

## 1. Key Feeding Indicators

Table 10. Ideal breastfeeding and complementary feeding practices

Ideal Practice		n	%
1.	That all infants are breastfed for the first time within the first hour after birth	60 <sup>a/</sup>	54
2.	That all infants are not fed with pre-lacteals	16	14
3.	That all infants are fed colostrum	109	99
4.	That all infants and young children are breastfed on demand, during the day and night	101	97
5.	That all infants are exclusively breastfed until 6 months of age	24	22
6.	That no children are weaned before 24 months of age	6	5
7.	That all infants are fed semi-solid complementary foods beginning at 6 months of age	64 <sup>b/</sup>	71
8.	That all infants and young children meet their recommended daily energy requirements	38 <sup>c/</sup>	46.3
9.	That all infants and young children are supported and motivated to eat to satiety during meal times	106	96

<sup>a/</sup> total N= 110

<sup>b/</sup> total N= 90

<sup>c/</sup> total N= 82

## 2. Key Practices

Mothers' knowledge of child rearing is greatly manifested in their children's over-all health. Information regarding breastfeeding and complementary feeding practices are crucial to understanding the mothers' approach towards their child's growth and development. Tables 10 and 11 present the number of mothers by selected key infant and young child feeding practices by province.

### BREASTFEEDING PRACTICES

Breastfeeding is almost universal among the interviewed mothers. Ninety four percent (94%) of the respondents are currently breastfeeding. A minimal percentage (6%) of the mothers reported to have stopped breastfeeding. Two (2) out of six (6) mothers discontinued breastfeeding as early as less than 1 month to 3 months of age. However, four (4) mothers stopped breastfeeding at the later age of their children (i.e., at 12 to 19 months of age). The stated reasons for discontinuing breastfeeding are: feelings of discomfort because of onset of pregnancy, child refused to breastfeed or child gets sick because of breast milk.

#### Exclusive Breastfeeding

Among the mothers with children ages 0-5 months old, exclusive breastfeeding is widely practiced by most mothers (n=20) of children in this age group. One child, however, was reported to have given water by the mother. The explanation was that, the child was having hiccups. The mother admitted that water is given only (thru the mother's fingers) when the infant is having hiccups or

when the mother thinks that her child has something in the throat that needs to be cleaned. Although water was not given on a regular basis or as a replacement for breastmilk, it was recommended to the mother the importance of just giving breastmilk and that, extra water is not needed by the infant.

In general, the breastfeeding pattern is quite favourable for all the children in the study. Apparently, exclusive breastfeeding is religiously observed by most of the mothers whose children are less than 6 months old. Interestingly, a previous study of UNICEF (from 1995-2003 data) showed that only 12% of children in this age group are exclusively breastfed in Cambodia.

### *Breastfeeding Initiation*

Breastfeeding initiation should start immediately after birth or within an hour after giving birth. This recommendation is being promoted extensively across all nations where malnutrition exists. However, due to several constraints that vary according to physiological and cultural beliefs, most mothers in different regions still do not practice the ideal breastfeeding initiation.

In this study, more than 50% of the respondents replied that they started breastfeeding their child for the first time immediately after birth or within one hour. However, fifteen respondents (15 or 13.6%) stated that they practiced breastfeeding after 24 hours to up to 3 days of giving birth. Some claimed that no breast milk comes out after giving birth or breast milk flows only after 2-3 days of giving birth. On the other hand, nearly all of the mothers interviewed (99%) claimed that they have given the colostrum to their newborn. This indicates that mothers are aware of the importance of giving colostrum to their child.

Breast milk remains as the first liquid that was consumed by the child after birth as claimed by 85% of the respondents. Water mixed with sugar or honey is a common alternative when breast milk is not given immediately after birth.

### *Frequency and Time of breastfeeding*

Breastfeeding comes naturally for mothers when a child expresses hunger. The normal reaction of a mother is to put her child on her breast when the child cries or expresses wanting breast milk. Breastfeeding is initiated by about 97.2% of the mothers when their child wants it, while only 2.88% feed their children on a fixed schedule. Mothers seldom follow a schedule when to breastfeed. It is only when children cry or are put to sleep that the mothers give breast milk.

On average, most of the mothers feed their children 8-12 times for the whole day. About 38% and 68% expressed that they feed their children about 4-6 times during the day and night, respectively. Frequency of breastfeeding is higher during the day than during the night. This may be because there is longer sleeping time for the children at night when they do not need to be fed than during the day.

Table 11. Breastfeeding Practices

Variable	All subjects <sup>a/</sup>		Provinces <sup>b/</sup>				
	n	%	Kratie	Stung Treng	Prey Veng	Kampot	Battambang
<b>Currently breastfeeding</b>							
Yes	104	94.55	20	22	21	21	20
No	6	5.45	2	0	1	1	2
Total number subjects (n)	110	-	22	22	22	22	22
<b>Children who are exclusively being breastfed</b>							
	24	100.0	3	5	6	4	6
Total number subjects (n)	24						
<b>When mother breast feeds</b>							
When the child asks/wants	101	97.12	19	22	20	21	19
Fixed schedule	3	2.88	1	0	1	0	1
Total number subjects (n)	104	-	20	22	21	21	20
<b>No. of times the child is breastfed during the day</b>							
1- 3 times	2	1.92	1	0	1	0	0
4- 6 times	40	38.46	10	8	11	6	5
7- 9 times	38	36.54	6	10	3	13	6
10 – more times	24	23.08	3	4	6	2	9
Total number subjects (n)	104	-	20	22	21	21	20
<b>No. of times the child is breastfed during the night</b>							
1- 3 times	17	16.35	2	5	7	3	0
4- 6 times	67	64.42	17	13	12	10	15
7- 9 times	15	14.42	1	4	2	7	1
10 – more times	5	4.81	0	0	0	1	4
Total number subjects (n)	104	-	20	22	21	21	20
<b>No. of hours after birth that the child was breastfed for the first time</b>							
< 1 hour after birth	60	54.55	8	17	12	17	6
1 to 3 hours after birth	24	21.82	6	4	7	5	2
> 3 hours after birth	11	10.00	7	0	1	0	3
After 24 hours (after 1 day)	7	6.36	1	0	1	0	5
After 48 hours (after 2 days)	7	6.36	0	0	1	0	6
After 72 hours (after 3 days)	1	0.91	0	1	0	0	0
Total number subjects (n)	110	-	22	22	22	22	22
<b>First liquid consumed by the child after birth</b>							
Breast milk	94	85.45	16	21	20	22	15
Water	2	1.82	1	0	0	0	1
Water with sugar	9	8.18	5	1	1	0	2
Boiled water with honey	2	1.82	0	0	0	0	2
Pure honey	1	0.91	0	0	0	0	1
Milk powder	1	0.91	0	0	0	0	1
Liquid part of bobor	1	0.91	0	0	1	0	0
Total number subjects (n)	110	-	22	22	22	22	22

