child was recovering from illness	Gave an additional meal each day for two weeks	7.4	Fed the usual way	61.9
	Gave more food per meal	4.4	Force-fed child	19.3

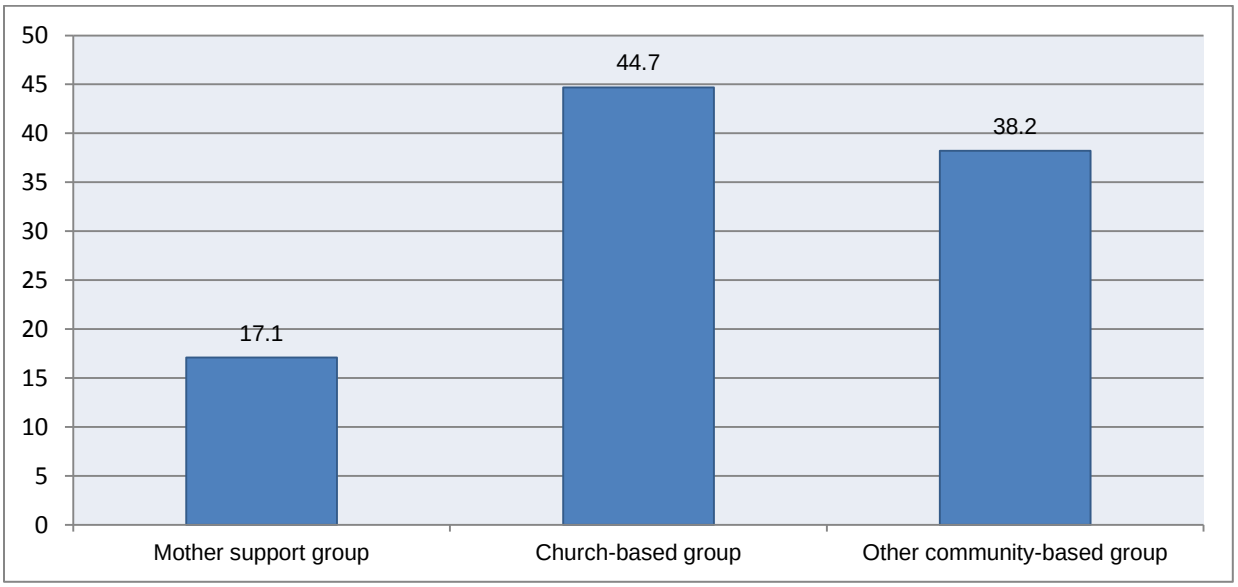
*Multiple responses were given for each variable; "other" responses are not presented in this table.

3.5 Sources of health information for caregivers

3.5.1 Membership of community-based groups

Community members' association with local groups could provide avenues and support for disseminating health information and counseling on appropriate infant and young child feeding practices. The findings indicated that overall, only 28% of study participants belonged to any groups. Of these, about 17% were members of mother support groups, about 45% belonged to groups within their religious organizations (Islamic women's group, Christian mothers, and youth prayer groups), and about 38% belonged to other identified groups, such as artisan associations (Figure 15).

Figure 15. Membership in community-based groups.

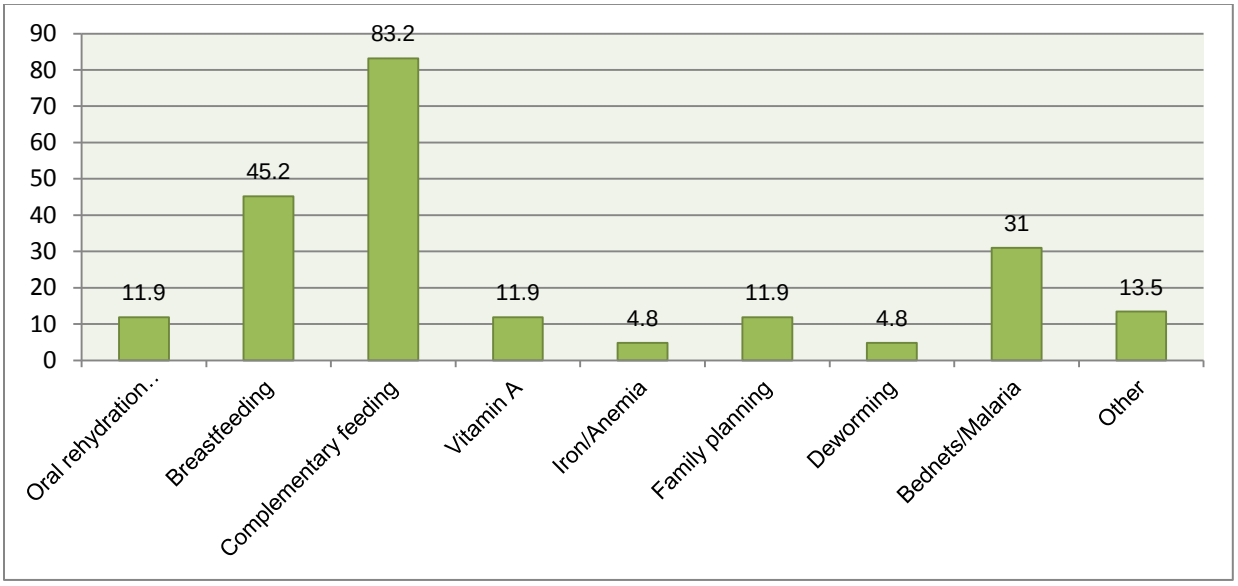


3.5.2 Access to infant and young child feeding information within community groups

More than half of study participants (53.3%) belonging to groups said that they discuss issues on infant and young child feeding. However, district-specific analysis revealed outlier situations: groups in Kintampo were least likely to discuss infant and young child feeding issues (14.3%), followed by those in Asutifi (25%); whereas, groups in Jaman South and Nkoranza North in particular were very likely to discuss infant and young child feeding issues (83.3% each), followed by those in Atebubu-Amanten (75%), and Sunyani West (60%).

From Figure 16, the three most important infant and young child feeding issues discussed at group meetings were complementary feeding (83.2%), breastfeeding (45.2%), and malaria/insecticide-treated nets (31%). Discussed the least: deworming (4.8%), iron/anemia (4.8%), oral rehydration therapy/diarrhea-related issues (11.9%), vitamin A (11.9%), and family planning (11.9%).

Figure 16. Infant and young child feeding issues discussed at group meetings.

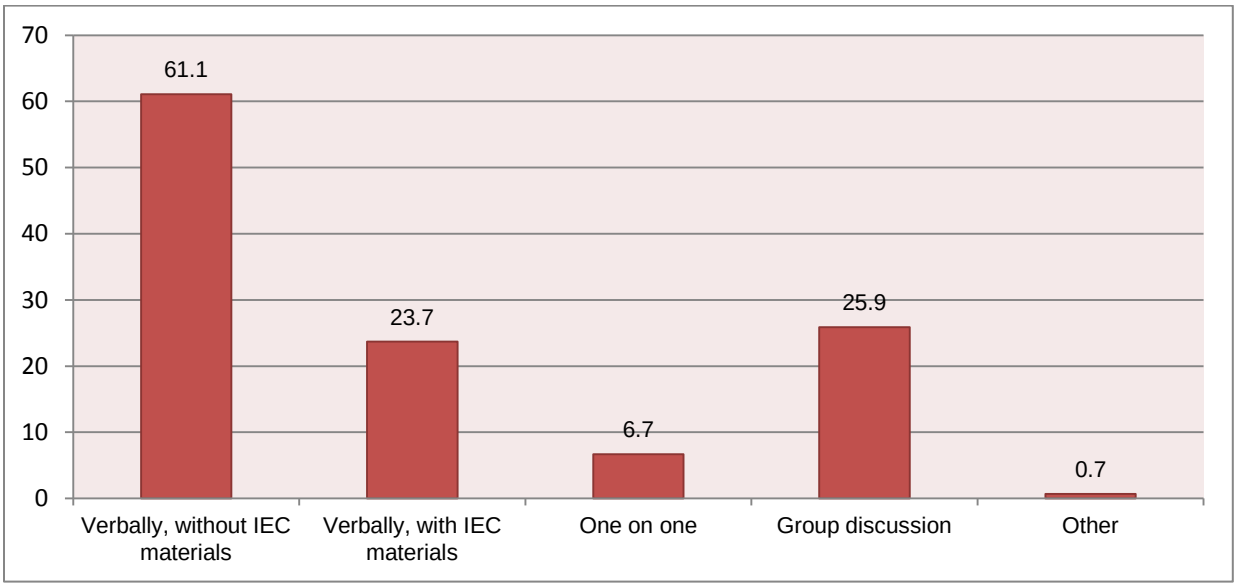


3.5.3 Access to infant and young child feeding information at health facilities

> *At weighing, we are taught how to dress the child, breastfeeding, cleanliness, sleeping under mosquito nets, and family planning, how to feed the child.*
>
> FGDs with women
> Jaman South and Sunyani West Districts

Child care information is usually given to caregivers during monthly growth monitoring sessions at health facilities or during community outreach clinics. According to study participants, infant and young child nutrition information at the health facilities is usually given en masse and occasionally in group discussions, without any supporting audio visuals or information, education, and communication (IEC) materials (see Figure 17). Only about 23.7% of study participants had received IEC materials such as flyers/leaflets from a health facility.

