

PILOT MODULE No. 2: DIETS FOR YOUNG CHILDREN



A nutrition curriculum module for Ghanaian community health workers - developed for field-testing, by Ghanaian Nutrition Technical Officers (NTOs), The University of Ghana Department of Community Medicine, and the International Nutrition Communication Service, at a workshop in Accra, September 12-19, 1982.

PILOT MODULE # 2 DIETS FOR YOUNG CHILDREN

A. Performance Objectives

At the end of this module, the community health worker should be able to:

1. Explain and otherwise demonstrate an understanding of her/his role in educating the community concerning the diets of young children.
2. Explain why breast milk alone is not enough after the age of 6 months and explain that the child should start to eat enriched pap by 5 months.
3. Advise village families what ingredients should be added to the local pap and how to add them.
4. Explain the three food groups and the need to start giving the baby all three groups at 6 months, in spite of local taboos.
5. Advise village families when and how to start feeding the adult diet to the baby.
6. Advise how much and how often to feed the young child, starting from 5 months, and what methods can be used to teach the baby to eat properly.
7. Explain what local snacks can be used to feed the young child (up to four years) more frequently, including all three food groups.
8. Interview the mother to learn how she is feeding her baby and give correct advice based on the messages above.

B. The Role of the Community Health Worker in Teaching the Community How to Feed Young Children

The community health worker should be able to teach parents in a simple and straightforward manner how to improve the diets they already are giving to children under the age of four years. The community health worker must first understand why breast milk alone is not sufficient after six months, and what improvements can be made in the diet before he or she can teach this information to others. Dietary improvements that are applicable to almost all regions of Ghana are: adding enrichment

ingredients to the local pap and starting to feed this pap by five months; feeding the adult diet in a form that is soft and not too peppered starting about six months; overcoming taboos that prevent feeding of all three food groups starting at six months, and in particular taboos regarding protein foods such as beans, meat, and fish; and using local snack foods appropriately to feed the young child at frequent intervals.

Community health workers should be trained in their own regions. Their local supervisors, such as the community health nurses and nutrition technical officers, should provide them with recipes for pap that are based on locally available materials. The community health worker may make adjustments in these recipes when certain foods are scarce or more available in her village. But the community health worker should not be responsible for developing the technical content of the lessons he or she gives.

It should be the responsibility of the nutrition technical officers (NTO) and the Community Health Nurses (CHN), to develop pap recipes, or adapt the recipes they receive from the Nutrition Division in Accra to suit the local region. In this module, a rough guide for quantities is given. One part of stew ingredients to 4 parts of maize, guinea corn, or millet is recommended for making pap. This is slightly less rich than the mixtures used in rehabilitation centers but richer than the minimum safe ratio developed by the MOH Nutrition Division Accra. It is important to keep the pap thick and to add oil if the stew ingredient does not contain oil. It is easy to add too much water to a pap recipe with the result that a baby who eats it regularly will not get enough energy to grow well.

According to the teaching instructions, each recipe will be taught to village mothers during the training sessions. Then the

trainees will check the practicality of the recipes with the mothers at home during the week between one lesson and the next. Mixtures that are not practical will be reported at the next lesson, so that the NTO or CHN can make changes in them.

The community health worker should give education to the community about the diets of young children in the following ways:

- in cooking and feeding demonstrations for groups of mothers.
- during consultation with mothers who bring their sick children for health treatment.
- informally during social visits and group activities.
- during the weighing or growth monitoring program if one is developed.

The community health worker should be tactful. When he or she sees that a mother has a malnourished baby, the CCA should first befriend the family, then look for the right moment to discuss the problem with the mother and father.

C. Training Procedures and Lessons

Pilot Module 2 consists of a total of 8 lessons of about 2 hours in the morning and 2 in the afternoon, depending on the length of the training day.

The site for training for these lessons should be in the same training village for all 8 lessons, with a new village for each new class of trainees. The entire lesson should take place in the village. The trainees should live in the village or go together to the village. In the morning, the trainees should have their own lesson either in the village clinic, the VDC chairman's house, or some other private location.

The second part of the lesson, in the afternoon, should take place with a group of village mothers and other family members in a public location. The teacher and the trainees together should repeat the lesson for the village mothers. Then the teacher will show the trainees and the mothers how to prepare the demonstration food and feed it to the young children. The trainees will be encouraged to explain what they have just learned to the mothers, but the teacher will guide them and answer any difficult questions.

To prepare for the demonstration, the village will be asked to have a cooking fire, large pots, and a table ready in the area where the mothers will be taught. The food can either be brought by the training team or donated by the village.

The first lesson, explaining to the trainees their role in educating the village concerning the diets of young children, will not include a formal lesson for mothers. In the afternoon of the first day, the training class will meet with the VDC or the chief. If possible they will then meet socially with the villagers and will introduce the purpose of the training course to the village informally.

All of the lessons in this module, except the first, can be used independently as refresher units with a slight change in format. The acting community health workers all should come to a central village, conduct the lesson together, and then return to give this lesson for the families in their own village.

LESSON 1

Performance Objective: Explain and otherwise demonstrate an understanding of her/his role in educating the community concerning the diets of young children.

Preparation of village: Arrange with VDC chairman or chief for new class of trainees to come for introductions in the afternoon and to meet with villagers publicly, to explain the purpose of the course. If possible, the instructors should contribute something towards light refreshments, such as palm wine.

Morning Session

Location: instructor and trainees privately in village clinic, school, leader's house or outdoor location where they will not be disturbed.

Time: Two hours.

Activities	Approach
Pretest	Ask trainees how they see their role in educating the community concerning the diets of young children. Ask them what are the problems with the diets of young children.
Instructor-led discussion and lecture	Show the picture of the two children, one well-nourished and one malnourished.* Explain that the biggest nutrition problem in most villages occurs in young children after the age of six months and up to the age of about four years. The community health worker can be of great service to the village by teaching families how to feed children of this age so that they grow strong and so that their brains grow to be intelligent. In this course, they will learn how to educate village families about diets for young children.
Explanation of plans for afternoon	In the afternoon, the group of trainees will meet the chairman of the VDC or chief for introductions and to announce the purpose of

*Fig. 1, p. 2 - 7

the course. They will also be introduced socially to the villagers.

Post-test Trainees role play explaining their role to the chief or VDC chairman, and explaining to villagers.

Afternoon Field Session

Time: Two hours.

Activities

Approach

Meeting with VDC chairman or chief and with village community

Traditional introductions to village influentials, and to villagers. Socializing with refreshments and dancing if this is suitable. The VDC chairman or the chief should introduce the instructor and call upon him or her to speak. The instructor should announce at this time that the trainees will be holding a class for village mothers once every week on the same afternoon. All mothers of children under four years should try to attend. At each class there will be a demonstration of how to cook foods specially to make young children strong and the children will try these foods.

The mothers should expect that the trainees may visit them sometimes in their homes to discuss what problems they have feeding young children.

Evaluation

Observe the trainees mixing with the community members. Listen to what they are saying and notice their manner.

Lesson 1 Content

The Role of the Community Health Worker in Diets for Young Children

The role of the community health worker is to educate the community concerning the diets of young children. In Ghana about one of every three village children under the age of four years is malnourished. The picture below shows a well-nourished child standing beside a malnourished

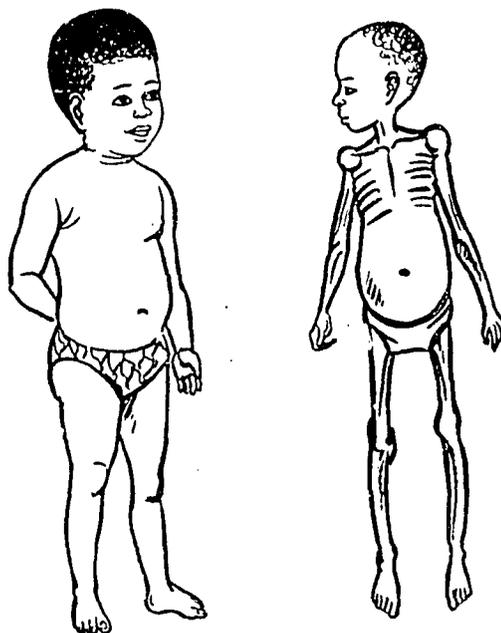


Figure 1 : Well Nourished Child
 Malnourished Child

child of the same age. Both children are three years old. The child who has been eating well is tall and strong. His head is larger. He does not get sick easily like the smaller child because his body is strong and the foods that he eats protect his health.