Fed colostrum							
Yes	109	99.09	22	22	22	22	21
No	1	0.91	0	0	0	0	1
Total number subjects (n)	110	-	22	22	22	22	22
Giving bottle-feeding							
Yes	6	6.67	2	1	1	1	1
No	84	93.33	16	17	17	17	17
Total number subjects (n)	90	-	18	18	18	18	18

Table 11a. Breastfeeding Practices

Variable	All subjects <sup>a/</sup>		Provinces <sup>b/</sup>				
	n	%	Kratie	Stung Treng	Prey Veng	Kampot	Battambang
Age in months that the child stopped breastfeeding <sup>c/</sup>							
Less than one month	1	16.67	0	-	1	0	0
3 months	1	16.67	0	-	0	1	0
12 months	1	16.67	1	-	0	0	0
16 months	1	16.67	0	-	0	0	1
17 months	1	16.67	0	-	0	0	1
19 months	1	16.67	1	-	0	0	0
Total number subjects (n)	6	-	2	-	1	1	2
Reasons for stopping breastfeeding							
Child refused to breast milk and started to lose weight	1	16.67	0	-	1	0	0
Has feeling of discomfort because mother is pregnant	3	50.00	1	-	0	0	2
Child gets sick when being breastfed	2	33.33	1	-	0	1	0
Total number subjects (n)	6	-	2	-	1	1	2

<sup>a/</sup> Results expressed as frequencies and percent of group

<sup>b/</sup> Results expressed as frequencies

<sup>c/</sup> Children not currently breastfeeding

## COMPLEMENTARY FEEDING PRACTICES

The introduction of liquids and solid foods occurs when the child is 6 months old, according to two in three respondents (66.7%) (Table 12). Mothers remain as the most important decision maker when it comes to what foods to give or not to give their child. As shown in Table 8a, 87% of the respondents claimed that they are those who decide on what to feed their child.

### Introduction of liquids and solid foods

The introduction of liquid or any solid foods at the age of six months is practiced by most of the respondents (Table 11). Sixty-six percent (66%) and seventy-four percent (74%) claimed that liquids and solids, respectively, were introduced when the child is 6 months old. Among the liquids, water is the most common alternative in replacement of breastmilk. The introduction of

other liquids such as formula milk, coconut water and soya bean is very minimal. Spoon is the most common utensil that was used to give the first liquid as claimed by eighty-percent (80%) of the respondents. Cup, glass, and bowl were used by a minimal number of mothers to give the first liquid to their child. Interestingly, mother's fingers were also used to give the first liquid and it was practiced by only a small percentage of the mothers. The use of bottle for feeding is not widely practiced among the respondents.

Likewise, most of the respondents introduced solid foods at the age of 6 months. Almost 75% of the respondents claimed to have introduced solids at this age. However, 16% claimed to have introduced solid foods earlier than 6 months. The reason for this is not clear though some mothers in the rural areas believed that they can introduce solids even before 6 months. Most of the solid foods introduced are rice-based. *Bobor* (a local porridge), plain or mixed with other foods, is the most common food that is widely introduced among the young children. Almost 60% of the respondents claimed to have given *bobor* as the first solid food that was introduced. In the villages, it is the easiest to prepare and is readily available in the local markets.

Table 12. Child Feeding Practices

Variable	All subjects <sup>a/</sup>		Provinces <sup>b/</sup>				
	n	%	Kratie	Stung Treng	Prey Veng	Kampot	Battambang
Age that the child was given liquids other than breast milk for the first time (months)							
Less than one month	4	4.44	0	0	1	1	2
1	2	2.22	0	0	0	0	2
2	1	1.11	0	0	0	0	1
3	4	4.44	0	1	3	0	0
4	3	3.33	0	1	1	0	1
5	10	11.11	3	1	0	1	5
6	60	66.67	12	14	12	16	6
7	3	3.33	3	0	0	0	0
8	1	1.11	0	1	0	0	0
Does not know	2	2.22	0	0	1	0	1
Total number subjects (n)	90	-	18	18	18	18	18
First liquid other than breast milk that was given to the child on a regular basis							
Water	83	92.22	16	17	15	17	18
Formula Milk	2	2.22	0	0	1	1	0
Coconut Water	2	2.22	1	1	0	0	0
Soya bean	1	1.11	1	0	0	0	0
Water with sugar	2	2.22	0	0	2	0	0
Total number subjects (n)	90	-	18	18	18	18	18
Utensil that was used to give the first liquid							
Spoon	72	80.00	16	16	13	14	13
Bottle	4	4.44	1	0	1	1	1
Cup	5	5.56	0	2	1	2	0
Glass	3	3.33	1	0	0	1	1
Bowl	3	3.33	0	0	2	0	1
Mother's hands	3	3.33	0	0	1	0	2
Total number subjects (n)	90	-	18	18	18	18	18

<sup>a/</sup> Results expressed as frequencies and percent of group

<sup>b/</sup> Results expressed as frequencies

Table 12a. Child Feeding Practices

Variable	All subjects <sup>a/</sup>		Provinces <sup>b/</sup>				
	n	%	Kratie	Stung Treng	Prey Veng	Kampot	Battambang

Age that the child was given the first solid or semi-food

< 5 months	14	16.09	2	0	2	1	9
6 months	65	74.71	12	13	16	17	7
7 months	4	4.60	3	1	0	0	0
8 months	3	3.45	2	1	0	0	0
Does not remember/know	1	1.15	0	0	0	0	1
Total number subjects (n)	87	-	19	15	18	18	17

First food or preparation that was given to the child

Plain bobor	52	100.00	11	10	11	12	8
Bobor bought from the market	7	13.46	2	1	2	1	1
Bobor mixed with other foods	20	38.46	6	3	3	5	3
Banana	4	7.69	0	0	0	0	4
Rice with broth and salt	3	5.77	0	1	1	0	1
Cake	1	1.92	0	0	1	0	0
Total number subjects (n)	87	-	19	15	18	18	17