Figure 17. Dissemination of infant and young child nutrition information at health facilities.



3.5.4 Content of infant and young child nutrition information received at health facilities

Study participants were asked what specific information on nutrition they had received at a health facility. Their responses were matched against a list of key infant and young child nutrition/feeding information/best practices. The majority (51.5%) mentioned personal hygiene: washing hands before preparing a meal and washing a child's hands before eating (Table 8).

Table 8. Infant and young child nutrition information received at a health facility.

Infant and young child nutrition information received at the health facility	%
Wash your hands before preparing food and wash your and the child's hands before feeding.	51.5
A healthy meal provides nutrients in the right amounts and mix to meet the body's needs.	33
From 6 months, breastmilk alone is no longer enough for the baby; he/she needs other foods in addition, to grow and develop properly.	28.1
Increase the amount and variety of foods you eat, including fruits, vegetables, and meat, fish, milk, and eggs when possible.	21.2
Prepare child's food from the three food groups (energy-rich, body-building, protective).	18.3
Give fruits (mango, watermelon, avocado pear, pawpaw, pineapple, banana) everyday. Wash fruit, and mash or squeeze into juice.	15.9
Enrich porridge and other foods with fish powder, mashed meat, palm or fortified vegetable oil, groundnut paste, milk, egg, soy flour.	15.2
Give thick porridge (that stays on the spoon) made from maize, millet, sorghum, guinea corn, rice, tom-brown, and weanimix.[7]	11.9
Start giving additional foods carefully and patiently to ensure the child's nutrient needs are met.	9.3
Prepare the child's food in a form that can easily be swallowed (mashed, cut up).	8.1
(Other): Let children sleep under an insecticide-treated net and keep environment clean.	3

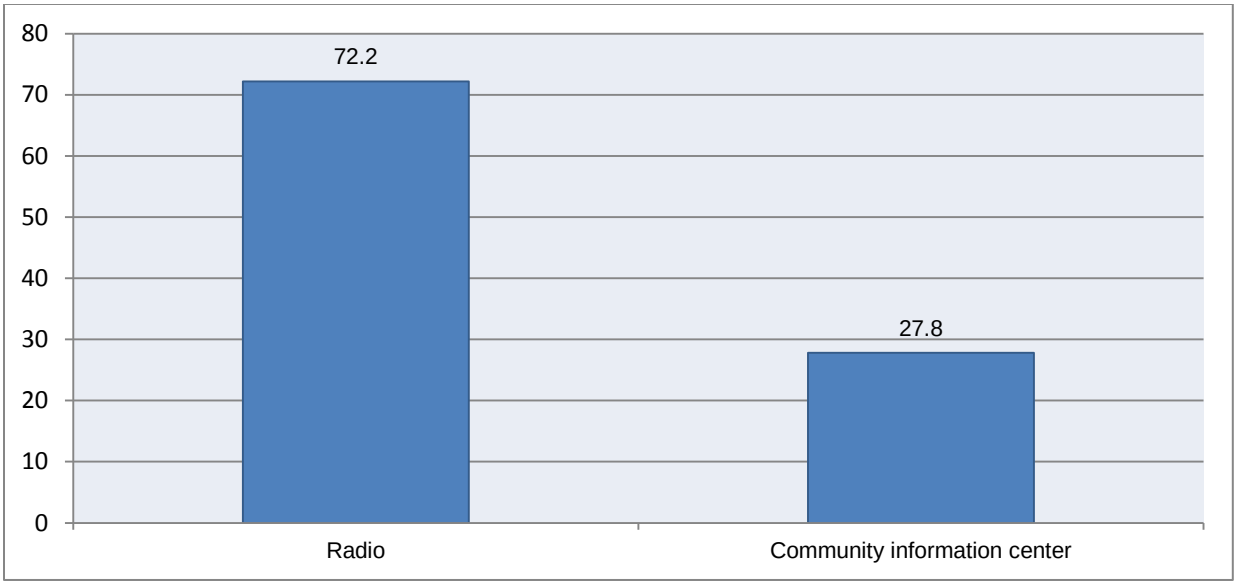
*Multiple responses were given.

[7] "Tom-brown" is a local name for roasted maize powder or porridge made from it. The name is also applied to the imported version. "Weanimix" is a cereal-legume blend prepared by roasting and milling three parts cereal and one part legume. It is used for porridges and other local dishes for children.

3.6 Media habits and access to infant and young child nutrition information

As shown in Figure 18, there were two main mass media sources of information available to study participants. The vast majority cited radio, while the rest mentioned community information centers. Community information centers are individually owned facilities where community-specific information on events such as funerals and festivals, and special announcements, are delivered using a loud bullhorn mounted on a high pole. The centers are a limited source of information, however, in that the owners turn the system off when they leave the house.

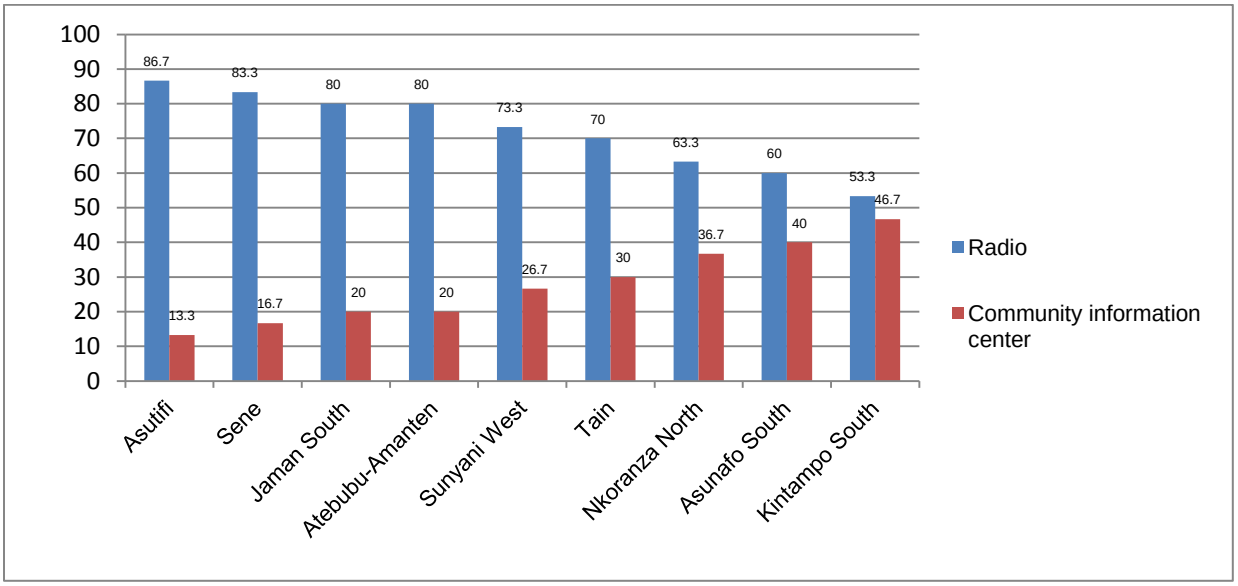
Figure 18. Media sources of information.



While this trend was similar in the district-specific analysis, it was found that there was an inverse relationship between the prevalence of radio and that of community information centers as a whole: the more popular the FM station, the less people listened to the community information center and vice-versa (Figure 19).

Overall, radio was more popular for the respondents in Asutifi, Sene, Atebubu-Amanten, Jaman South, and Tain Districts, while community information centers were mentioned the most by respondents in Kintampo South and Asutifi North.