Do the families in our villages have the money to feed their young children so that they grow very strong? The answer to this question is yes. Only a very few families are too poor to feed their children well. It is not necessary to feed foreign foods or expensive foods. The same foods that we eat every day will make children grow strong if they are given in the right combinations and in the right amount. Building a child's body is like building a house. If the right materials are used in the right amount, the house will be strong. Ghanaian foods are just as good as foreign foods.

There are three ways of making the diets of young children better. The community health worker should teach village families these ways.

They are:

- correct feeding of pap with added ingredients such as groundnut paste.
- correct use of adult foods for feeding young children.
- correct use of snack foods.

This course will teach the trainees about these three ways and will give them many recipes and ideas for mothers whose children don't have much appetite. The trainees will practice teaching what they learn to the mothers in the training village. They will also help to prepare a cooking and feeding demonstration for the mothers every week.

When the trainees go back to their home villages, they will teach the village families in four ways:

- by demonstrating new cooking methods for fixing pap.
- By advising mothers who come to them with sick children.
- by everyday conversation with mothers.
- in the weighing program, explaining how to feed the babies who are not gaining weight.*

It is necessary to be friendly and sympathetic in teaching families about the diets of young children. It is very important not to make a mother feel ashamed because she has a malnourished child. Almost all mothers have love and patience and concern to see their babies grow healthy. But many lack the knowledge of how to prepare and feed the correct foods for babies. If the baby gets sick, he may become more malnourished and may even refuse food. Mothers may also have too much work to spend as much time with the young child as they wish. In most cases, the community health worker can make helpful suggestions if he or she wins the mother's friendship and trust. In some cases, the community health worker may first befriend the children in the family and then befriend the mother. The community health worker must be tactful in choosing the right moment to speak to the mother and father about the diet of the child.

*Mention this way only if there is a weighing program.

LESSON 2

Performance Objective: Understand and explain why breast milk alone is not enough after the age of six months and explain that the child should start to eat enriched pap by five months.

Morning Session with trainees only

Location: teacher and trainees privately in village clinic or Village Development Committee chairman's or other leader's house.

Time: Two hours.

Activities	Approach
Revision	Review of community health worker's role.
Pretest	Teacher asks trainees their ideas how much milk the mother has when the baby is born and how much by six or seven months. What is happening to the milk as the baby grows bigger? What other foods can be given? Show large beer bottle and large calabash to demonstrate amount of milk when baby is first born. (Show soft drink (Fanta or Coke) bottle and small calabash to show amount of milk when baby is older.
Lecture and Instructor-led Discussion	Teacher explains that the milk supply decreases after six months but that the baby needs more food because he is bigger and more active. Ordinary pap is not enough for the baby because it is too thick and doesn't have enough different ingredients to help the baby grow strong.
Explanation of food demonstration in session with mothers	Teacher explains the cooking method for the food and organizes the trainees to help with the demonstration.
Post-test	Questions to individual trainees and role play to test understanding.

Afternoon Session with trainees and village mothers

Location: Teacher, trainees, and village mothers and other family members meet publicly in village. Trainees visit homes to interview mothers about problems with the cooking method taught last week.

Time: Two hours and fifteen minutes.

Activities	Approach
Pretest	Same questions as morning session, but the village mothers give the answers.
Lecture and discussion	Same as morning session, but teacher asks trainees to help with explanation.
Food demonstration	Teacher explains recipe and cooking method. All cooperate in cooking and feeding to the young children.
Evaluation	Trainees go to village homes during the week to ask mothers if they are using the method they learned last week at home. Is it practical for every day? If not, why not?

Lesson 2 Content

In the first three months after the baby is born the mother has plenty of breast milk. Every day she gives her baby as much milk as it would take to fill a large beer bottle or a large calabash (a large STAR beer bottle and a calabash or other local container that holds the same amount should be available for demonstration). After the baby is older, by about eight or nine months, the milk decreases. Now there is only as much milk as a soft-drink bottle or a small calabash can hold (a Fanta or Coke bottle and a small calabash or other small container should be available to demonstrate the amount). The baby grows bigger, but the amount of milk grows less. This is the reason why the mother should start to give the baby pap at five months. If he starts at five months, he will be really eating the pap by six months, which is the time when his mother's milk alone is no longer enough.

Some mothers have more milk and some mothers have less milk, particularly if they are very thin or they already have given birth to five

or six children. But all mothers will have more milk when the baby is very young and less after the age when it starts to get teeth. A mother with less milk may have to start pap at three months because her baby is hungry or is not growing well. A mother with plenty of milk still should start pap at five months because this is a good time for the baby to get used to the taste of the pap, so that he will learn not to refuse it. If the mother finds it difficult to remember the baby's exact age, she can use the baby's first tooth as a sign that it is time to start feeding pap. This is less reliable than age because some babies do not get teeth until eleven or twelve months. They could become malnourished if they did not receive pap before this time.

If the baby can be weighed every month it becomes easy to know whether he has been getting enough to eat. If we see that his weight increases by the right amount, we know that the mother's milk or milk and pap is enough. If his weight increases less than the right amount, we know to advise the mother to feed him more.

What about the pap we usually feed to babies? Is it a good food? Yes. But in the way in which we prepare it, it does not have enough ingredients. Could a grown man or woman live without soup or stew? If a grown person ate only kenke or akasa, or ampese or fufu every day, and never had any stew or soup to put on this food, would this person be strong? Such a person would grow thin and weak. This is the problem of many of our babies. When they eat plain pap every day, they become weak and don't grow rapidly, because they do not get the ingredients that we put in stew and soup. These ingredients are groundnut paste, palm nut and palm oil, egusi, greens such as nkontomere, beans, fish, meat, eggs and other common foods.

A baby does not need much of these foods, but he needs a small amount every day from the time when the mother's milk starts to grow less. A baby is much smaller than his father. But the baby's body is doing a different kind of work from the father's body. The most important work of the baby's body is to grow bigger. He cannot stay a baby. He must add new flesh and new bone to his body. For this work his body needs good ingredients. He can build more flesh from fish or groundnut mixed with pap than he can build from pap alone. The milk of the mother contains all the ingredients that the baby needs. This is why the baby should continue to breast feed for two years, if possible. But when the amount of the mother's milk starts to grow less, we must start giving other foods. These foods must also provide all of the ingredients for good health and good growth.

How can we give the soup and stew ingredients to a baby starting from six months? The baby does not have enough teeth to chew and most babies do not accept hot pepper. The most important way for us to give these ingredients is by adding small amounts of them to the baby's pap. Do grown people eat the same stew or soup every day? No, because we

would get tired of it. The same is true of the baby. The baby's pap can be cooked with the addition of small amounts of different ingredients from day to day, using the food that is in the house, or buying a little extra for the baby.

Pap Recipe for the Day's Demonstration

Before teaching this lesson, the instructor should decide upon the pap recipe for the day's demonstration and write the exact amounts in the space below, together with the instructions for combining ingredients: all kinds of pap are made with a staple food such as corn, guinea corn, or millet, enrichment ingredients such as groundnut paste, fish powder, etc., and water. The amount needed for the public demonstration and for teaching the recipe should be calculated carefully in advance. The amount of water also should be specified so that the cooked pap will not be too thin.