Person who decides what the child should and should not eat/drink

Mother	96	87.27	15	17	22	20	22
Father	1	0.91	0	1	0	0	0
Female relative	5	4.55	4	1	0	0	0
TBA/health village volunteer	5	4.55	2	1	0	2	0
Doctor/health personnel in the hospital	3	2.73	1	2	0	0	0
Total number subjects (n)	110	-	22	22	22	22	22

Child's appetite when healthy

Eats/breastfeeds too much	69	62.73	14	15	14	15	11
Eats/breastfeeds well	14	12.73	3	2	0	5	4
Eats/breastfeeds a little	3	2.73	2	0	0	1	0
Breastfeeds more/eat a little	18	16.36	0	4	7	1	6
Breastfeeds less/eat more	6	5.45	3	1	1	0	1
Total number subjects (n)	110	-	22	22	22	22	22

<sup>a/</sup> Results expressed as frequencies and percent of group

<sup>b/</sup> Results expressed as frequencies

### 3. Maternal Beliefs and Practices on Child's Appetite

Maternal beliefs about child's appetite are essential in understanding why certain feeding practices are being followed. Deriving these beliefs in this study has been undertaken by asking the mothers their practices under varying conditions of their children's health. Table 13 shows some maternal beliefs regarding child's appetite.

#### APPETITE WHEN HEALTHY

Among healthy individuals, it is more likely that appetite is better. Among the respondents interviewed, more than 50% of the mothers believed that children have more appetite when healthy. Sixty two percent (62%) of the mothers reported that their children eat or breastfeed more when healthy and 12% breastfeeds or eat just enough. A small percentage (2.7%) of the mothers replied that their children eat or breastfeed a little even when healthy.

#### APPETITE WHEN SICK

Children tend to become fussy when they are sick or not feeling well. Among the mothers interviewed, about 36% believe that their children eat or breastfeed less when they are sick. In this delicate situation, the mother motivates the child to eat by playing or provides verbal support and prepares special food for the child. On the other hand, forty percent (40%) of the mothers believed that food intake is less when their child is sick so they resort to breastfeeding. It is very seldom that the mothers bring their sick child to the doctor (7%) or does not do anything about the situation (1%).

Among the mothers interviewed, about 15% believe that appetite is not a problem when their child is sick.

#### INTAKE OF BREASTMILK, LIQUIDS AND SOLID FOODS WHEN SICK

The intake of breastmilk is higher when the child is sick. This may be because breastmilk is easier for the child to ingest in situations when they are not feeling well. Moreover, breastfeeding provides a sense of security for a sick child or simply, the appetite is really low. The intake of water and other fluids is the same for more than 40% of the mothers. The amount of being the "same" is not however, clearly defined.

The ingestion of anything solid is most difficult for the sick child. Seventy-nine percent (79%) of the mothers believe that their child's intake of *bobor* or soft foods is lesser when their child is sick. Similarly, 58% of the mothers reported that their child's intake of solid foods is less when their child is sick.

Table 13. Feeding Practices when Child is Sick

Variable	All subjects <sup>a/</sup>		Provinces <sup>b/</sup>				
	n	%	Kratie	Stung Treng	Prey Veng	Kampot	Battambang
Is appetite a problem when the child is sick? What do you do about it? <sup>c/</sup>							
Appetite is not a problem when the child is sick.	17	15.04	1	1	1	6	8
Child's appetite is the same							

Child eats/breastfeeds less or none at all when sick. The mother motivates the child to eat by playing and verbally encourages the child or prepare a special food for the child	41	36.28	10	6	7	11	7
Child eats a little or none at all when sick, mother resort to frequent breastfeeding	46	40.71	11	11	12	5	7
Child refuses to eat or breastfeed. Mother gives medicine or bring to the doctor	8	7.08	0	4	2	0	2
Child eats/breastfeeds a little when sick. Mother does not do anything	1	0.88	0	0	0	1	0
Total number subjects (n)	113	-	22	22	22	23	24

How is child's intake of BREASTMILK when sick? <sup>d/</sup>

Less	34	30.91	6	10	10	3	5
Same	28	25.45	3	5	5	7	8
More	42	38.18	11	7	7	10	7
Total number subjects (n)	104	-	20	22	22	20	20

How is child's intake of WATER AND FLUIDS when sick? <sup>d/</sup>

Less	28	31.11	9	2	8	6	3
Same	38	42.22	4	9	4	10	11
More	24	26.67	7	5	6	2	4
Total number subjects (n)	90	-	20	16	18	18	18

How is child's intake of BOBOR AND SOFT FOODS when sick? <sup>d/</sup>

Less	57	79.17	9	12	15	12	9
Same	14	19.44	3	1	0	5	5
More	1	1.39	0	0	1	0	0
Total number subjects (n)	72	-	12	13	16	17	14

<sup>a/</sup> Results expressed as frequencies and percent of group

<sup>b/</sup> Results expressed as frequencies

<sup>c/</sup> Multiple responses

<sup>d/</sup> Total n varies as there are mothers who do not give the type of food being asked or mother does not answer

## FEEDING BEHAVIOURS OF MOTHERS

There are certain factors that contribute to the child's eating pattern or behaviour (Table 13a). The attitude of the mother usually is the most important factor when it comes to training the child to eat properly at an early stage of life. The emotional care coming from the mother can be considered as the most influential factor valuable to a child's growth.

### Motivational Support

It is interesting to know that more than 60% of the mothers provide motivation in the form of gestures, games or verbal encouragement when their child stops eating. Breastfeeding appears to be an alternative when mothers think their children did not eat enough. About 22% of the mothers



resort to breastfeeding when their children stop eating when in fact, they are still hungry. A small percentage (3%) does not do anything to motivate their child to eat.

### Schedule of Feeding

Most of the mothers do not have a fixed schedule of feeding their children. Children will have to express hunger before the mothers would decide to feed them. Crying is possibly the most natural way of asking food by the young children. Seventy-nine (79%) percent of the respondents decide to feed their children when they cry or express hunger with gestures like pointing to the kitchen or pots to get some foods. Eight percent (8%) of the mothers replied the same when their children ask for food or attempts to grab the food or breast of the mother.

On the other hand, about 11% of the mothers feed their children on a scheduled basis. These mothers feed their children on time for each meal.