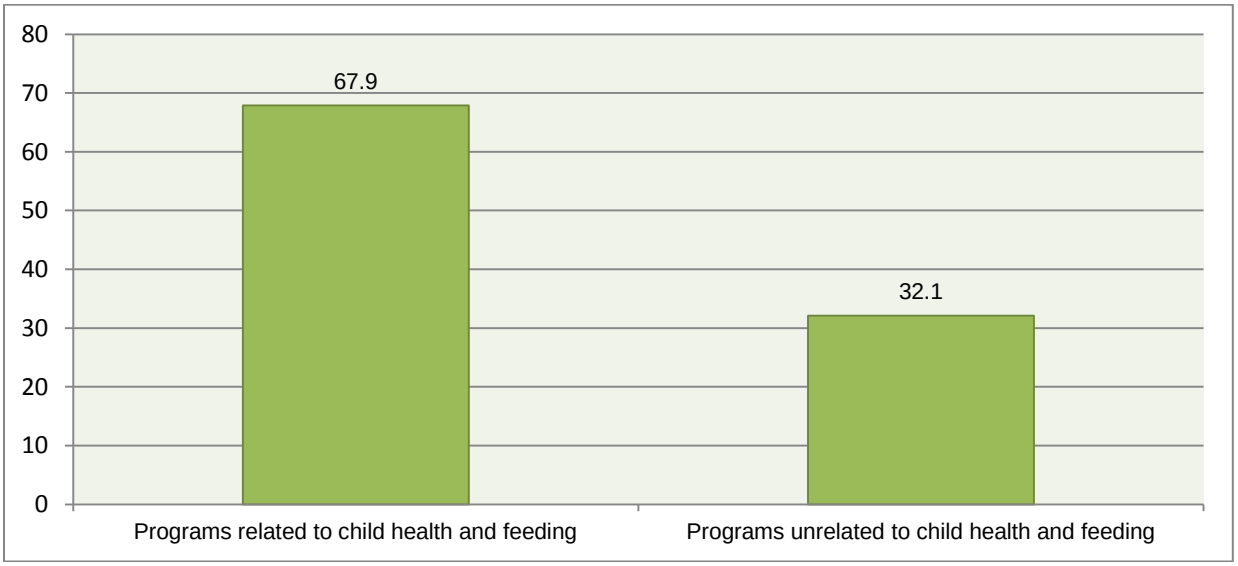
Figure 19. Media sources of information, by district.



3.6.1 Access to infant and young child nutrition information through the media

Table 9 shows that most people listen to radio in the morning (39%) and fewer (5.1%) in the evenings. Programs that aired late in the night were also very popular with respondents (32%). Figure 20 shows that about 68% of respondents received child nutrition information from radio or community information center.

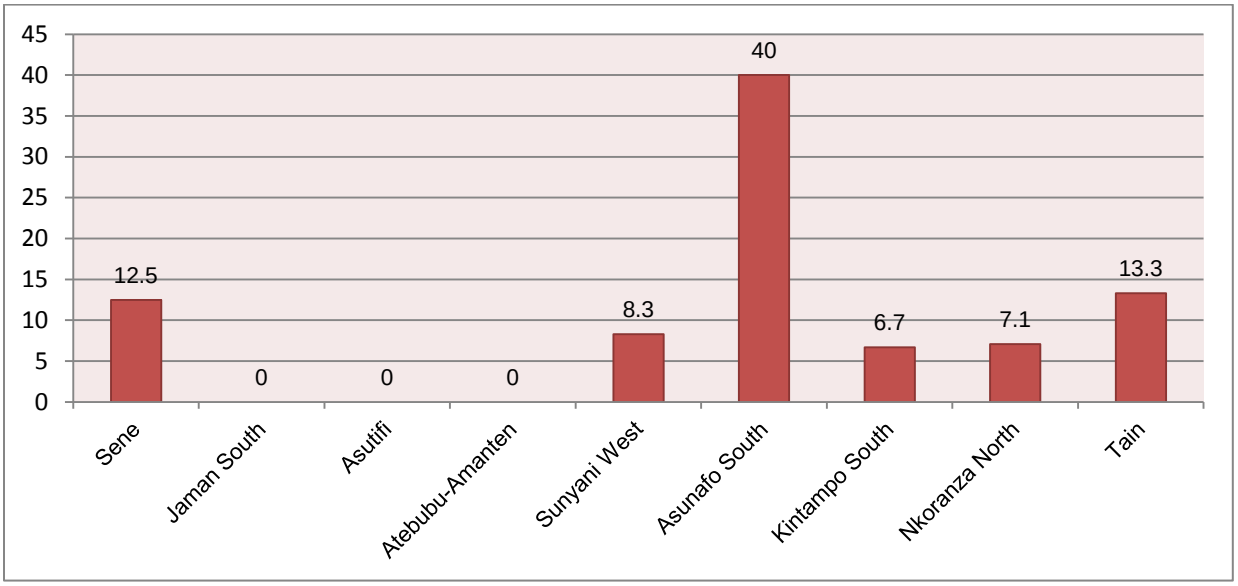
Figure 20. Programs related to child health and feeding.



3.6.2 Participation in radio discussions via call-in

Less than 10% (8.9%) of the respondents who listened to radio said they had ever called in to participate in a discussion program. A district-specific analysis revealed that study participants in Asunafo South were more likely to call in to a discussion program than respondents in any other district (Figure 21).

Figure 21. Participation in radio discussions, by district.



3.7 In-depth interviews with health workers

3.7.1 Counseling practices and knowledge on infant and young child nutrition

Health workers in the nine districts engaged in similar counseling activities. All were involved in daily, weekly, or monthly growth monitoring sessions at the facilities or out in remote communities. They also took advantage of market or taboo days to ensure maximum turnout.

> *We have [child welfare clinics] at the market because every Tuesday is a market day, and at the market, we offer services to all the people within or even out catchment areas.*
>
> Health worker, Kintampo South District

On a typical child welfare clinic day, health workers reported carrying out activities such as registration of children, immunization, one-on-one counseling, weighing, child feeding education for mothers, and administration of vitamin A supplements. In group activities, they also taught mothers how to prepare weanimix and nutritionally adequate meals for their children.

3.7.2 Knowledge on current recommendations on infant and young child feeding

Generally, health workers had fair knowledge on infant and young child feeding. However, it was clear from the interviews that there is a need to strengthen their capacity and update their knowledge of the current recommendations. A few gave complementary feeding information that was in contrast with current recommendations. For example, “start with light food and increase the consistency as the child grows” was mentioned by a few providers. The current message is to

give thick porridges from 6 months of age. Several health workers were still using old terms, like balanced diet (instead of nutritionally adequate), supplementary feeding/weaning (instead of complementary feeding*)*.

There were also mixed answers on the frequency of feeding and the amounts to be given per age group, showing the need for capacity-building in this area. When health workers were asked about the current recommendations on infant and young child feeding, all mentioned exclusive breastfeeding for the first six months. The majority mentioned introducing babies to liquid foods without pepper, salt, or spices at 6-9 months, and that babies should be fed with porridge once a day in addition to breastmilk. From 9-12 months, "children must be fed locally made foods like soft *banku* with soup or stew, prepared with fish or fish powder, and fed three to four times on the average." Respondents also mentioned that children 12-24 months should be fed at least three times plus given fruits and snacks and that meals should be thick.

Sick babies need enough time and persuasion to feed. The child should be given breastmilk if he/she cannot eat and can be supplemented with coconut juice, porridge, kontomire [cocoyam leaf] *stew, pepper-free soup, and fruits. Quality food is very important for a sick child, alongside drugs, because their system is weak.*

Responsive feeding

Most health workers were knowledgeable on responsive feeding, which is commendable, although it was not clear if responsive feeding messages were routinely communicated to caregivers. The caregivers' survey revealed poor practices, such force-feeding of children.

Knowledge of the three food groups and sources of iron

Health workers could easily classify foods into the three food groups. They also reported that they encouraged mothers to prepare food from all three food groups. They mentioned using food demonstrations to teach mothers about the food groups. This may be true, since the caregivers' survey showed a fair knowledge of the food groups. Health workers also mentioned encouraging caregivers to use locally available and affordable foods.

When they were asked to give examples of iron inhibiters, health workers noted fatty foods, worm infestation, overheating of foods, eating late in the night, malaria, malnutrition, starchy and sugary foods, toffees, mother's inability to breastfeed, pepper, onions, spices, serving with only cooked rice, alcohol, nonprescription drugs, and poor feeding. Given the high level of anemia in the region, it is of concern that caregivers may not be receiving adequate information on iron nutrition from health workers.