Please complete the following recipes:

Individual recipe for 1 or 2 children:

	Food	Amounts
Staple	_____	_____
Ingredient 1	_____	_____
Ingredient 2	_____	_____
Water		_____
Cooking method	_____	

Recipe for group demonstrations (same as above but in large amounts)

	Foods	Amounts
Staple	_____	_____
Ingredient 1	_____	_____
Ingredient 2	_____	_____
Water		_____
Cooking method	_____	

LESSON 3

Performance Objective: Advise village families what ingredients should be added to the local pap and how to add them.

Preparation: All the ingredients and cooking utensils and kitchen facilities necessary for demonstrating the different kinds of pap must be arranged.

Morning Session

Location: Instructor and trainees privately in village home where they can cook together.

Time: Two hours.

Activities	Approach
Revision	Ask trainee to explain why breast milk alone is not enough after the age of six months.
Pretest	What recipes do trainees already know for adding ingredients to pap? Have they tried them? Do mothers use them? Why? Why not?
Instructor-led demonstration and lecture	Show preparation method for four or five types of enriched pap that can be prepared in the training village. Demonstrate principle of one part stew ingredient to four parts of pap flour (corn dough, etc.). Use the thumb to represent the stew ingredient and the four fingers as a reminder of the amount of pap dough. Show how to add about a teaspoonful of oil for each child's serving if fish or bean flour are used to make the pap. Show how thick the pap should be.
Explanation of plans for afternoon	Explain how the demonstration will be arranged in the afternoon. Which recipes will be demonstrated using small amounts? Which one will be cooked in a large quantity for everyone to eat?
Post-test	Questions to individual trainees.

Afternoon Field Session

Time: Two hours

Activities	Approach
Revision	Same as above, but mothers answer questions.
Pretest	Same as above, with mothers answering.
Demonstration and lecture	Same as above, except that trainees and mothers assist with demonstrations. After demonstration of small quantities, a large quantity of one of the recipes is cooked, with the assistance of the mothers.
Sharing of food	Food cooked in large pot is shared among all the young children.
Evaluation	Trainees go to village homes during the following week to see if mothers are using the cooking methods taught in class. If not, why not?

Lesson 3 Content

The same pap prepared for the baby will also be better than plain pap for all of the children in the house. It will save the mother time if she can cook for two or three children together. Only the amount of pap that can be eaten in half a day should be prepared, because it is not very safe to feed any food to babies under two years if more than half a day has passed since the time when the food was cooked. Older children and adults can still eat food that has been kept longer than this time because their bodies are better able to fight the germs that cause diarrhoea.

Some of the ingredients to be added to pap are found in all of Ghana. Others are only found in certain regions. The ingredients that are usually available everywhere are groundnut paste, fish flour made from pounding dried fish (this can keep about three days), bean flour made from pounding cow peas, and oil. Palm oil is best, but any other

cooking oil or type of "butter" also is satisfactory. Ingredients available in certain regions and season or for certain groups only are: fresh fish, milk, eggs, green leafy vegetables, nere seeds, egusi, baobab fruit, groundnut cake (made after pressing out the oil), meat and so on.

For all of the ingredients except for dried fish and oil, a mixture of 1 to 4 before cooking makes a good pap. This means about one measure of the stew ingredient and four measures of the corn or guinea corn or millet that is used to make the pap. If the stew ingredients are very expensive, less can be added but not less than 1 measure for about 8 measures of the akasa or guinea corn.

In the case of pounded dried fish, the amount can be 1 to 10 or more. If there is enough fish to add a good taste of fish to the pap, the amount probably is enough. In fact the person who is cooking should always test the taste of the pap, in the same way that we taste the stew to be sure that the ingredients are correct.

Oil is added together with other ingredients, not by itself. If the stew ingredient already has oil in it, such as groundnut paste or egusi or palm nut, then it is not necessary to add more oil to the pap. If the stew ingredient has no oil, then a very small spoonful of oil should be added for each child who is eating the meal of pap. In other words, if one baby is getting just enough pap for one meal, one teaspoon of oil should be added to this pap. The stew ingredients that require oil are fish, green leafy vegetables, and beans. Some kinds of pap are good with the addition of one or two lumps of sugar, if sugar is available. Groundnut paste pap, or pap with milk or egg, for example, are good with sugar.

In every case the pap should be thick. If it has too much water, it will fill the child's stomach with water instead of with food. Some people think that pap should be thin because the mother's milk is also thin. This is not true. The mother's milk looks like water, but it is very powerful because it comes directly from the blood of the mother. It contains all the ingredients that go to feed the different parts of the body. Pap only has the ingredients that we put into it.

Some mothers, who are very busy, must buy pap ready cooked from a vendor. If they have time, they can add stew ingredients, such as groundnut paste, to this pap and cook it again until the other ingredient is well enough cooked. If they do not have the time, there are still two things that they can do:

- take ingredients from a stew or soup that is already cooked in the house and add this to the pap. This could be a small amount of fish or meat or even just the palm or nkontomere or groundnut stew. But this stew or soup should be freshly cooked.

- feed the plain pap to the baby and feed it the other ingredients separately. For example, give the baby two or three bites of the soft flesh of fried fish, without any bones.

In some places, vendors have learned to add ingredients to the pap that they prepare for babies and mothers are happy to spend a little extra money to buy a better quality food for their children. If possible, the community health worker should explore with the village whether it would be practical to start such a system. How much would it cost the vendors to prepare a better quality pap? How much would they have to charge the mothers to buy it? Would the vendors and mothers be interested in this arrangement? If so, the community health worker might ask the VDC chairman for a small amount of money to cover training and start-up costs for the vendors.

Pap Recipe for the Day's Demonstration

Before teaching this lesson, the instructor should decide upon the pap recipe for the day's demonstration and write the exact amounts in the space below, together with the instructions for combining ingredients: all kinds of pap are made with a staple food such as corn, guinea corn, or millet, enrichment ingredients such as groundnut paste, fish powder, etc., and water. The amount needed for the public demonstration and for teaching the recipe should be calculated carefully in advance. The amount of water also should be specified so that the cooked pap will not be too thin.

Please complete the following recipes:

Individual recipe for 1 or 2 children:

	Food	Amounts
Staple	_____	_____
Ingredient 1	_____	_____
Ingredient 2	_____	_____
Water		_____
Cooking method	_____	

Recipe for group demonstrations (same as above but in large amounts)

	Foods	Amounts
Staple	_____	_____
Ingredient 1	_____	_____
Ingredient 2	_____	_____
Water		_____
Cooking method	_____	

LESSON 4

Performance Objective: Explain the three food groups and the need to start giving the baby all three groups at six months, in spite of local taboos.

Preparation: Get together foods to demonstrate three food groups and make preparations for afternoon pap demonstration to village mothers.

Morning Session

Location: Instructor and trainees privately in village clinic, school, leader's house or outdoor location where they will not be disturbed.

Time: Two hours.

ActivitiesApproach

Revision	Review last week's pap recipes. Discuss findings of evaluation discussions in village homes. Are the mothers using these recipes? If not, why? What changes could be made in the recipes?
	Explain that the mothers need today's lessons to help them to understand the importance of the lesson last week.
Pretest	What do the trainees know about the importance of the different foods? What does each kind of food do for the body?
Instructor-led discussion and lecture	Show the three food groups picture and explain the meaning of each of the groups. Why do babies need foods from all the groups? Have a basket that represents each of the three food groups and about twenty pieces of demonstration food on a mat. (These may be peppers, an egg, corn, yam, a bottle of oil, some beans, some green leaves, a pawpaw, etc.) Ask the trainees to take turns picking up a food from the mat and putting it into the proper basket.
Explanation of plans for afternoon	Explain that the trainees will help teach the three groups to the mothers in the afternoon. Explain the pap demonstration.
Post-test	Ask trainees to explain the role of each of the food groups.