Table 13a. Feeding Practices when Child is Sick

Variable	All subjects <sup>a/</sup>		Provinces <sup>b/</sup>				
	n	%	Kratie	Stung Treng	Prey Veng	Kampot	Battambang
How is child's intake of SOLID FOODS when sick? <sup>a/</sup>							
Less	41	58.57	9	5	11	10	6
Same	6	8.57	1	0	0	2	3
Total number subjects (n)	47	-	10	5	11	12	9
If your child stops eating and, and you think she is still hungry or did not eat enough, what do you do? <sup>a/</sup>							
Motivate the child (with gestures, games, words)	77	68.14	13	17	14	18	15
Does not motivate the child	4	3.54	1	1	1	1	0
Does not apply (does not give solid foods)	2	1.77	1	1	0	0	0
Breastfeed the child more	25	22.12	5	3	8	2	7
Give the child other food	3	2.65	1	0	1	0	1
Go to the doctor	1	0.88	0	0	0	1	0
No reply	1	0.88	1	0	0	0	0
Total number subjects (n)	113	-	22	22	24	22	23
How do you decide when to feed your child?							
When the child cries and points to the kitchen or the plates and pots or look for the mother's breasts	87	79.09	12	19	22	19	15
Child is fed on a scheduled habit	13	11.82	7	0	0	1	5
When the child asks for food or attempts to grab a food or the mother's breasts	9	8.18	2	3	0	2	2
No reply	1	0.91	1	0	0	0	0
Total number subjects (n)	110	-	22	22	22	22	22

<sup>a/</sup> Results expressed as frequencies and percent of group

<sup>b/</sup> Results expressed as frequencies

- 2/ Total n varies as there are mothers who do not give the type of food being asked or mother does not answer  
 2/ Multiple responses

## MOTHERS' CONTROL OF THE FEEDING SITUATION

Young children's behaviour towards feeding is often difficult to understand. The ability of the mother to control the situation is important to gain a fuller understanding of why the young children behave in such ways.

When the mothers were asked how they know when their child has had enough to eat, 48% replied that their child has had enough when the child stops eating or spits out the food (Table 13b). Breastfeeding children, on the other hand, stop sucking or push the breasts away according to 27% of the mothers. Children also display certain behaviours when they are full. The mothers noted that their children have had enough when they ask for water (10%) and start to play or does not cry (11%).

In situations when children do not have appetite or refuse to eat, 59% of the mothers provide motivation to their children by giving toys or playing with them. The mothers also resort to breastfeeding (25%) to compensate for the inadequate intake of solid foods. Interestingly, 14% of them do not force their children to eat. Rather, they wait for the time when the children will be hungry again.

Table 13b. Feeding Practices when Child is Sick

Variable	All subjects		Provinces				
	n	%	Kratie	Stung Treng	Prey Veng	Kampot	Battambang
How do you know when (CHILD'S NAME) has had enough to eat?							
when the child stops eating or spits out the food and pushes the food away	53	48.18	14	4	12	11	12
when the child stops sucking or pushes the breasts away	30	27.27	2	12	3	7	6
when the child asks for water	11	10.00	2	3	2	3	1
when the child starts to play and does not cry	13	11.82	3	1	5	1	3
the child tells the mother that he/she is full	2	1.82	0	2	0	0	0
No reply	1	0.91	1	0	0	0	0
Total number subjects (n)	110	-	22	22	22	22	22
If the child refuses to eat - either spits, vomits, or has no appetite - what can be done in these situations? What do you do to improve appetite?							
Mother verbally encourages the child or motivates the child by giving toys or playing with her or luring the child to eat	65	59.09	14	12	14	11	14
Mother breastfeeds the child instead or give other	28	25.45	5	8	6	5	4

foods to the child							
Mother does not force the child to eat/does not do anything but to wait for the child to get hungry again	16	14.55	2	2	2	6	4
No answer	1	0.91	1	0	0	0	0
Total number subjects (n)	110	-	22	22	22	22	22

## BELIEFS ABOUT FUSSY EATERS

Young children are often difficult to feed. The underlying reasons are sometimes not understood by the caregivers simply because young children cannot communicate verbally yet. Mothers were asked on their perceptions about why some children are fussy eaters. Interestingly, most of the responses imply that such behaviour of children is also brought on by the mother's attitude towards feeding.

A large percentage of the mothers (40%) believe that children become fussy eaters because the foods being served are not delicious. Similarly, 24% thinks that some children are being breastfed too much hence, appetite to eat is lessened (Table 13c). This finding implies that breastmilk is indeed an alternative to solid foods when young children do not eat much.

In addition, mothers think that when children are sick, they tend to become fussy eaters. Some behaviours of the children such as eating a lot of snacks outside the home before the main meal, makes it difficult for them to feed. Attitudes of the mothers such as giving foods that are too solid and cannot be eaten by the child, lack of motivation or too busy to prepare food makes the child used to being not fed hence, they tend to become fussy.

Table 13c. Feeding Practices when Child is Sick

Variable	All subjects <sup>a/</sup>		Provinces <sup>b/</sup>				
	n	%	Kratie	Stung Treng	Prey Veng	Kampot	Battambang
In general, can you tell me why some children are fussy eaters? Can these children be changed? <sup>c/</sup>							
Children who are sick, tend to become fussy eaters	6	5.26	5	0	0	0	1
Mothers breastfeeds the child too much, that's why they lose their appetite to eat.	28	24.56	3	5	10	6	4
Children eat a lot of snacks outside the home that's why they become fussy when its time to eat the main meals	5	4.39	2	0	1	0	2
The foods that mothers give to the child are not delicious and same foods are given	46	40.35	7	13	8	13	5
Mothers give foods that are too solid that cannot be eaten by the child	3	2.63	1	1	0	0	1