On food sources of iron, health workers generally mentioned iron-rich foods, though some gave answers like palm oil and iodated salt. Much more emphasis was placed on plant sources—such as dark green, leafy vegetables and nuts: *aleefo*, *kwawunsusua*, *ayoyo*, groundnuts, *dawadawa*, *okro*, bitter leaves, *wrewreh*, and *bokoboko*—than animal sources

3.7.3 Prevalence of anemia in communities

> *It is not common; it comes once in a while; it is called mild anemia. I have not gotten any since I started working here.*
> Health worker, Asunafo South District

Across all nine districts, health workers interviewed thought that anemia was not very common in their communities, except in children who received poor parental care. Nonetheless, they reported giving talks on how to prevent anemia, and encouraged mothers to sleep under long-lasting insecticide-treated nets.

> *Anemia cases are malaria inclined, so I would say the health talk that we give at [child welfare clinics] on malaria and the use of [long-lasting insecticide-treated nets] to prevent mosquito bites help to prevent anemia.*
> Health worker, Sunyani West District

3.7.4 In-service training on infant and young child feeding

Many of the health workers interviewed mentioned having received some training. The exception was in Asunafo, where only one health worker had participated in an in-service training.

Trainings were mostly carried out by district directorates, World Vision, regional nutritionists, and the Population Council, and included topics such as:

- The preparation and quantity of food to be given to children.
- Exclusive breastfeeding for six months.
- Complementary feeding after six months.
- Problems associated with not breastfeeding.
- Positioning and attachment of babies for breastfeeding.
- The three food groups.
- Essential Nutrition Actions.
- Personal cleanliness.

In addition, health workers were given materials like flip charts, books, pamphlets, posters, and brochures to use to demonstrate to mothers how to prepare food, for counseling mothers during visits, and to post where child welfare clinics are held. Literate mothers are given the brochures to read.

3.7.5 Media habits and access to infant and young child nutrition information

Most health workers reported listening to radio. Some of the notable radio stations: Adom FM, via community information centers, Jerisom FM, Dinpa FM, Royal, Adepa, and Grace FM. Most listened in the evening, followed by morning, dawn, and in the afternoon. Health officials reported that they listened to radio programs related to health. This means that they would be able to refer to radio spots and discussions on complementary feeding and encourage caregivers to listen to them as well.

4. Discussion

The study showed that the target population had low literacy levels and were employed in the informal sector. For a successful intervention, programmers should develop low-literate materials and use local dialects in community mobilization activities.

Feeding practices indicated both good practices and areas of concern. Among the recommendable practices, the findings from this study confirmed what is already documented; that generally, Ghanaian women breastfeed, and do so for a long time.

It appeared that caregivers used local foods for complementary feeding, and a large proportion of caregivers prepared foods at home instead of purchasing from food vendors. This is a good practice, since it greatly reduces the risk of food-related infections.

Study participants reported giving a fair amount of dark green, leafy vegetables to children, which should be encouraged and improved. Campaign messages should emphasize the need to give vitamin C-rich foods with the vegetables to increase the bioavailability of iron. Moreover, there is the need to improve the feeding of animal-source foods, and generally, protein food sources fed to infants. It is important that these protein sources be given right from age 6 months. One finding that was not surprising was the low quantities of fruits being given to the study children. Caregivers were not in the habit of giving fruits, especially with meals, and this will have to be emphasized in the campaign.

There is a potential market for commercially fortified complementary foods, given that more than half of caregivers purchased packaged foods assumed to be 'good for children'. The complementary feeding campaign should encourage meal diversity. The study revealed that some caregivers gave only one form of food, especially when the child readily accepted it. This may be harmful, since it could deprive the child of vital nutrients that could be obtained from other food sources. The campaign must address the use of a variety of locally available and affordable foods, including commercially fortified foods. In addition, there may be the need to increase communication on age-appropriate frequency of feeding, especially after 1 year of age; children become more active at this time, and so more frequent meals are needed to meet energy and nutrient requirements.

Responsive feeding practices were encouraging; however, there is need for more communication on that subject. With regard to feeding when a child has a reduced appetite, there is the need to encourage caregivers to assess the child's situation more holistically, such as taking the child for a medical assessment, which only a negligible number of respondents mentioned. Reduced appetite could indicate the onset of an infection; in which case, appropriate responsive feeding alone would not be the best way to address it. Feeding the child who is recovering from illness seems to need corrective action. Two-thirds of study caregivers fed the usual way when a child was convalescing, which is cause for concern. Intensive nutrition behavior change is needed to improve responsive feeding actions during and following illness (e.g., an additional meal for two weeks) so that children recovering from illness attain the needed catch-up growth.

There is cause to worry about the level of caregivers' knowledge compared to their use of good feeding practices. FGD participants readily shared their knowledge of good practices, including the men's groups. The men also reported encouraging their wives to exclusively breastfeed, and while they thought women were engaged in the practice, information from the survey proved otherwise. Further, practices as reported by health workers during the in-depth interviews did not support caregivers' responses. This situation reflects two likelihoods: first, that study participants were giving socially desirable responses; and second, the often all-too-common dichotomy between knowledge and practice. If this campaign is to be successful, it should aim to move the target population further on the 'behavior change ladder'—i.e., from awareness to action—to maintain recommended complementary feeding practices.

4.1 Group membership and discussion of infant and young child nutrition-related issues

Most of the study participants who reported belonging to a group were involved in a religious group for women (either Christian or Islamic), followed by mother support groups.

Close to half of respondents said they did not discuss infant and young child feeding issues in their groups, which is not surprising given that church-based groups primarily engage in spiritual or religious discussions. However, this would be a good avenue for undertaking behavior change activities: the moral authority of religious group leaders would lend validity to the health information being disseminated to members.

The study revealed that the main infant and young child nutrition information given to respondents by health facilities was on complementary feeding and personal hygiene. Though this is expected, it is clear from the study that caregivers do not act on all the messages they receive on infant and young child feeding. Additionally, health workers indicated that they do not have adequate job aids to facilitate education sessions with caregivers, leading to little information assimilation by caregivers. Further, health workers are not abreast of current WHO/UNICEF feeding recommendations. This underscores the need for Regional Health Management Teams to conduct in-service training.

The high dependence on radio for child health and general nutrition information may be explained by the generally low education levels of the vast majority of the study respondents, and the fact that FM stations in the regions usually broadcast in the local languages. This also shows the relevance of radio in a BCC/social marketing campaign.

4.2 Positioning the findings in the literature

The findings from this study were briefly compared to the existing literature, primarily the 2008 GDHS. Table 9 shows the comparison of some of our findings with those from the GDHS. Overall, there are key similarities and differences in the breastfeeding and complementary feeding patterns found in our study and those of the 2008 GDHS, including high initial breastfeeding levels—100% for all children. Also, both studies showed high levels of initiation of complementary feeding for all breastfed children 6-9 months. Both studies also showed that Ghanaian infants were fed mostly carbohydrate foods. Further, both studies revealed that only a small percentage of caregivers were feeding vitamin A-rich foods and fruits. Most importantly,

early initiation of breastfeeding based on WHO standards was lower than expected in both studies, and the same applied to exclusive breastfeeding for the first six months after birth.

Table 9. Comparison of key findings from this baseline study and the 2008 GDHS.

Variables/Indicators	Baseline study values (%)	2008 GDHS[8] values (%)
Breastfeeding		
Breastfed first six months	100	100
Exclusive breastfeeding (0-6 months)	43.7	63
Early initiation of breastfeeding (WHO recommendation: within one hour of birth)	52.2	52 (less than 50% for Brong Ahafo Region)
Initiation of breastfeeding within one day	92.2	82
Predominantly breastfeeding for first six months (breastmilk and water)	49.3	17
% breastfed 6–8 months	96.8	96.8
% breastfed until 24[9] months	81.1	56
Complementary feeding		
Fed complementary foods in addition to breastmilk	50.7	68
Fed vitamin-A rich fruits and vegetables*	17	33
Fed fruits and vegetables other than vitamin-A rich fruits	24.4	37
Most common complementary foods fed*	Grains (58%) and other carbohydrates, fed in excess, overall	Grains (64%) and other carbohydrates, fed in excess, overall
Fed infant formula and other milks	10.4	3%
Fed sugary foods[10]	23	49%
Fed foods made from roots and tubers	57	30%

*Findings from 24-hour recall sources: survey data and the 2008 GDHS.

[8] 2008 GDHS: Values reported in this study are sometimes for children born within the three or sometimes five years preceding the study.
[9] 6-23 months was specified by the 2008 GDHS.
[10] Does not include foods for which sugar is mostly added, such as porridges.