Afternoon Field Session

Time: Two hours

Activities	Approach
Revision	Discuss last week's pap recipes with the others.
Pretest	What do mothers know about the action of the different foods?
Instructor-led discussion and lecture	Same as above. But ask mothers to sort the demonstration foods into the baskets with help from the trainees. Explain why even a baby of six months needs foods from all of the three groups. Ask mothers about local taboos against feeding these foods to babies. Explain why these taboos are not true.
Demonstration cooking and feeding	Group cooking of enriched pap recipe, with trainees and mothers assisting. Babies and young children share the cooked food.
Evaluation	Same as previous weeks. Trainees visit mothers at home to see success of last week's recipe.

Lesson 4 Content

All of the foods we eat can be divided into three groups, depending on the way in which the body makes use of them and the actions they have within the body. The three types of food are shown in Fig. 2, p. 2-20a.

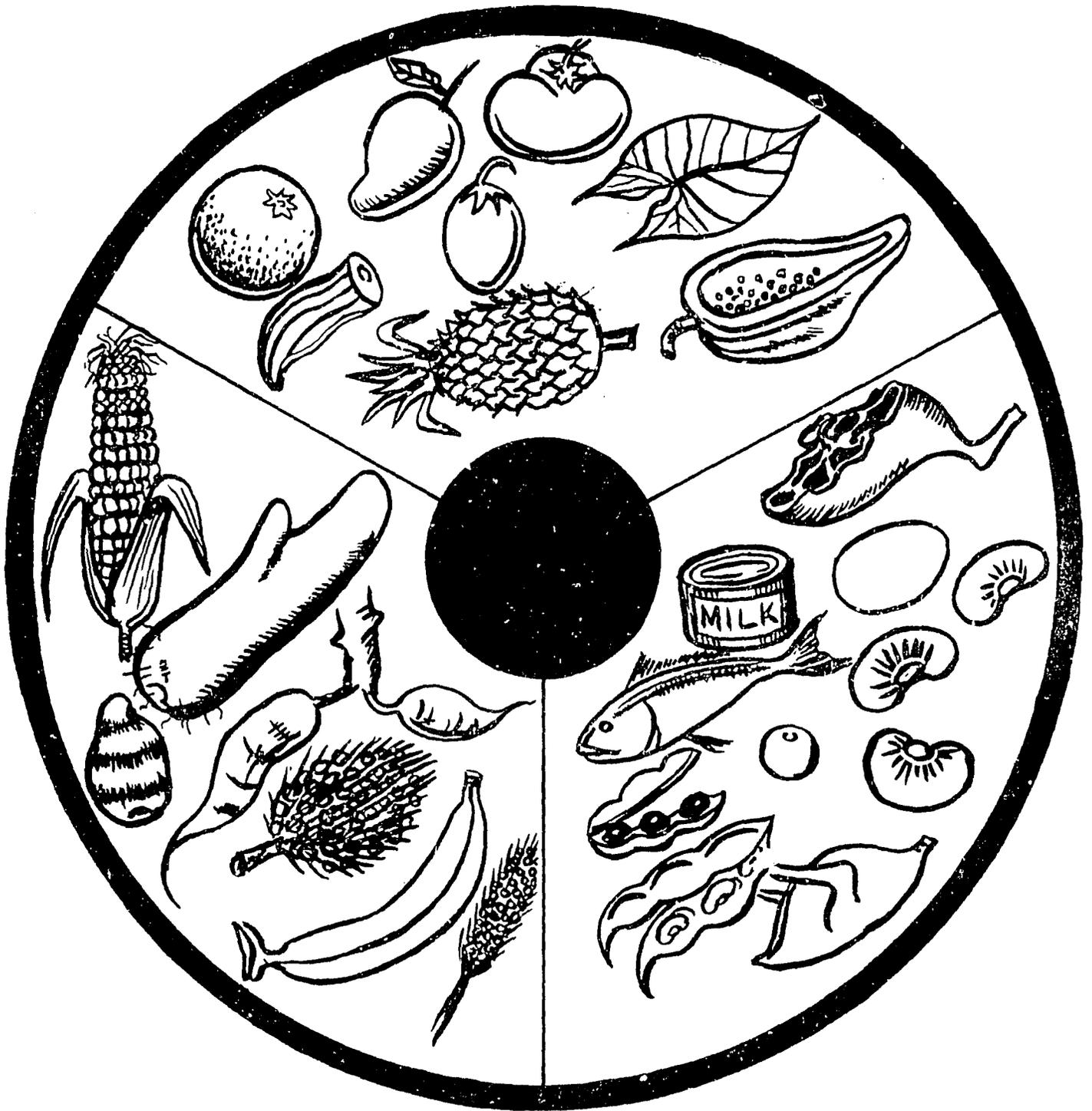


figure 2: Three Food Groups

Group One are the energy foods. Our bodies burn these foods in the same way that a car burns petrol. This group includes all of the foods that we eat in large quantities, such as rice, yam, cassavah, corn, millet, plantain and banana. It also includes all kinds of oil and fat and all kinds of sugar. Alcoholic drinks also are in this group (although they have other negative effects on the body, as well). When we do not get enough of these foods, we feel hungry and weak. We also get thin because we burn the fat off our own bodies to take the place of the energy food that we would need to eat.

Group Two are the growth foods. Our bodies use these foods to build new muscle, bone, skin, brains, etc. Children use these foods to grow. Adults, who are no longer growing taller, use them to repair the body and form new muscle if they exercise heavily. The brain also uses these foods for thinking and remembering. The most powerful foods in this group come from animals. They are meat, fish, eggs, and milk. We can easily use animal foods to build our bodies because these foods are more similar to our bodies than foods from plants. However, some of the plant foods also belong to Group Two. They are cheaper than the animal foods and are almost as useful. These foods are groundnuts, all kinds of beans, egusi, nere seeds, and palm nuts. Some of the foods in Group One have a small amount of growth power, but it is much less than the growth power of foods in Group Two.

Group Three are the protective foods. These foods protect our eyes and our skin from infections and rashes. They help our wounds to heal quickly and help to prevent us from getting all kinds of illness. They cannot prevent us completely from getting sick but they can make our illnesses milder and shorter lasting. This group includes all green leafy vegetables and other vegetables, such as squash, cucumbers, etc., and eggs. It also includes all fruits, such as oranges, lemons, mangoes, pineapples, and pears. Green leaves (such as nkantomere), oranges and pears are particularly powerful members of this group.

Adults and older children naturally eat food from all of the three groups. This is why adults and older children usually are strong unless they happen to become ill with a specific condition such as malaria. Mother's milk has the strength of all of the three groups in it, directly from the blood of the mother. This is why young babies up to the age of six months also usually are strong and well, if their mothers are healthy. Unfortunately, it is the older babies after six months and the young children up to about four years who suffer the most. After six months the mother's milk is not enough to feed the baby completely. Very often, older babies and very young children do not get food from all the three groups. They are mainly given foods from Group One. But they need more foods from Group Two and Group Three, because they are growing and because their body's defense against illness is not yet well developed.

In Ghana there are taboos against giving babies foods from Groups Two and Three. Meat is believed to cause worms in babies under the age of two. Fish also is believed by some to cause worms. Eggs cannot be given and beans are believed to be indigestible. These beliefs are not true. What is the truth? The truth is that some of the common ways of preparing and storing these foods are not suitable for babies, and this has caused people to think that the foods themselves were not suitable. When a baby is given food cooked with too much hot pepper, it may upset his stomach and cause the mother to think of worms. Also, if a stew is kept for more than half a day and then warmed lightly, it may make a baby sick, because babies need foods that are freshly cooked. Our babies and young children need these foods in order to be strong and intelligent. But they need to have them properly prepared.