The mother does not encourage the child to eat or is too busy to prepare food for the child. Children were not used to being fed	8	7.02	2	1	3	0	2
Do not know	18	15.79	2	3	1	3	9
Total number subjects (n)	114	-	22	23	23	22	24

a/ Results expressed as frequencies and percent of group

b/ Results expressed as frequencies

c/ Multiple responses

#### 4. Current Diets of Children

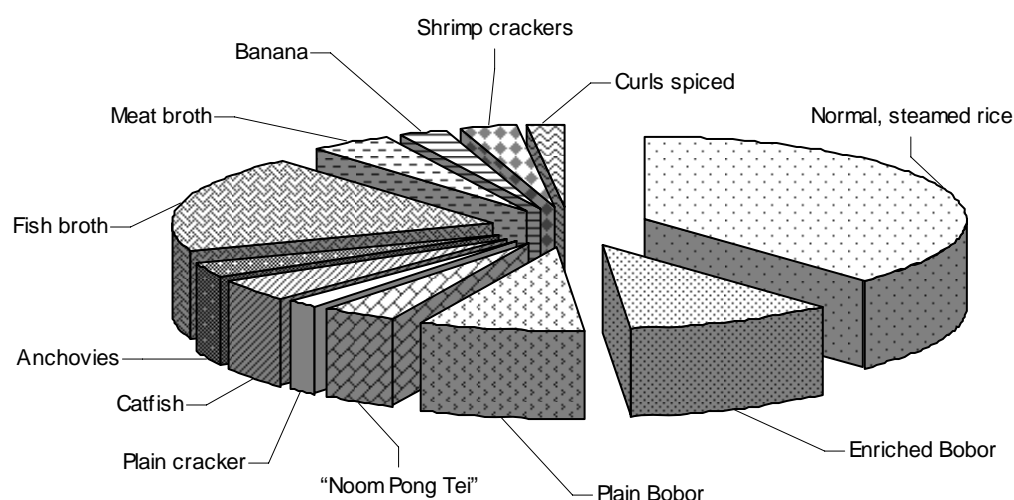
The diets of young children are often inadequate in terms of nutritive value. It is the most critical stage when young children should be given adequate amounts of foods and quality meals to prevent the onset of malnutrition or micronutrient deficiencies.

There are several factors that affect the nutritional status of young children. Aside from the adequacy of diets, the cultural beliefs about certain foods and the availability of foods are also valuable in understanding the diets of children.

##### Most frequently consumed foods

The main meals (i.e. breakfast, lunch and dinner) of the children 6-23 months that are most frequently consumed consist mainly of rice, fish broth and enriched or plain *bobor* (local porridge) (Figure 6). *Bobor* is the most common complementary food that is almost always available in the households. Aside from its easy preparation, it is probably the most affordable or cheapest food that can be given to young children in the rural villages. *Bobor* is always available in the local small restaurants and is generally consumed by most people in the community for breakfast, regardless of age.

**Figure 6. Most frequently consumed foods of 6-23 months old children**



Aside from the local porridge, rice and broth (fish and meat) is fed to young children normally for lunch and dinner. Vegetables such as morning glory and Chinese cabbage are very common in the meals of most of the households in the villages but are often not fed to young children. Some mothers believe that feeding these vegetables to their children will cause choking. A wide variety of vegetables are available in the selected villages but very limited are prepared for the young children.

Among the fishes, catfish and anchovies are the most common. Catfish is abundant even in the rice paddies and anchovies that are used to make "*prohok*" (fish paste) are also given to young children.

Banana is the most common fruit that is being given to the young children. The snacks commonly fed to young children are the most affordable and available, but are of low caloric and nutrient values. Snack foods such as shrimp cracker and spiced curls are the most common snacks being given to young children. On the other hand, there are also snacks, which are of higher caloric value such as locally made bread with egg ("*Noom pong tei*") and some crackers and biscuits.

### Beliefs about foods

Knowledge and beliefs about which foods are appropriate to give the young children affect children's growth (Engle, 1996). The mothers for this study were asked on certain foods that they perceived as healthy or unhealthy to feed their young children and its effects on those who are sick.

### Healthy Foods

Healthy foods are categorised according to the type of foods mentioned by the respondents ([Annex 5](#)). Based on the responses, the most common foods that the mothers perceived as healthy are also the most abundant in the villages as observed during the fieldwork.

Among the fruits mentioned, banana, papaya and oranges have the highest percentage of respondents (13%, 25% and 18%, respectively) that consider those fruits, which will make the body strong and healthy. This belief is mostly based on own experience and was imparted by the health personnel. In addition, the respondents believe that banana (45%), papaya (24%), and oranges (17%) are good for the sick individuals. On the contrary, a small percentage (1%) believed that papaya would cause stomach ache or diarrhoea when eaten by a sick individual.

Pumpkin (24%), ivy gourd (13%), and morning glory (29%) are among the most mentioned vegetables that the respondents believed are good for the body. Most of the respondents reported to have gathered this information from the health personnel. For the sick individuals, 31%, 19% and 30% believed that pumpkin, ivy gourd and morning glory, respectively, would make the sick individuals become healthy.

Fish, pork, beef, chicken, eggs are among the protein sources that are considered healthy by among 27%, 28%, 11%, 11% of the respondents, respectively. Surprisingly, the respondents based their beliefs on their own experience rather than learning from other people. In addition, most of the respondents believed that these foods will make sick children become stronger.

### Food Taboos

It is very interesting to note that the mothers consider certain foods that are actually healthy for the children, as taboo ([Annex 5](#)). For instance, mothers believed that fruits such as guava, longan and rambutan can cause fever on a child. Tamarind (35%) and mango (12%) are believed to bring

diarrhoea among the young children. Seventeen percent (17%) believed that guava can bring stomach ache to a healthy child. Surprisingly, a small percentage (4%) of the mothers believed that feeding fishes would produce worms among the healthy children. This belief was thought to be very common among the mothers in the villages.

Among the numerous foods mentioned, guava and tamarind appear to be the most avoided foods when a child is sick. Nineteen percent (19%) and 23% of the mothers believed that guava and tamarind, respectively, will make the condition of a sick child worst.

Most of the food taboos mentioned by the mothers were based on their personal experiences rather than having taught or heard from health professionals or other influential people in the family.

#### *Description of Dietary Intakes of 6-23 months old children*

Table 14 summarizes the frequency and percent distribution of the 6-23 months old children who have adequate and non-adequate dietary intakes.

##### *a. Total Energy Intake*

Over all results for energy intake show that more than 50% of the young children did not meet their recommended energy intake. This pattern is the same by age group, where almost 57% and 62% of the 6-11 months and 12-23 months, respectively, did not meet the recommended energy intake.

The mean intake for the 6-11 months old is far below the recommended intake of 615 kcal (6-8 months) and 686 kcal (9-11 months). It is more or less twice lower than the recommended intake. The same is true for the 12-23 months whose mean intake is lower than the recommended intake of 894 kcal. Even with the significantly low energy intakes of the children, surprisingly, it does not reflect in the nutritional status of the subjects where a low rate of malnutrition was recorded.

##### *b. Energy and nutrient density*

The energy density of the diets, in simple terms, tells whether the diet is too liquid. If a child's diet is too watery, s/he will need additional volume to meet the caloric requirement. Surprisingly, a large proportion of the children by age group met the energy density requirement. Meeting the adequacy of energy density depends also on the frequency of meals being served. The acceptable energy density for 6-8 months is 0.71 kcal/g (eating 2 meals per day). For 9-11 months, 0.56 kcal/g (consuming 3 meals per day) and the same requirement is recommended for the 12-23 months if consuming 4 meals per day.