5. Conclusions

The majority of study participants reported that breastmilk alone is enough for a baby aged 0-6 months; this is good knowledge, but in practice, exclusive breastfeeding is low. The study also revealed a low rate of early initiation of breastfeeding, measuring it as within 30 minutes of birth (a Ghana Health Service recommendation). However, at 52%, the study rate equaled the national figure of 52.2%, measured as within one hour of birth (WHO recommendation).

There is good market potential for fortified complementary foods since more than half of study respondents reported buying commercial foods that promise good growth for their children.

Most caregivers reported being comfortable with preparing foods at home for their children or feeding them from the family pot. Foods were usually prepared from locally available and affordable ingredients. Hence, caregivers require more community-based activities, such as cooking demonstrations, community theater, and drama around what constitutes a healthy meal for a child 6-24 months.

Some good responsive feeding practices were reported, although the percentages were not encouraging. Knowledge on how to feed a child following illness was very low and should be emphasized.

Two main sources of infant and young child nutrition information were radio, primarily, and community information centers. Local FM stations should be targeted to provide education on infant and young child nutrition during key listening periods.

Data triangulation revealed that high knowledge and good practices reported during FGDs with both men and women were not supported by actual practice, as reported in the survey. Most of the study findings fit with those of the 2008 GDHS, as well as earlier studies and other literature on infant and young child nutrition in Ghana.

6. Recommendations

Based on the findings and conclusions from the study, the following are recommended:

- Churches and mosques or religious groups should be used as channels to disseminate health information.
- Male involvement could be very crucial to the BCC component of the project, given that the vast majority of the women were married or had male partners, and the men reported positive knowledge around infant feeding. Men may serve as an important secondary target audience.
- Education on the right quantities, thickness, frequency, and variety of complementary foods should be intensified to prevent malnutrition in children 6-24 months old.
- How to feed a child who is recovering from illness should be emphasized (e.g., giving an additional meal each day for two weeks).
- The campaign should address the need to give fruits with meals to improve iron absorption.
- The target population can be reached broadly through churches, mosques, and other religious gatherings. The Christian affiliation of the vast majority of study participants and their membership in smaller church groups provides an avenue for information dissemination on child well-being. Individual congregations, particularly the Local Council of Churches, could be used as venues for dissemination of child feeding messages. Catholic congregations would have to be approached separately, as they do not participate in interdenominational groups.
- The extreme popularity of radio as a source of information among study participants makes it necessary to target local FM stations for dissemination of infant and young child nutrition-related information. Community information centers should also be explored for reaching target audiences. The use of community information centers will be particularly crucial in Kintampo South, Asunafo South, and Nkoranza North Districts.
- While discussion programs could be used as an avenue to reach target audiences, extra effort must be made if call-in programs are employed to discuss infant and young child nutrition information. On the other hand, radio discussion programs could be used as a pointer to stimulate dialogue at community and church group meetings, and issues that require follow-up could be forwarded to community health workers.
- Based on the gaps between reported knowledge and practices and actual practices, the campaign should include nutrition demonstrations that are backed with appropriate, mostly pictorial IEC materials. One-on-one discussions with caregivers could be used to bring out specific challenges faced by caregivers.

7. References

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Appendix 1. Selected study districts and communities

District	Communities	Selected health facilities	Community groups
Sene	Kyeamekrom Wiase Lemu Drobe Lassi	District hospital=3 Kyeamekrom CHPS=1 Lassi CHPS=1	Wiase Traditional Birth Attendant Association Christian Women's Association, Lemu Catholic Women's Association, Drobe
Jaman South	Bodaa Asare Sebreni Babianiha Abirikasu	District hospital=2 Bodaa rural clinic=1 Asare rural clinic=1 Abirikasu HC=1	Mother support group, Asare Mother support group, Babianiha Mother support group, Bodaa Mother support group, Sebreni Mother support group, Abirikasu
Asutifi	Konkontreso Obengkrom Nkrankrom Akosa Tutuka	Kenyasi HC=1 St. Elizabeth Hospital=2 Nkaseim CHPS=1 Acherensua HC=1	Mother support group, Obengkrom Mother support group, Nkrankrom Mother support group, Konkontreso Mother support group, Akosa
Atebubu-Amanten	Afrefreso Garadima Abour Beposo Mem	Atebubu District Hospital=2 Garadima CHPS=1 Akokoa HC=1 Mem CHPS=1	Mother support group, Abuor Mother support group, Afrefreso Mother support group, Amanten Mother support group, Atebubu-Amanten
Sunyani West	Adantia Bofourkrom Addoi Dumasua Nsoatre	Kwatire HC=1 Addoi CHPS=1 Dumasua CHPS=1 Nsoatre HC=1 Fiapre HC=1	Mother support group, Nsoatre Mother support group, Dumasua Mother support group, Adantia Adantia Presbyterian Singing Band Addoi Pentecost Women's Fellowship
Asunafo South	Noberkaw Kwapong Anwiam Asufufuo Dantano	Kwapong rural clinic=1 Kukuom HC=1 Noberkaw CHPS=1 Kokooso Clinic=1 Sankore HC=1	Hairdressers' Association, Kwapong Methodist Women's Association, Asufufuo Catholic Women's Association, Noberkaw Catholic Women's Association, Anwiam Methodist Women's Association, Dantano
Kintampo South	Nante Jema Ampoma Jema Nkwanta Kokuma	Jema District Hospital=2 Nante CHPS=1 Ampomah CHPS=1 Bredi CHPS=1	Mother support group, Ampomaa Mother support group, Jema Mother support group, Jema-Nkwanta Mother support group, Nante
Nkoranza North	Dromankese Yefri Bomini Fiema Bosunya	Busunya HC=2 Dromankese HC=1 Yefri HC=1	Mother support group, Dromankese Methodist Women's Fellowship, Busunya
Tain	Nkonakwaagye Tainso Badu Bobeeye Nsawkwa Minaso Badu Asuafu	Nsawkaw Hospital=2 Badu HC=1 Hani CHPS=1 Bui rural clinic=1	Mother support group, Tainso Mother support group, Nkonakwaagye Mother support group, Badu Bobeeye Mother support group, Badu Asuafu Mother support group, Nsawkwa Minaso

CHPS: Community-Based Health Planning and Services; **HC:** health center.

Appendix 2. Baseline study tools

Ghana Promotion of Complementary Feeding Practices Project **Baseline Data Collection** **Caregiver Survey**			
Baseline survey for use with mothers/primary caregivers of children 6-24 months			
No.	**Questions and Filters**	**Coding Categories**	**Skip Pattern**
001	Questionnaire number Interviewer's name and ID District name and code Community name and code	|__|__[__|__| _____ |__|__[_____ |__|__[_____ |__|__[__|__[	
002	**Respondent Screening** "Are you the mother or primary caregiver of a child who is between 6 and 24 months old?" **Ask to see the child's weighing card to confirm child's age is between 6 and 24 months.**	Yes 01 No 02 IF NO CHILD IN HOUSEHOLD OR ALL CHILDREN ARE UNDER 6 MONTHS OR OVER 24 MONTHS (2 YEARS OLD), MOTHER/CAREGIVER SHOULD NOT BE INTERVIEWED.	
003	Date of visit	[_____|_____| _____| DD | MM | YYYY	
004	Results of interview	COMPLETED 01 NOT AT HOME 02 REFUSED 03 PARTLY COMPLETED 04 OTHER 05 OTHER (SPECIFY)_____	

Introduction and Consent

My name is _____ from the Ghana Health Service. I am working with PATH on the Ghana Promotion of Complementary Feeding Practices Project. The goal of the project is to improve the nutrition of children under 2 years of age in 9 target districts and 45 communities through the promotion of improved dietary practices. This will be done by developing and implementing a behavior change communication campaign to promote improved nutrition for infants and young children.

We are currently collecting data to ascertain the current infant and young child feeding practices within these selected districts and communities so that PATH can plan interventions to improve the practices.

You have been selected at random to be a respondent, and we will be most obliged if you would agree to speak with us and give us your thoughts.

All your responses will be treated as confidential and will only be used in reports as representing the state of children within this community and district.

If you agree to speak with us, please sign this form or let me know.

Thank you for your cooperation.