Pap Recipe for the Day's Demonstration

Before teaching this lesson, the instructor should decide upon the pap recipe for the day's demonstration and write the exact amounts in the space below, together with the instructions for combining ingredients: all kinds of pap are made with a staple food such as corn, guinea corn, or millet, enrichment ingredients such as groundnut paste, fish powder, etc., and water. The amount needed for the public demonstration and for teaching the recipe should be calculated carefully in advance. The amount of water also should be specified so that the cooked pap will not be too thin.

Please complete the following recipes:

Individual recipe for 1 or 2 children:

Food	Amounts
Staple	
Ingredient 1	
Ingredient 2	
Water	
Cooking method	

Recipe for group demonstrations (same as above but in large amounts)

	Foods	Amounts
Staple	_____	_____
Ingredient 1	_____	_____
Ingredient 2	_____	_____
Water		_____
Cooking method	_____	

LESSON 5

Performance Objective: Advise village families when and how to start feeding the adult diet to the baby.

Preparation: Prepare to cook a group meal of adult food such as aprapransa in the training village and share it with parents and children. Cook two separate pots of the same food, one with pepper and the other without pepper.

Morning Session

Location: Instructor and trainees privately in village clinic, school, leader's house or outdoor location where they will not be disturbed.

Time: Two hours.

ActivitiesApproach

	Review three food groups. Discuss findings of evaluation visits in village homes. Are more mothers using the pap recipes? Why, and why not?
<u>Pretest</u>	In the trainees' own families, when do they start giving adult food to the baby? How do they introduce it?
<u>Instructor-led discussion and lecture</u>	Explain content of lesson 5. The main points are (1) that babies should start adult food between six and ten months because they need plenty of foods from the three food groups; (2) if the baby won't eat pepper the family should cook part of the food without pepper for the baby; (3) the child should receive moral training in the home, but withholding good food should not be part of this training; (4) the best way to start feeding adult food to the baby is for the mother or father to hold the baby during the meal and feed the baby from the mother's or the father's own portion; (5) a rough guide for amounts is to make sure the baby gets one part of soup or stew (including some fish or meat) for every four parts of the rice or fufu or kenke, etc.

Explanation of afternoon plans	Explain that group will cook aprapransa with and without pepper and assign trainees to start this cooking during the group talk.
Post-test	Individual trainees answer questions about point above.

Afternoon Field Session

Time: Two hours.

Activities	Approach
Revision	Review three food groups with mothers. Put up picture. (Fig. 2, p. 2 - 20a)
Pretest	Introduce topic for the day and start asking mothers when they started giving adult foods to their babies. Fufu? rice? kenke? pepper? stew? fish? beans? Ask about specific young children aged two or three years--do you remember when this child started eating pepper? rice? etc. Ask how the mothers encourage their young children to eat pepper.
Lecture and discussion	Explain that the baby should start eating adult food between six and ten months in order to get more foods from the three food groups. Continue to explain remaining points of lesson above. Let trainees help to answer the mothers' questions.
Cooking and demonstration	The food must be cooked by the time the discussion is finished. Cooking should start early because aprapransa takes some time to prepare. Ask mothers to try giving their babies the cooked food without pepper first and with pepper second (from two separate cooking pots or dishes). See how many will eat it without? How many will eat it with?
Evaluation	Trainees go to homes during week, as usual, and discuss practicality of cooking the baby's food without pepper. Do families agree to try this type of cooking? Why, and why not?

8/3

Lesson 5 Content

How and when should we start to give adult food to the baby? If the baby is eating pap with added ingredients, we can start any time between six months and about ten months. By twelve months, the baby should be able to eat the same foods as the rest of the family if he or she does not have a problem with pepper.

Some babies refuse food with pepper. They cry and even avoid the "bad" person who gave them the peppered food. Other babies eat peppered food, but it upsets their stomachs if they take too much. A third type of baby likes peppered food and can eat it without any trouble from as early as six or seven months. Families that like to eat pepper are fortunate if their babies are the third type. They will have no trouble starting to feed them the adult diet. If the baby cannot take pepper, there are two ways we can try to change our cooking:

- Put the pepper in the stew or soup late, after everything else. Take the baby's portion out before putting in the pepper and finish cooking it separately.
- Cook the stew or soup with no pepper or very light pepper and serve a separate pepper sauce with the meal.

Parents may think that it is spoiling the child to make special cooking arrangements simply because the baby cannot eat pepper. But if we consider how much effort it takes to bring up a child, and how costly the medical treatment can be if the child becomes ill, it seems reasonable to take extra precautions to protect the child's health by feeding it well. Also, if we wish the child to get good marks in school, we must make an extra effort to feed him the foods that will help him to grow to be intelligent.

In fact, it is important not to spoil the young child. A child that does not respect his parents will cause severe problems for himself and for the family and the community. The child should be trained to be obedient and respectful. However, food should not be used for this type of training. Sometimes parents hold back food or try to give the child only a very small amount of the best foods, in order to teach him respect for his elders. This is dangerous, because it may damage the growth of the child's brain. The same lesson can be taught in other ways. The child should show respect for the family by working at simple jobs from an early age and completing these jobs as well as he can. Food should not be used in teaching this lesson.

The simplest way for the family to start feeding the baby with adult food is for an adult to hold the baby on his or her lap during the meal and to feed the baby as he or she is eating. The father may

wish to hold the baby and give him small bites of food, including fish and meat. When the baby sees the father eat, he will want to copy him. More often, the mother will hold the baby and feed it when she is eating. The mother or father should always keep the baby's needs in mind. The small child cannot be responsible for deciding what to eat until the age of three or four years, and even then an adult should keep watch on the child.

In many places the traditional custom is to force the child to finish his food from Food Group One (fufu, kenke, rice) before he is allowed to eat the food from Group Two (meat or fish). This may be necessary in order to encourage certain children to eat enough, when the fish and meat in the stew are expensive. However, parents who wish their children to grow to be very strong, both in mind and in body, are changing this custom. They are urging the child to eat the ingredients in the stew before they fill their stomachs with the rice or ampese, etc. because they know that the stew ingredients will make the child stronger.

A good rule is to have the baby eat about one portion of the stew for four portions of the main food (as in the case of pap recipes). If the parents can afford to give more stew, they can increase the amount.

LESSON 6

Performance Objective: Advise how much and how often to feed the young child, starting from five months, and what methods can be used to teach the baby to eat properly.

Preparation: Prepare to cook a pap recipe in the village during the afternoon lesson for mothers.

Morning Session

Location: Instructor and trainees privately in village clinic, school, leader's house or outdoor location where they will not be disturbed.

Time: Two hours.

Activities

Approach

Revision	Review how to introduce adult foods. Check on results of evaluation in village homes. Are mothers able to cook without pepper for the baby? Why, and why not?
Pretest	How do trainees think a baby should be taught to eat pap? What if the baby doesn't like it? How much pap should the baby eat in a day?
Instructor-led discussion and lecture	Explain the content of Lesson 6, concentrating on the following main points: (1) babies can start to hold food in their hands at four to five months, but they won't succeed in eating well this way; (2) parents should start to let the baby share their food from about six months, feeding baby by hand; (3) the baby's main food until he gets teeth will be pap. For this reason, the mother should be very patient in teaching the baby to eat pap from a spoon; (4) the number of times that a baby eats should increase from one meal of pap at five to eight months to about five small meals by the age of one year. The total amount in a day should increase from one cup to four cups; (5) babies

need special feeding during and after illness;
 (6) the baby should not stop breast feeding
 before the age of one year. If he is breast-
 feeding less, the mother should encourage him
 to feed more.

Explanation of plans for afternoon	Explain pap recipe for afternoon, and trainees' role in demonstrating spoon feeding.
Post-test	Ask trainees to explain the six messages.