Most of the children in the study met the recommended frequency of meals. This can partially explain the above findings although in real situations, the foods served, especially the bobor, can be said to be watery.

Interestingly, protein density requirement is met 100% by the study subjects. In addition, the percentage of children who met the vitamin C density requirement is also high. It is apparent that the most "problem nutrients" based on this data are Iron, Zinc, Vitamin A and Calcium. This is because the required densities for these nutrients were remarkably less than desired.

### c. Nutrient intake

In terms of nutrient intake, the same “problem nutrients” mentioned above are found to be inadequate in the diets of the study participants. Inadequate intake in these essential nutrients can put the young children at risk of growth retardation. The only nutrients that were met by most of the young children are protein and vitamin C.

The diets are very much low in key nutrients such as iron, zinc and calcium. Adequate amounts of these nutrients can only be met if animal products are consumed in sizeable quantities-levels of intake that are unlikely to be feasible in non-meat-eating communities and poor households (Brown, 1999 Internet source). As such cases, programs on food fortification or supplementation are considered.

Table 14. Frequency and percent distribution of children who met and did not meet the recommended requirements, by energy and nutrient density, nutrient intake, frequency of meals by age group

Energy and Nutrients	Over-all				Age groups							
	Did not meet		Met		6-11 months				12- 23 months			
					Did not meet		Met		Did not meet		Met	
	n	%	n	%	n	%	n	%	n	%	n	%
Children meeting/ not meeting requirements	48	58.5	34	41.5	33	56.9	25	43.1	15	62.5	9	37.5
Mean daily energy intake	345				236				610			
Total n subjects= 82 <sup>a/</sup>												
<u>Energy <sup>b/</sup> and nutrient density <sup>c/</sup></u>												
Energy	5	6.5	72	93.5	5	9.43	48	90.57	0	0.00	24	100.0
Protein	0	0.0	77	100.0	0	0.00	53	100.00	0	0.00	24	100.0
Iron	72	93.5	5	6.5	52	98.11	1	1.89	20	83.33	4	16.67
Zinc	77	100.0	0	0.0	53	100.00	0	0.00	24	100.0	0	0.00
Vitamin A	49	63.6	28	36.4	29	54.72	24	45.28	20	83.33	4	16.67
Vitamin C	17	22.1	60	77.9	0	0.00	53	100.00	17	70.83	7	29.17
Calcium	70	90.9	7	9.1	50	94.34	3	5.66	20	83.33	4	16.67
Total n subjects= 77 <sup>d/</sup>												
<u>Nutrient Intake</u>												
Protein	10	12.2	72	87.8	10	17.2	48	82.80	0	0.0	24	100.00
Iron	74	90.2	8	9.8	56	96.6	2	34.40	18	75.0	6	25.0
Zinc	82	100.0	0	0.0	58	100.0	0	0.00	24	100.0	0	0.00
Vitamin A	56	68.3	26	31.7	38	65.5	20	34.50	18	75.0	6	25.0
Vitamin C	22	26.8	60	73.2	6	10.3	52	89.70	16	66.7	8	33.3
Calcium	75	91.5	7	8.5	56	96.6	2	3.40	19	79.2	5	20.8
Total n subjects=82												
<u>Daily Frequency of meals <sup>e/</sup></u>												
Total n subjects= 82	19	23.2	63	76.8	15	25.9	43	74.10	4	16.7	20	83.3

<sup>a/</sup> Total n ages 6-23 months old with 24-hour food records on the first visit

<sup>b/</sup> Mean energy density is calculated by summing energy intake from all non-breast milk foods and liquids and expressing per 1 gram of foods and liquids consumed.

<sup>c/</sup> Mean nutrient density is calculated by summing nutrient intake from all non-breastmilk foods and liquids consumed and expressing the total per 100 kcals of foods and liquids consumed

<sup>d/</sup> Four (4) subjects belonging to 6-11 months age group had no food intake (only breastfeeding) as recorded in the 24-hour, hence the change in N

<sup>e/</sup> Number of recommended formal meals by age group

## E. TRIALS OF IMPROVED PRACTICES (TIPS): DESCRIPTION OF FEEDING PRACTICES

This section presents results of the TIPS with children 0-23 months of age. Results have been organized by age group and a summary table of the recommendations tested and their outcomes is described for each age group. Within each age group are separate tables for each of the recommendations practiced by the mothers, with a summary analysis of results.

Analysis of the recommendations according to its success is mainly based on the 24- hour food recall obtained during the follow-up visit. The term “partially successful” denotes three conditions encountered during the analysis: a) mother claim to have tried the recommended practice but this was not evident in the 24-hour recall; b) mothers tried but not necessarily everyday, or not necessarily for every meal; c) mothers tried but stopped after an obstacle (e.g., child had diarrhoea or got sick).

### 0-5 months old

Children in this age group had the least feeding problems of all groups. Only three feeding problems were identified in this age group. Results are following:

Table 15. Results of TIPS in children 0-5 months of age (n=20)

	RECOMMENDATION	No. who participated	No. who were successful	No. who were partially successful	No. who were not successful
1.	Use both breasts at each feeding and feed long enough until the breasts feel soft	1	1	0	0
2.	Stop giving the child water	2 <sup>a/</sup>	1	0	0
3.	Stop giving feeds of other foods and liquids	1 <sup>a/</sup>	0	0	0

<sup>a/</sup> One (1) mother lost to follow-up

Table 16. Analysis of TIPS: 0-5 months old

<b>Recommendation No. 1:</b> Use both breasts at each feeding and feed until the breasts feel soft
<p><b>Results:</b> Only one mother was given this recommendation. Mother followed the recommendation as suggested.</p> <p><b>Modifications:</b> None</p> <p><b>Facilitators:</b> Knowing that breastfeeding is good for the baby, the mother was motivated to try it.</p> <p><b>Obstacles:</b> Nothing was mentioned.</p> <p><b>Intention to continue:</b> Mother intends to continue the recommendation.</p> <p><b>Discussion/conclusion:</b> The recommendation was given based on the observation conducted by the interviewer. It was observed that the mother's right breast was larger than the left. The mother was politely asked why and the response was that, it has always been like that. During the interview, however, it was noticed that the mother was not using both breasts to feed the child.</p> <p>Most of the mothers interviewed were observed changing breasts from time to time during breastfeeding. As part of the NNP-MOH's campaign on breastfeeding, this recommendation is already being promoted with emphasis on breastfeeding a longer time on each breast in order for</p>



the child to get the “hind milk” which has a higher concentration of fat than the “foremilk”. This recommendation is feasible for the mothers with children in this age-group, especially since most mothers practice exclusive breastfeeding.