Consent given? Yes ☐ **No** ☐

Name of respondent ……

SECTION 1: Demographic Data of Mother/Primary Caregiver		
101	Type of respondent	Mother 01 Father 02 Primary caregiver, not parent 03 Other 04 Grandmother 05 Other (specify)_____
102	Gender of respondent	Male 01 Female 02
103	How old are you?	Age in years__ __ Don't know 99
104	How old is your child?	Age in months__ __ Don't know 99

105	Verify child's date of birth by asking to see the family health card or vaccination card. **If caregiver cannot provide the family health card, DO NOT continue the interview. Screen other caregivers in the household or move to the next household within the sample.**	Card seen, date of birth verified 01 Not possible to verify 02
106	What is your current marital status?	Married 01 Single 02 Cohabitation 03 Separated 04 Divorced 05 Widowed 06
107	Are you able to read or write a simple sentence? **Show card with the inscription "*Thank you for having me in your home*" to respondent to read.**	Yes 01 No 02
108	What is the highest level of school you attained?	No school 01 Completed primary school 02 Junior high school 03 Senior high school 04 Tertiary 05 Other 06 Other (specify)_____
109	What is your religion?	Christian 01 Muslim 02 Traditional religion 03 Other 04 Other (specify)_____

110	Occupation	Civil/Public Servant 01 Professional (Accountant, Marketer, Statistician, Teacher/Lecturer etc) 02 Health Worker 03 Petty Trader/Street Food Vendor 04 Artisan (seamstress, hairdresser) 05 Farmer/Fisherman 06 Businesswoman/Businessman 07 Market Woman 08 Unemployed 09 Other 10 Other (specify)_____
SECTION 2: Exclusive Breastfeeding Knowledge and Practices		
201	Where did you deliver your child?	Traditional birth attendant 01 Health facility 02 Private midwife 03 Herbalist 04 Other 05 Other (specify)_____
202	When did you put the child to breast for the first time?	Within 30 minutes 01 Between 30 minutes to an hour 02 More than one hour 03 Within 24 hours 04 Other 05 Other (specify)_____
203	When do people in this community give water to their children for the first time?	After birth 01 Within the first 6 months 02 At 6 months 03 After 6 months 04 Other 05 Other (specify)_____ Don't know 98
204	When did you give water to your child for the first time?	After birth 01 Within the first 6 months 02 At 6 months 03 After 6 months 04 Other 05 Other (specify)_____ Can't remember 99

205	What foods do people in this community give within the first six months of their baby's life?	Breastmilk only 01 Breastmilk and infant formula 02 Breastmilk and koko 03 Koko only 04 Infant formula only 05 Other 06 Other (specify)_____ Don't know 98	
206	What foods did you give to the child within the first six months?	Breastmilk only 01 Breastmilk and infant formula 02 Breastmilk and koko 03 Koko only 04 Infant formula only 05 Other 06 Other (specify)_____	
207	Do you think it is good to give only breastmilk for the first six months?	Yes 01 No 02 Don't know 98	**→Continue** **→Q209**
208	If yes, why?		
209	If no, why not?		
SECTION 3: Complementary Feeding Knowledge and Practices			
301	Are you breastfeeding?	Yes 01 No 02	
302	When do people in this community start giving other foods to their children in addition to breastmilk?	Before 6 months 01 At 6 months 02 After 6 months 03 Don't know 98	
303	When did you start giving other foods to your child in addition to the breastmilk?	Before 6 months 01 At 6 months 02 After 6 months 03	

304	How often do you feed your child in a day in addition to breastmilk?	Two times a day 01 Three times a day 02 Four times a day 03 Five times a day 04 Other 05 Other (specify)_____
305	How often do you feed a child at age ……? ***[Mention age ranges below.]*** At 6 months 6-9 months 9-12 months 12-24 months	**At 6 months** 2 times 01 Other 02 Other (specify)_____ **6-9 months** 3 times 01 Other 02 Other (specify)_____ **9-12 months** 4 times 01 Other 02 Other (specify)_____ **12-24 months** 5 times 01 Other 02 Other (specify)_____
306	What food do you give your child? ***[Allow responder to give you a list of foods.]***	Koko 01 Weanimix 02 Tom-brown 03 Commercially fortified cereals 04 Mpotompoto 05 Banku with soup/stew 06 Rice with soup/strew 07 Tuoszaafi with soup 08 Mashed yam 09 Other 10 Other (specify)_____
307	What fortified foods do you give to your child?	
308	Why do you give it?	It is convenient 01 My baby likes it 02 My baby grows well 03 Other 04 Other (specify)_____

309	How often do you give it?	Once a day 01 Twice a day 02 Once a week 03 2-3x a week 04 Other 05 Other (specify)_____			
310	How often do you buy it?	_____			
311	Is it affordable to you?	Yes 01 No 02			
312	How much should fortified food cost to make it affordable for every woman in this community?	_____			
313	What ingredients do you use in preparing your child's food? **Let responder freely mention the foods, then prompt for items in the list that are not mentioned.** **For each food item and for each age interval, write "1" for daily; "2" for 1-2x/week; "3" for 3x or more/week.**	**Type of foods**	**6-9 months How often**	**9-12 months How often**	**12-24 months How often**
		a. Dark green, leafy vegetables			
		b. Yellow- or orange-colored vegetables (e.g., carrots)			
		c. Yellow- or orange-colored fruits (e.g., mango)			
		d. Other vegetables			
		e. Orange-fleshed potatoes			
		f. Meat (beef, chicken)			
		g. Eggs			
		h. Fish			
		i. Liver			
		j. Palm oil			
		k. Other oils			
		l. Other food items			
314	How thick is the porridge mentioned above? **To facilitator: Show Card A with various levels of thickness and allow respondent to choose one. Describe thickness under D if respondent answer does not fall within the three above.**	Thin (watery) 01 Not too thick 02 Thick enough to stay on the spoon 03 Other 04 Other (specify)_____			

315	How much porridge do you give to your child? **To facilitator: Show Card B and allow respondent to select which one is used in serving food.**	One stew ladle 01 One soup ladle 02 Two soup ladles 03 Three soup ladles 04 Other 05 Other (specify)_____			
316	How do you prepare your child's food?	Prepared specially for child 01 Same as what the rest of the family is eating 02 Same as what the rest of the family is eating, but modified to suit child's age 03 Bought from the food seller 04 Bought from the food seller and enriched at home 05 Other 06 Other (specify)_____			
317	Of the foods you mentioned above, how much did you give to the child per meal in the last 7 days? **Allow respondent to use household measures available, like spoons, ladles, to estimate quantities.** **For each food item and for each age interval, write "1" for one ladle; "2" for two ladles; "3" for three ladles, "4" for four ladles; etc.**	**Type of foods**	**6-9 months How much**	**9-12 months How much**	**12-24 months How much**
		a. Dark green, leafy vegetables			
		b. Yellow or orange vegetables (e.g., carrots)			
		c. Yellow or orange fruits (e.g., mango)			
		d. Other vegetables			
		e. Orange-fleshed potatoes			
		f. Meat (beef, chicken)			
		g. Eggs			
		h. Fish			
		i. Liver			
		j. Palm oil			
		k. Other oils			
		l. Other food items			
318	Please list all the foods you gave to your child in the last 24 hours (from yesterday morning to this morning) **READ OUT THE LIST. Circle "1" for yes and "2" for no.**	(Yes = Y, No = N) Y N A Breastmilk 1 2 B Water 1 2 C Infant formula 1 2 D Fortified, commercially available infant and young child food 1 2 E Porridge 1 2 F Tinned, powdered, or fresh animal milk 1 2 G Fruit juice 1 2 H Other liquids (sugar water, coffee, tea, soft drinks) 1 2 I Bread, rice, noodles, or other foods made from grains 1 2			

		J Potatoes, yams, cassava, cocoyam, or any other foods made from roots 1 2 K Carrots or sweet potatoes that are yellow or orange inside 1 2 L Any dark green, leafy vegetable 1 2 M Ripe mango, pawpaw (include other vit-A rich foods available) 1 2 N Any other fruits or vegetables 1 2 O Liver, kidney, heart, or other organ meats 1 2 P Any meat such as beef, pork, lamb, goat, chicken, or duck 1 2 Q Eggs 1 2 R Fresh or dried fish or shellfish 1 2 S Any foods made from beans, peas, lentils, or nuts 1 2 T Cheese or yogurt 1 2 U Any oils, fats, or butter, or foods made with any of these 1 2 V Any sugary foods such as chocolates, sweets, candies, pastries, biscuits, cakes 1 2 W Any other solid or semi-solid food 1 2	
319	At any time during a meal, yesterday, did your child refuse to eat food?	Yes 1 No 2	→**Q321**
320	If yes, what did you do?	Provided alternative food/changed food 01 Talked to the child 02 Sang to child 03 Force-fed the child 04 Stopped feeding 05 Reprimanded child (scolded, pinched, or hit) 06 Contacted grandmother 07 Breastfed and then gave solid food, then breastfed a little more 08 Encouraged child to eat another way 09 Other (specify)_____ _____	
321	How do you feed when child is sick?	Feed slowly and patiently 01 Feed child's favorite foods 02 Breastfeed more often 03 Stop feeding 04 Force-feed the child 05 Reprimand child (scold, pinch, or hit) 06 Put child to sleep 07 Other 08 Other (specify) _____ _____	
322	How do you feed when child has reduced appetite?	Feed slowly and patiently 01 Feed child's favorite foods 02 Breastfeed more often 03 Stop feeding 04 Force-feed the child 05 Reprimand child (scold, pinch, or hit) 06	