Afternoon Field Session

Time: Two hours

Activities	Approach
Revision	Ask mothers if any have tried cooking without pepper.
Pretest	Ask how mothers teach their babies to eat pap.
Instructor-led discussion and lecture	Explain and discuss six points above.
Cooking and feeding demonstration	When the pap is ready, return to point (3) and explain that this is most important: the bay's main food until he gets teeth will be pap mixed with stew ingredients. It is important to teach him to eat it. Ask individual mothers to demonstrate feeding the pap with a spoon to their young babies. Ask for volunteer mothers whose babies don't like pap. Teach the mother how to coax these babies to eat. Explain that the baby should have one cup a day up to eight months, and more after this time. But the baby should never stop breast-feeding because he is eating pap. Babies need both breast-milk and pap.
Evaluation	Students visit homes of mothers whose babies refused to eat pap (or other foods) before the last lesson. They try to help the mother to teach the baby to eat.

Lesson 6 Content

How to go about feeding the young child, how much and how often to feed

Everyone who has taken care of babies knows that it sometimes is difficult to feed them. Everyone has a story about the most difficult child. The writer of this lesson had a baby daughter who could not be fed by spoon because she would vomit if the spoon went into her mouth. All the breast milk she had eaten in the past three hours would be vomited out. This child learned to feed herself by hand starting at six months. It is lucky that children like this one are not common. Some children try to refuse all food except for the breast. This is particularly true if the child is not well. All babies need us to be very patient with them.

How should we introduce new foods to a baby? By the age of four or five months, most babies have started to reach things with their hands. It is natural for them to put everything into their mouths. They also have learned to bite. At this time the baby usually has a natural desire to learn to eat. The baby can hold food in his hand and suck on it. Usually he will not succeed in eating much like this. He can chew on biscuits, bread, orange slice, yam, pawpaw, chicken bone and other foods. We must watch for two things: first, the things that go into baby's mouth must be clean, or they may make him sick. If his piece of yam falls on the ground we should not give it back to him. Second, he may choke if he bites off big pieces.

Starting at about five months we also can share the food that we are eating with the baby. We should share food from our own meals, so long as it is freshly cooked, and so long as the baby can eat the pepper. We also can share snacks, such as fruit and fried plantain. We can feed the baby by hand, as we feed ourselves. But if this food is not soft, the baby probably will not eat much, until he gets teeth. There are certain foods that we eat that are not good for the baby. We should not give him these foods. They are: coffee, strong tea, cola nuts, alcoholic drinks such as palm wine, and sweets or toffees. The sweets and toffees are not so bad as the others, but they may damage the baby's teeth and may take away his hunger for healthy foods. The sugar gives a feeling of fullness, but it has no power for growth or protection of the body.

Because the baby has no teeth he cannot get enough ingredients from eating adult meals only. This is the reason why we feed him pap, starting at five months. From the beginning, we add ingredients to this pap, so that he will have foods from all of the three food groups.

We should feed the pap with a spoon, by putting a small amount on the baby's tongue the first time, so that he can taste it. At first most babies will spit it out because they are not used to the taste. The mother should patiently put the food into the baby's mouth again. If he continues to refuse, she should try again the next day. It may take a month before the baby finally learns to eat the pap well. If the mother starts to feed him at five months, he should be eating pap properly by six months. The mother should try to start the pap at a time of day when the baby is hungry. She may hold back the breast for one or two hours before the time when she gives the pap. From the age of five to eight months, the mother who has plenty of milk can give pap once a day, when the baby is hungry. At this time the baby should eat about one full cup. If he can't eat that much, he should have a half cup first and then the other half after one or two hours. Pap that has been kept for more than half a day after cooking should not be fed to the baby. If the baby is thin or seems hungry, the mother should make pap twice a day, in the morning and the evening.

By eight months the baby should start having adult food in addition to pap every day. From eight months to one year the total amount of food the baby eats should increase gradually. The baby's stomach is small. For this reason, the food he eats should be divided into about five meals. This may be two meals of pap plus two meals of adult food plus some fruit or other snack. The total amount the baby eats in one day at the age of one year may be three or four cups of food. At some meals the baby will not be hungry. At other meals he will eat more.

When the baby has a fever or cold or diarrhea, he should continue to eat. Often babies refuse food at this time, although they continue breast-feeding and drinking liquids. Illness makes the baby thin. For this reason, the mother should give her child more food than usual as soon as he gets better. She should give him more than usual of the growth foods, from Group Two, to build back the parts of the body that were attacked by the illness.

A baby under the age of one year should not get into the habit of eating so much pap and adult food that it stops breast-feeding. If the baby sleeps with the mother and wakes up several times in the night to breast-feed, this is not a danger. But a few babies will stop breast-feeding when they start eating plenty of other food. If the mother notices that the child is only breast-feeding three or four times a day, she should try to feed it from the breast first, before giving the meals of pap or adult food.

Pap Recipe for the Day's Demonstration

Before teaching this lesson, the instructor should decide upon the pap recipe for the day's demonstration and write the exact amounts in the space below, together with the instructions for combining ingredients: all kinds of pap are made with a staple food such as corn, guinea corn, or millet, enrichment ingredients such as groundnut paste, fish powder, etc., and water. The amount needed for the public demonstration and for teaching the recipe should be calculated carefully in advance. The amount of water also should be specified so that the cooked pap will not be too thin.

Please complete the following recipes:

Individual recipe for 1 or 2 children:

	Food	Amounts
Staple	_____	_____
Ingredient 1	_____	_____
Ingredient 2	_____	_____
Water		_____
Cooking method	_____	

Recipe for group demonstrations (same as above but in large amounts)

	Foods	Amounts
Staple	_____	_____
Ingredient 1	_____	_____
Ingredient 2	_____	_____
Water		_____
Cooking method	_____	

LESSON 7

Performance Objective: Explain what local snacks can be used to feed the young child up to four years more frequently, including all three food groups.

Preparation: Get samples of local snack foods to use for Three Food Groups exercise and for group snack after the afternoon lesson with the mothers. Have paper and pencils so that trainees can draw pictures of snacks that are not in season. Get three stools for sorting snacks into food groups.

Morning Session

Location: Instructor and trainees privately in village clinic, school, leader's house or outdoor location where they will not be disturbed.

Time: Two hours.

Activities	Approach
Revision	Discussion of home visits. Are mothers succeeding in feeding pap to their more difficult babies?
Lecture and discussion	Explain to trainees that young children up to the school age need to eat more often than adults. Show picture of baby chicken and child. Explain need to set aside family food and to use snacks in order to feed the child more often.
Test of trainees' ability to sort local snacks into three food groups and to combine snacks from the three groups	Put up Three Food Groups picture. Put the examples of local snacks onto a table in front of three stools. First ask trainees what snacks are missing from the group shown on the table. Have them take paper and pencil and draw pictures of these missing snacks and put the pictures on the table. Now have the trainees take turns putting each snack onto the appropriate stool, commenting on whether this snack is good for young children (for example, coconut is too hard for children without teeth).
Post-test	Instructor takes a snack from one stool and asks a trainee what snacks from the other two food groups could be used to complement this snack.

Continue to ask this question of each trainee. Explain that the Three Food Groups do not need to balance at every meal, but that we should try to balance them during the day.

Explanation of
Afternoon

Explain that the same lesson will be repeated for the mothers in the afternoon. The trainees can coach the mothers.

Afternoon Field Session

Time: Two hours.

Activities

Approach

Revision

Ask mothers if any have succeeded in teaching their baby to eat pap since the last week. Who? Which baby?

Instructor-led
discussion and
lecture

First show all of the mothers the picture of the child and the baby chicken.* Explain why young children must eat frequently, so that they can be lively and grow and learn faster. Explain that food should be set aside from the meal specially for the child, and that the child should eat snacks.

Show mothers the Three Food Groups picture, table with snacks on it, and stools representing the Three Food Groups.