#### **Recommendation No. 2: Stop giving the child water**

**Results:** Two mothers were given this recommendation but one was lost to follow-up.

**Modifications:** One mother followed the recommendation as suggested.

**Facilitators:** According to the mother's observation, the child was sick less often when the mother stopped giving water

**Obstacles:** Nothing was mentioned.

**Intention to continue:** Mother intends to continue the recommendation.

**Discussion/conclusion:** Exclusive breastfeeding in this age group is almost universal. However, there are instances when mothers think that their child's throat needs to be washed with water because of the milk stuck in it. This kind of belief is related to mothers' fears about small babies getting choked. Among breastfeeding mothers, it is important to emphasize that babies do not need water to clean their throat. Although only tried by one mother, this practice appears to be feasible for the mothers to do especially since most children in this age group are predominantly breastfed.

### **6-11 months old**

This age group had the highest number of feeding problems.

Table 17. Results of TIPS in children 6-11 months of age (n=59)

RECOMMENDATION		No. who participated	No. who were successful	No. who were partially successful	No. who were not successful
<b>BREASTFEEDING PRACTICES:</b>					
1.	Use both breasts at each feeding and feed long enough so the breasts feel soft	1	1	0	0
2.	Express breastmilk and have others give to the baby with cup and spoon or just a cup	6 <sup>1</sup>	0	0	2
3.	Breastfeed more frequently when at home and during the night, on demand.	1	1	0	0
<b>COMPLEMENTARY FEEDING PRACTICES:</b>					
<b>Introduction of food</b>					
4.	Start feeding soft foods, such as thick babor or soft steamed rice ( <i>bay cham hoy</i> ) with chopped fish, egg or meat and mashed pumpkin or green vegetable, after breastmilk.	5	5	0	0
<b>Quality of food</b>					

5.	Make bobor with less water so it is thicker, and add mashed fish, egg or chopped meat and pumpkin, and green vegetable, after breastmilk.	13	0	8	5
6.	Add oil to bobor when cooking	8	6	0	2
7.	Add the fish or meat and vegetables to the rice, not just the liquid	19	0	19	0
8.	Add vegetables and meat to the rice at each meal (NEW)	7	0	7	0
<b>Frequency and quantity of meals</b>					
9.	Increase meal frequency until baby is fed 2 times per day (6 months) or 3 times per day (7-12 months)	12			
10.	Gradually increase the amount of food given to baby until the child is eating at least 1/3 of small bowl (or 2-3Tbsps.) per meal (for 6 months)	2			
11.	Gradually increase the amount of food given to baby until the child is eating at least 1/2 of small bowl (for 7-11 months)	22			
<b>Feeding behavior</b>					
12.	Motivate and help your child to finish all his food.	5			

<sup>1</sup> Four (4) mothers failed to try hence, cannot be concluded if successful or not.

Table 18. Analysis of TIPS: 6-11 months old

<b>BREASTFEEDING PRACTICES</b>	
<b>Recommendation No. 1:</b> Use both breasts at each feeding and feed long enough so the breasts feel soft.	
<p><b>Results:</b> One mother whose child was a little more than 6 months of age was given this recommendation. The recommendation was given based on the observation of the interviewer during the household visit when the mother was breastfeeding and only one breast was used. The mother practiced the recommendation.</p> <p><b>Modifications:</b> Not applicable</p> <p><b>Facilitators:</b> The mother thinks that her child looks happier and plays more than usual when fed to fullness.</p> <p><b>Obstacles:</b> None mentioned.</p> <p><b>Intention to continue:</b> Mother intends to continue the recommendation.</p> <p><b>Discussion/conclusion:</b> same as in Recommendation No. 1 of the 0-5 months age group</p>	
<b>Recommendation No. 2:</b> Express breast milk and have others give to baby with cup and spoon or just a cup	
<p><b>Results:</b> Six mothers were given this recommendation. Four of the six mothers did not try the recommendation. Of the four who did not try, 3 mentioned that they did not leave the house for long hours while one mother who is a teacher, asked the caregiver of her son to bring the child to school and she breastfed him there. Only two mothers tried the recommendation but were unsuccessful. They tried expressing their milk but said that none came out</p>	

**Modifications:** None

**Facilitators:** None

**Obstacles:** Two mothers claimed they did not have enough milk to express and leave for their children after breastfeeding in the morning. One of the mothers also thinks that her child is too small to be fed breast milk using a cup or spoon.

**Intention to continue:** Despite not trying, the 4 mothers who did not try still intend to try and continue the practice if necessary. However, one of the two mothers who tried is not willing to continue the practice because she thinks she does not have enough milk to express after breastfeeding her child in the morning.

**Discussion/conclusion:** Based on these results, it can be said that this recommendation is not feasible. It is possible that mothers need more education and support on how to express their milk properly and to overcome their belief that they do not have enough milk to express and leave for their children when they leave the house.

**Recommendation No. 3:** Breastfeed more frequently when at home and during the night, on demand.

**Results:** Only one mother was given this recommendation and she tried it.

**Modifications:** None

**Facilitators:** The mother wanted to feed the child until full. She believed that the more she breastfeeds, the more milk she will produce.

**Obstacles:** None mentioned

**Intention to continue:** Mother intends to continue the recommendation.

**Discussion/conclusion:** Though only one mother tried the recommendation, it is possible for the mothers to feed their children on demand.

## COMPLEMENTARY FEEDING PRACTICES

### Introduction of food

**Recommendation No. 4:** Start feeding soft foods, such as thick *bobor* or soft steamed rice (*bay cham hoy*) with chopped fish, egg or meat and mashed pumpkin or green vegetable, after breastmilk.