		Put child to sleep 07 Other 08 Other (specify)_____	
323	How do you feed when child has just recovered from illness?	Give the child an additional meal each day for 2 weeks 01 Feed the usual way 02 Give more food per meal 03 Force-feed the child 04 Other 05 Other (specify)_____	
324	At what age did you first give fruits to your child?	Before 6 months 01 At 6 months 02 After 6 months 03 Can't remember 99	
325	Which local foods would you describe as? ***[Mention the food groups below. Probe for more responses.]*** Body-building foods Energy-giving foods Protective foods Blood-giving foods ***Circle "1" for mentioned and "2" for not mentioned.***	Mentioned=1, Not Mentioned=2 **Body-building foods**_____ Meat (beef, pork, lamb, goat, chicken) 1 2 Fresh or dried fish, shellfish 1 2 Eggs 1 2 Groundnuts, cashew nuts, agushie, beans, peas 1 2 Milk and milk products 1 2 **Energy-giving foods**_____ Bread, rice, maize, wheat, millet, sorghum, tom-brown, weanimix 1 2 Yam, cassava, cocoyam, potato 1 2 Plantain 1 2 Palm oil, palm kernel, coconut oil, groundnut oil 1 2 Margarine, butter, shea butter 1 2 **Protective foods**_____ Ripe mangoes, oranges, apples 1 2 Pineapples, bananas, avocado pears, watermelons 1 2 Tomatoes, okro, nkontomire, ayoyo 1 2 **Blood-giving foods**_____ Fish, liver, meat 1 2 Egg 1 2	
SECTION 4: Child Welfare Clinics; Mother Support or Church-Based Group Membership and Activities			
401	Do you belong to any group in this community?	Yes 1 No 2	→**Q406**
402	What group(s) do you belong to and how often do you meet?	Group name(s)_____ _____	

403	When was the last time you met with this group?	Less than one week ago 1 1 to 4 weeks ago 2 More than 4 weeks ago 3 Can't remember 99	
404	Do you ever discuss issues of infant and young children?	Yes 1 No 2	→**Q406**
405	What specific topics do you discuss on infant and young children? **Record all responses mentioned.**	ORS/ORT/Caring for children with diarrhea 01 Breastfeeding 02 Complementary feeding 03 Vitamin A 04 Iron/Anemia 05 Family planning 06 Deworming 07 Bednets/Malaria 08 Other 09 Other (specify)_____ Can't remember 99	
406	What information on infant and young child nutrition did you receive from the health facility during your last visit?	A healthy meal provides nutrients in the right amounts and mix to meet the body's needs. 01 Increase the amount and variety of foods you eat, including fruits, vegetables, and meat, fish, milk, eggs when possible. 02 From 6 months, breastmilk alone is no longer enough for the baby. He/She needs other foods in addition, to grow and develop properly. 03 Start giving additional foods carefully and patiently to ensure all the child's nutrient needs are met. 04 Prepare child's food from the 3 food groups (body-building, energy-giving, and protective foods). Prepare the child's food in a form that can easily be swallowed (mashed, cut up). 05 Give thick porridge (that stays on the spoon) made from maize, millet, sorghum, guinea corn, rice, tom-brown, and weanimix. 06 Enriched porridge and other foods with fish powder, mashed meat, palm or fortified vegetable oil, groundnut paste, milk, egg, soy flour. 07 Give fruits (mango, watermelon, avocado pear, pawpaw, pineapple, banana, etc.) everyday. Wash fruit, mash or squeeze into juice. 08 Wash your hands before preparing food and wash your and the child's hands before feeding. 09 Other. Other (specify)_____ 10 _____ 11	

407	How was this information provided to you? ***[Multiple answers allowed here.]*** **Circle "1" for mentioned and "2" for not mentioned.**	Mentioned=1, Not Mentioned=2 Verbally, without a material 1 2 Verbally, with a material 1 2 One on one 1 2 Group discussion 1 2 Other 1 2 Other (specify)_____	
408	Were any materials on child nutrition given to you when you last visited the health facility?	Yes 1 No 2	→**Section 5**
409	What kind of material was given to you?	Flyers 01 Leaflets 02 Others 03 Other (specify)_____	
SECTION 5: Media Habits and Access to Infant and Young Child Nutrition Information			
501	Where do you receive your media information?	Radio 01 Community information center 02	→**END**
502	How many days do you listen to radio in a week?	Days per week [_____] Everyday 7	
503	At what times of the day do you listen to the radio?	Morning 01 Lunchtime 02 Afternoon 03 Night 04 At all times of the day 05	
504	Do you normally listen to discussion programs on radio?	Yes 1 No 2	→**END**
505	Are any of the programs you listen to related to child health and feeding?	Yes 1 No 2	

506	Which radio programs discuss child health and infant feeding?	_____ _____ _____	
507	Have you ever called in to a program to ask questions or make contributions?	Yes 1 No 2	
508	What messages have you heard on child feeding?	Introduce semi-solid or mashed meals and fruits 01 Feed meals prepared from the three food groups daily 02 Give fruits daily 03 Give meats, liver, organ meats 04 Other 05 Other (specify)_____ _____	
509	How have you used the messages you heard?	Put it into practice 01 Shared with my friends 02 Others 03 Other (specify)_____ _____	

Ghana Promotion of Complementary Feeding Practices Project May 2011	
In-depth interview guide for use with health workers	
Interviewer's name: _____	Interviewer's ID: _____
District: _____	Date: _____
Community: _____	Type of facility: _____

Background of health facility/worker

a. What is your name?
b. What is your designation/position?
c. What is your role as a _____? **[Mention position of health worker.]**
d. What services do you offer in this health facility? **[Probe.]**
e. Tell me a bit about child welfare clinics. How often do you meet caregivers of children aged 6-24 months?

Counseling practices and knowledge on infant and young child nutrition

a. How would you describe a typical child welfare clinic day?
b. What do you do with mothers and primary caregivers (probe for one-on-one sessions, group sessions, etc.).
c. How do you encourage mothers and primary caregivers to practice recommendations on infant and young child feeding?
d. How are you able to follow up with mothers and primary caregivers on decisions or actions they have agreed to do?
e. How do you encourage mothers and primary caregivers to provide feedback?
f. What are the current recommendations on infant and young child feeding? **[Probe for 6-9 months, 9-12 months, 12-24 months, feeding of the sick child.]**
g. How do you teach mothers and primary caregivers to enrich baby's food?
h. Which foods in this district/community would you classify as:
   Body-building.
   Protective.
   Energy-giving.
   Iron-rich. **[Probe for enhancers and inhibitors of iron-rich foods.]**

Complementary feeding knowledge and practices

a. How familiar are you with the three food groups?
b. How are you able to demonstrate the three food groups during your child welfare meetings?
c. In your opinion, how often should children be fed other foods in addition to breastmilk? What about quantities? **[Probe for 6-9 months, 9-12 months, 12-24 months.]**
d. Let's discuss the anemia situation in this district/community. Is it a serious issue? How often do you have anemia cases in this facility? **[Mention appropriate jurisdiction.]**
e. How can we prevent anemia among children?
f. What type of local foods can prevent anemia in this district/community? **[Mention appropriate jurisdiction.]**

Previous orientations/training on infant and young child feeding

a. Have you had any training or orientation on infant and young child nutrition or complementary feeding? **[If yes, probe for whether it is infant and young child nutrition, complementary feeding, or both.]**
b. Where did you have that orientation on infant and young child nutrition or complementary feeding? **[Be specific on infant and young child nutrition, complementary feeding, or both.]**
c. Who gave that training/orientation?
d. What materials and tools were you given at the orientation?
e. What are the key messages on the materials you received during the orientation?
f. How have you utilized the materials and tools given to you at the orientation?

Media habits and access to infant and young child nutrition information

a. Do you listen to radio?
b. If yes, which radio station do you listen to?
c. What times of the day do you listen to the radio station?
d. How often do you listen to this radio station?
e. What programs/discussions do you normally listen to and how often?
f. Are any of the programs you listen to related to child health and feeding? Which one? What do they talk about?