As in the morning's lesson, ask the mothers one by one to put the snacks from the table onto the correct stool, representing the correct food group. As above, pick snacks from each group and ask the mothers for complementary snacks from the other groups. Explain again that snacks do not have to be balanced by food group at every meal, but that the food eaten

*Fig. 3, p. 2 - 36

during the whole day should contain foods from each group.

Evaluation

As previously, trainees visit homes during week and ask about mothers' use of snack foods.

Lesson 7 Content

Use of Local Snack Foods to Feed Young Children More Frequently

Young children up to the school age need to eat more often than adults because their stomachs are small and they are always running about. It has been said that the young child should be like the baby chicken, always pecking at food.

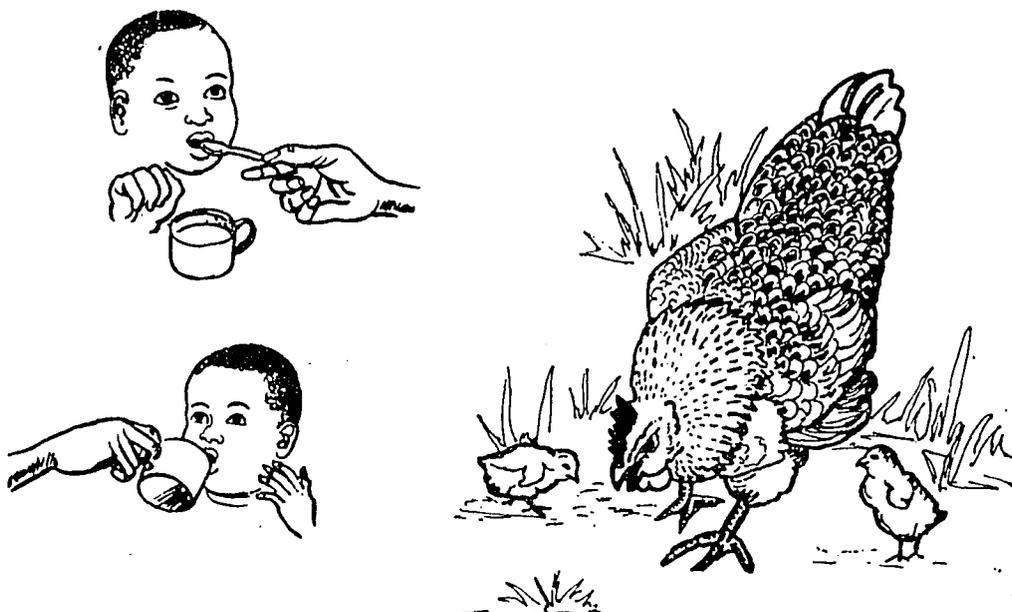


Figure 3: Well Nourished Child and Chicken

It is good for the child to play actively, running up and down, because this exercise develops the body and the mind. The young child who has plenty to eat is lively. The child who does not eat enough sits quietly.

In the last lesson we explained that the young child should eat about five times a day. This may cause problems for the mother because most mothers do not have time to cook more than twice a day. In many

families it is only possible to cook once a day. The grown persons in the family also may have the habit of eating only twice a day, or even once a day in some cases. Some families may think they should train the young child to eat only twice a day. This is not a good idea. They may be successful in training the child, but the young child's growth will suffer. Eating twice a day is a lesson that can be learned later, after the child is bigger and stronger.

One way that the mother can feed the child more often without cooking is to save some food in a special place for the child (on a covered plate or wrapped in banana leaf) after every meal and offer it to the child about two hours later. This food should not be kept for more than half a day after cooking or it may make the child sick, but after two or three hours it still will be fresh.

Another way of feeding the child more often without cooking is to give snack foods between meals. These foods may either be (1) from the family farm, (2) gathered wild, or (3) bought at the market or from a trader or vendor.

Fresh fruits such as orange, banana, mango, and pawpaw, are excellent snack foods for the young child. Many of the protective fruits, in Food Group Three, are common snack foods. Some of these

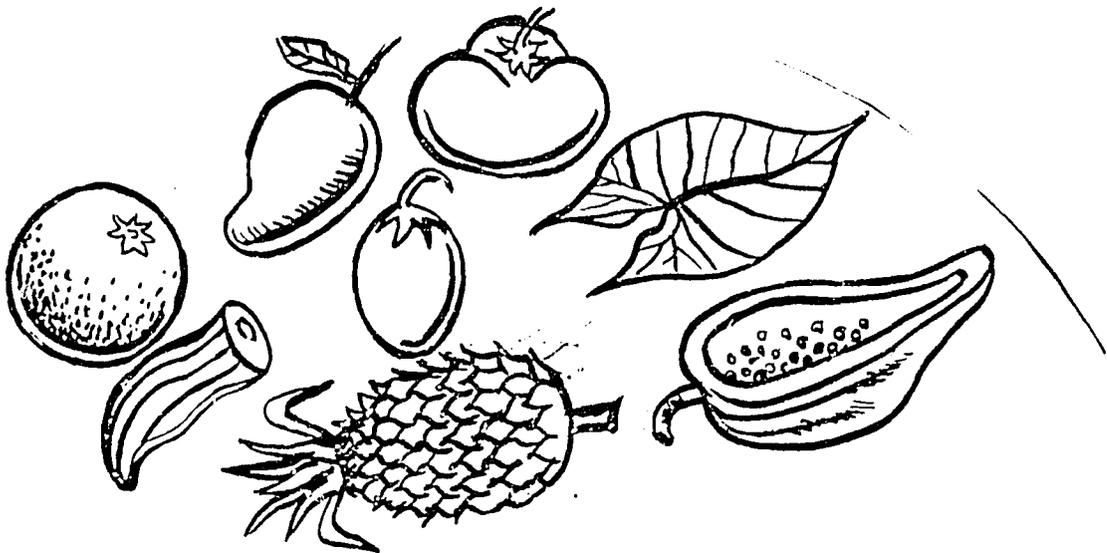


Fig. 4 Protective Foods

snacks are bush fruits that the children pick wild when they are in season. The mother can ask the older children to gather enough of these fruits to share with the very little children. But she must be careful that they are soft enough for the little ones to eat.

Special care should be taken in peeling fruits for very young children. The skin should be peeled or cut from the fruit immediately before eating, so that flies and dirt do not get onto the fruit before the baby eats it. If the fruit has been cut for some time, then the outside should be cut off again before giving it to the baby.

Fried snacks, such as fried plantain or dough balls give the young child extra energy. Fried rings of peanut cake, made after pressing the peanut oil, are a good growth food and are often sold in Northern Ghana. The other fried foods belong to Food Group One, the energy foods. If the young child eats much of them, the mother should try to also offer her some growth food to balance the meal. This could be roasted groundnuts or a small amount of fried fish or smoked fish.

(To complete the content of the rest of this lesson the instructor should make a list of all of the snack foods commonly eaten in the local villages and should write the names of these foods into the empty Three Food Groups picture .* The instructor must think of the ways in which these snacks can be used in feeding children, so that the children receive a balanced diet from all three groups.)