Ghana Promotion of Complementary Feeding Practices Project May 2011	
In-depth interview guide for use with leaders of mother support groups/church groups	
Interviewer's name: _____	Interviewer's ID: _____
District: _____	Date: _____
Community: _____	Type of group: _____

Background of community group

a. What is your name?
b. What group(s) do you belong to?
c. What is the purpose of this group?
d. When was the last time you met with this group? How often do you meet?
e. How many regular/active members do you have?
f. What are some of the topics you discuss in your meetings?

Exclusive breastfeeding knowledge and practices

Let's discuss child feeding.

a. What are some of the feeding practices in this community?
b. When do women put babies to the breast for the first time? Why?
c. What is your opinion about the recommendation not to give water for the first six months? Why do some women practice it and others do not? **[Probe: What makes it easy for those who practice it? What are the barriers for those who do not practice it? What should be done to make more women practice it?]**
d. In your opinion, is it good to give only breastmilk for the first six months? Why?
e. How do you encourage women in this group to do this?

Complementary feeding knowledge and practices

a. What kinds of food do caregivers give children in this community? **[Probe about frequency, thickness.]**
b. What would you consider as a healthy meal for a child 6-24 months? **[Probe for 6-9 months, 9-12 months, 12-24 months.]**
c. Are there any foods in this community that are considered **good** for children? Why?
d. Are there any foods in this community that are considered **not good** for children? Why?
e. What foods do caregivers give to children in this community to give them blood?

f. Are there any fortified foods in this community? Can you name them? Are they affordable? How do they help children to grow?

Previous orientations/training on infant and young child feeding

a. Have you had any training or orientation on infant and young child nutrition or complementary feeding?
b. Where did you have that orientation on infant and young child nutrition or complementary feeding?
c. Who gave that training/orientation?
d. What materials and tools were you given at the orientation?
e. What are the key messages on the materials you received during the orientation?
f. How have you utilized the materials and tools given to you at the orientation?

Media habits and access to infant and young child nutrition information

a. Do you listen to radio?
b. If yes, which radio station do you listen to?
c. What times of the day do you listen to the radio station?
d. How often do you listen to this radio station?
e. What programs/discussions do you normally listen to and how often?
f. Are any of the programs you listen to related to child health and feeding? Which one and what do they talk about?

GHANA PROMOTION OF COMPLEMENTARY FEEDING PRACTICES PROJECT

BASELINE DATA COLLECTION

Discussion guide

Focus group discussion for women with children 6-24 months

To facilitator: Please indicate the name of the district and community, and the type of group (e.g., men or women).

[Thank you and welcome to this discussion. We are going to have a conversation about child feeding in this community. It is important that we discuss this topic as honestly as we can so that the appropriate interventions can be planned to improve the health status of our children. Before we start, let's introduce ourselves. My name is ____. We will go round and mention our names. Just the first names are okay.]

1. Exclusive breastfeeding knowledge and practice

I would like us to discuss how you have been breastfeeding your children, especially the youngest one.

When did you put the child to the breast for the first time? Why?

What foods did you give to the child within the first six months? Why?

I would like to know about your experiences with exclusive breastfeeding.

[For facilitator: Have two people tell their story, one who practiced exclusive breastfeeding and another who did not.

Probe: What made it easy for you to practice it? What made it difficult for you practice it? Was there anything you would consider as a real motivator/demotivator to this practice?]

When did you give water for the first time and why?

Do you think it is good to give only breastmilk for the first six months? Why/Why not?

2. Complementary feeding knowledge and practice

a. What foods do you give your child in addition to breastmilk?
   When did you start giving solid food?
   What else is given?
   How do you prepare the food? ***[Probe for nutrient density, enriching, etc.]***
b. How often do you give your children other foods? ***[Probe for 6-9, 9-12, 12-24 months.]***
c. How often should children be given other foods? ***[Probe for 6-9, 9-12, 12-24 months.]***
d. What are the foods available in this community? ***[Let participants list all the local foods.]***
   - Let's try and group these foods into which ones give us energy.
   - What about body-building?

- Which ones will protect us from diseases?
- Which ones do you think give us blood?

e. How can we prepare children's food to make sure that they get all these benefits? When do we give fruits to children? Why?

f. What fortified foods are available in this community?
[Probe: How do they help children to grow?
Do you find them affordable?
How much do you think they should cost to make it affordable to all?]

g. What is the normal practice: preparing food at home or buying already prepared food? What are the barriers? What will motivate mothers to prepare foods at home?

3. Child welfare/community group activities

a. How often do you attend child welfare clinics? Why do you go? ***[Probe to find out the importance of the child welfare clinic.]*** Is it for immunization? Is it to know how well the child is growing?

b. What information do you receive from the health facility? Do you think it is enough? What additional information would you like to receive from the health worker?

c. What community/church group(s) do you belong to?
- What are some of the health topics you discuss?
- What about issues of children? How often do you receive child feeding information from the groups?
- Do you think it would be helpful to receive more information on child feeding in these groups? Why?

4. Media habits and access to infant and young child nutrition information

a. Which radio station do you listen to?

b. What are your favorite radio programs? Why?

c. How often do you listen to this radio station?

d. Are any of the programs you listen to related to child health and feeding? What do they talk about?

e. Are there any issues on infant and young child feeding that are of great concern to you?

f. What more information do you want on infant and young child feeding?

GHANA PROMOTION OF COMPLEMENTARY FEEDING PRACTICES PROJECT

BASELINE DATA COLLECTION

Discussion guide

Focus group discussion for men with children 6-24 months

To facilitator: Please indicate the name of the district and community, and the type of group (e.g., men or women)

[Thank you and welcome to this discussion. We are going to have a conversation about child feeding in this community. It is important that we discuss this topic as honestly as we can so that the appropriate interventions can be planned to improve the health status of our children. Before we start, let's introduce ourselves. My name is ____. We will go round and mention our names. Just the first names are okay.]

1. **Exclusive breastfeeding knowledge and practice**
   a. Let's cast our minds back to the day your wives delivered. Were you at home when your wife was in labor?
   b. Do men in these parts accompany their wives to deliver? Why? Why not?
   c. What can you say about the teachings regarding breastfeeding? ***[Guide them to talk about early initiation and exclusive breastfeeding.]***
   d. Do you honestly believe that breastmilk alone is enough for a baby for the first six months? Tell us about your own experience. ***[Allow one or two men to share positive experiences.]***
   e. What kind of support do you give to your wives during the pregnancy and breastfeeding period?
   f. How are you encouraging your partners to follow the recommendation to give breastmilk alone for the first six months?

2. **Complementary feeding knowledge and practice**
   a. When was your baby given other foods in addition to breastmilk?
   b. At what age should the baby be given solid foods?
   c. At 6 months of age, what other food should be given to the baby?
   d. What would you consider a healthy meal for a child 6-24 months? ***[Probe for nutrient density, enriching, etc.]***
   e. What do you think a father should do to ensure that his child is healthy and well fed?
   f. How do you support your partners to make this possible? ***[Probe willingness to buy commercially fortified food.]***

3. Media habits and access to infant and young child nutrition information

a. Which radio station do you listen to?
b. What are your favorite radio programs? Why?
c. How often do you listen to this radio station?
d. Have any of the programs you listened to talked about child health and feeding? Which ones? And what did they talk about?
e. Are there any issues on infant and young child feeding that are of great concern to you?
f. What information do you want on infant and young child feeding?

Appendix 3. Data collectors

Name	District	Designation	Telephone
Okyere Kwaku	Sunyani West	Field Technician	0541542957
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Luke Sambo	Sene	Technical Officer	0243756874
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Matilda Kwakwa Baidoo	Asutifi	District Nutrition Officer	0243542435
Agyapong Jerry Michael	Asutifi	Supply Officer	0244886390
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Abraham Num	Tain	Technical Officer (CH)	0249765847
Adjei-Mensah Razak	Asunafo South	Technical Officer (CH)	0243771130
Dorwu Yayra	Asunafo South	Community Health Nurse	0241841370
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Be-ir Eugene	Nkoranza North	DHIO	0247162101
Adlaide Amponsah	Kintampo South	Technical Officer	0279028730
Addah Gabriel	Kintampo South	ACTO	0208149145, 0246862210
Christiana Akua Konadu	Jaman South	DPHM	0244880675
Deyir Jacob Liptin	Jaman South	District Nutrition Officer	0243644105
Vivian Sopiimeh	Atebubu-Amanten	District Nutrition Officer	0200243446
Debpuur Joana Domitilla	Atebubu-Amanten	DPHM (Ag DDHS)	0243361559

Appendix 4. Supervisors/Team leaders for data collection

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