*Fig. 5, p. 2 - 38a

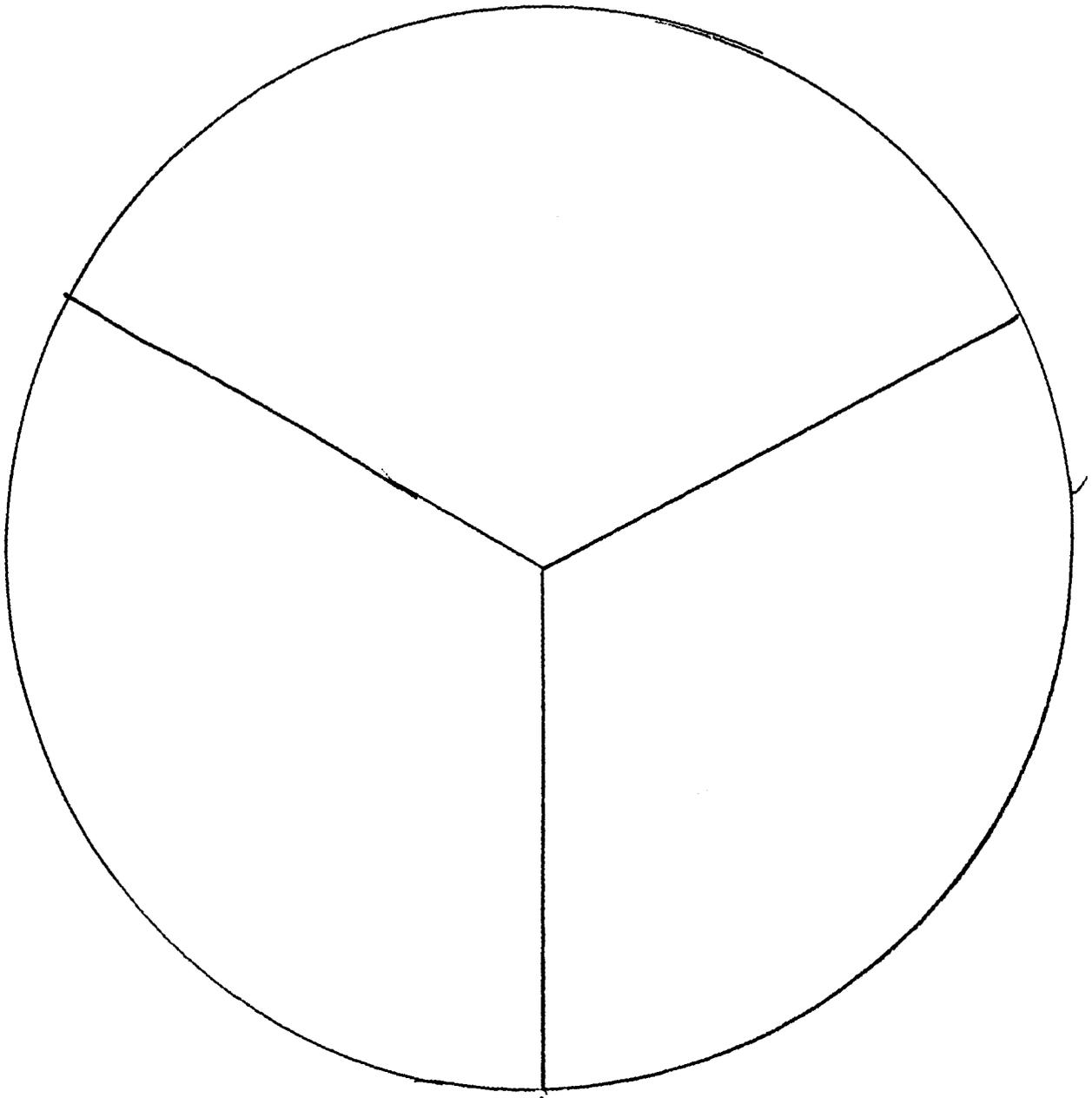


figure 5: Three Food Groups

LESSON 8

Performance Objective: Interview the mother to learn how she is feeding her baby and give correct advice based on the previous lessons.

Preparation: Decide whether to bring the mothers to a central location or visit them at home. Prepare the mothers one way or the other. Prepare the VDC chairman or chief for a farewell visit.

Morning Session

Location: Instructor and trainees privately in village clinic, school, leader's house or outdoor location where they will not be disturbed.

Time: Two hours.

ActivitiesApproach

Pretest	Ask the trainees how they would find out from a mother whether she was feeding her baby properly.
Lecture	Explain the five steps in interviewing the mother and giving correct advice. Tell the trainees that the instructor will demonstrate these steps with one mother, and that after this demonstration each trainee will have the chance to go through them individually with one of the village mothers, while the instructor and the other trainees observe and help if necessary. The instructor must be ready to provide assistance to the second and third interviews, and then gradually reduce this assistance during the course of the day as the trainees understand more clearly how to conduct the interview and advice session by themselves.
Demonstration and practice	During the remainder of the day, the instructor and the trainees interview and advise the mothers one by one. If possible they visit each mother's home. At the end of each interview the mother should have the opportunity to ask questions and the class should say farewell to this mother and thank her for her participation in the training program.

Farewells to
VDC chairman
or chief

When the visits have been completed, the group should visit the VDC chairman or chief to say farewell, if this can be arranged appropriately. It may even be possible to arrange a goodbye party for the training class and the villagers. This should depend on the professional judgement of the training staff. In any case, every effort should be made to make the village feel happy that they have participated in the training course.

Lesson 8 Content

How to Interview the Mother to Find Out About
The Baby's Diet and to Give Correct Advice
Based on the Messages Learned in this Unit

When a mother comes to the community health worker with a sick child, or a malnourished child, or a child that refuses to eat properly, the community health worker must know how to advise the mother properly. The first step is to discover the exact nature of the problem. Unless the community health worker knows what the child is eating now, she cannot advise the mother how she should change the way in which she is feeding him.

The best way of understanding the child's eating problems is to conduct a twenty-four hour dietary recall. This is done by asking the mother to tell us everything that she fed the child starting from the moment when the child woke up yesterday morning until the child went to sleep last night.

The community health worker should go through the following procedure:

- (1) Ask how old the child is.
- (2) Use the arm strip to see whether the child falls into the red. If yes, the child is malnourished. If no, the problem is not so serious.
- (3) Ask the mother:

"Please tell me what did you give the baby to eat yesterday morning, when he first woke up? (mother answers) What was

the next time you fed her and what did she eat? (mother answers) How much did she take? (mother answers) After that, what was the next time you fed her and what did she eat? (mother answers) How much did she take?" (mother answers)

These questions should continue until the time when the child went to sleep at night. Then the community health worker should ask, "How many times did the baby wake up to breast-feed in the night?"

- (4) Analyze the feeding problem. In order to do this, the community health worker must decide whether the baby is eating the correct foods for its age in the correct amounts the correct number of times a day. The community health worker may wish to ask more questions, such as, "During your meal did you try to give the baby some of the beans?" or, "Did you stop giving the baby some foods because she was sick?"
- (5) Give the mother correct advice. This must be done very tactfully so that the mother does not become annoyed. The advice also must consider the mother's economic position. Often the best way to give the advice is in the form of the question. Ask the mother, "Can you add some pounded dried fish to the baby's pap?" If she says no, then you must look for another solution. At the same time, the advice must be firm.

There are two situations in which the community health worker may find it difficult to give advice. The first is in the case of a well nourished child that is not eating properly. This may be a baby whose mother is fortunate to have plenty of breast milk, or it may be a baby that is normal but would be even bigger and stronger if it ate better food. In such a case, the community health worker should still teach the mother how to improve the baby's diet and explain that this improvement will make the child even stronger and healthier. The second is the case of a very malnourished child that doesn't seem to improve even though the mother is trying to give it a correct diet. This baby may be suffering from an illness that has not been discovered. If possible, the community health worker should refer the child to the hospital or health center for a checkup. If this is not possible, she should try to ask the mother to increase the amount of stew ingredients used in making the pap.

The best way to learn how to conduct the twenty-four hour recall is by practice and example. This is why almost the entire lesson in

Lesson 8 is spent teaching the trainees individually to interview mothers and give correct advice. It is better to conduct this practice through home visits because it is then not necessary to keep the whole group of mothers waiting while each is interviewed. The mother's privacy is protected, and she also can show the cooking facilities and the food that she has available to her in the house. If the interview is not in the house, she will be more likely to try to please the interviewer by saying that she gave the baby foods that she does not have available.