**Results:** This recommendation was given to mothers whose children were already 6 months or more and had not given complementary foods yet or had started giving them but lacked variety. Five (5) mothers were given this recommendation and all of them tried it. The mothers started feeding their children with *bobor* and rice with broth or fish. Specifically, the following results were obtained during the follow-up visit as reflected in the 24-hour recall:

M1: plain *bobor* and grilled fish, rice and broth of water lily soup

M2: *bobor* with fish

M3: rice and grilled fish, rice with salt

M4: plain *bobor*

M5: *bobor* with pork, egg, carrots and ivy gourd

**Modifications:** No modifications were done. Mothers started giving complementary foods aside from breast milk.

**Facilitators:** The motivating force that made the mothers continue the recommendation once they started giving complementary foods was their assessment of their children's behaviour. Three (3) of the mothers said that their children seemed to be happier, more active, and slept well after giving them complementary foods. Mothers expressed that ingredients such as vegetables, fish and meat are easy to find and the recommendation is easy to do.

**Obstacles:** On the other hand, some mothers mentioned factors that make it difficult to try the recommendation. One mother mentioned that she did not give the water lily in the water lily soup to her child because she was afraid it could choke her child. Another mother did not persist in feeding her child pumpkin because the child spitted it out.

**Intention to continue:** All of the mothers had the intention to continue the recommended practice.

**Discussion/conclusion:** The importance of the well-being of the child is the ultimate concern of the mothers when it comes to feeding. Taking this into consideration, the mothers tried their best to do something to improve their child's intake. With proper information on initiation of complementary feeding, this practice can be feasible for the mothers to do. It is also important that persons involved in counselling mothers on child feeding be able to explain to mothers that it is natural for babies to spit out the food initially, but with persistence, the baby will learn to eat the food.

### Quality of food

**Recommendation No. 5:** Make *bobor* with less water so it is thicker, and add mashed fish, egg or chopped meat and pumpkin, and green vegetables, after breast milk.

**Results:** Thirteen (13) mothers were given this recommendation. Eleven mothers tried adding at least fish or vegetables to the plain *bobor*. The question about thickness of the *bobor* was overlooked and the information gathered was limited to the addition of vegetables and fish.

- M1 (2014) - mother added fish
- M2 (4021) - mother added morning glory and fish
- M3 (4004) – mother gave *bobor* bought from the market
- M4 (1005) - mother added egg
- M5 (2015) - pumpkin and frying oil were added to *bobor*
- M6 (2022) - mother added fish
- M7 (1003) - mother gave *bobor* bought from the market
- M8 (4016) - mother added pork, Chinese cabbage, egg, fish
- M9 (5012) - mother gave *bobor* bought from the market
- M10 (3007) -
- M11 (3009) – mother added pumpkin
- M12 (5017) – mother added grilled pork into *bobor* and salted fish
- M13 (3015) –

**Modifications:** One mother chose to add fish only because according to her observations, the child vomits when fed with vegetables.

**Facilitators:** Some of the responses given by mothers were the following:

*"I liked it because it is easy to buy, cheap and easy to cook".*

*"I like it when I feed my child with *bobor* that contains fish and vegetables, my child enjoys eating it. Moreover I can catch fish by myself without spending money to buy, and it is easy to find vegetables that are planted near the house, such as morning glory".*

*"What I like is that when I cook *bobor* with vegetables, especially gourd, my child seems to be able to eat more food and it's easy to find"; "When I feed my child food with fish, vegetables, he seems more active, happier, sleeps well and disturbs me less".*

*"Eating thick *bobor* my child urinated less, his fullness lasted long and he's strong".*

*"I liked it because I plant the vegetables and catch fish by myself, If we don't have vegetables, we can ask our neighbours for some".*

*"It is easy to make"*

*"I like it. It's not difficult. It's easy".*

**Obstacles:** The following comments were given by the mothers

*The neighbor said, "the child doesn't know how to eat, do not force him to eat because he will feel like vomiting".*

*"My child doesn't want to eat, she eats only a little, then she stops".*

*Neighbours said, "Don't believe them! My children eat only soup and never get sick".; The mother also discontinued the recommendation because she was busy at the store and the child had diarrhoea when she fed vegetables*

*"The point that I don't like is that fish is expensive".*

One mother mentioned she didn't like pork, Chinese cabbage, and morning glory because these are difficult to buy, she had to go to market and spend money for travelling. And another mother could only practice the recommendation when she has time, not everyday.

**Intention to continue:** Eleven (11) mothers had the intention to continue the practice but one mother will not continue because when she tried to feed her child, the child did not want to eat additional food and only wanted to breastfeed.

**Discussion/conclusion:** This recommendation is feasible, although most mothers were more willing to add fish or meat to bobor than vegetables.

However, most mothers think that providing thick bobor to a young child will cause choking because it will get stuck in the child's throat. This was seen in one of the recipe trials conducted. However, the information on acceptability of thick *bobor* is very limited. Therefore, it needs further investigation. It is sometimes difficult to convince mothers to prepare *bobor* with vegetables and meat especially for the younger children because they think they are too small to be fed and it will choke the child. It is important to counsel mothers on the right consistency of foods so the child will not choke.

#### **Recommendation No. 6:** Add oil to bobor when cooking

**Results:** Eight (8) mothers were given the recommendation. Six mothers added oil to *bobor*, while 2 answered yes but no oil was reflected in the 24-hour.

M1 (2014) – mother did not feed the child, child was breastfed only in the 2<sup>nd</sup> recall

M2 (2011) - mother added oil

M3 (3007) – mother added oil

M4 (3009) - mother added oil

M5 (1005) - mother added oil

M6 (3015) - mother did not add oil

M7 (4016) - mother added oil

M8 (4022) – mother added oil

**Modifications:** No modifications were made.

**Facilitators:** The most frequent reason for liking the recommendation was that oil is cheap and they can buy it anywhere. Mothers believed that if they added oil, it would make their child healthy and the food would be swallowed more easily because it's greasy.

**Obstacles:** None were mentioned.

**Intention to continue:** All the mothers intend to continue

**Discussion/conclusion:** Although most of the mothers were not using oil in the *bobor*, they were able to try it. This recommendation is feasible, and cooking oil is always available in the market.

#### **Recommendation No. 7:** Add the fish or meat and vegetables to the rice not just the liquid

**Results:** Nineteen (19) mothers tried the recommendation. The results showed that most of the mothers added fish and vegetables (no matter how small the amounts) to the rice instead of just giving the liquid.

- M1 (3013) - Mother added papaya, wintermelon and fish (trei phtouk)
- M2 (3016) - Mother said she tried but no vegetables reflected in the 24 hour recall
- M3 (3004) - Mother added only fish (eel)
- M4 (3005) - Mother added fish
- M5 (3011) - Mother served cassava leaves, banana flower and fish (trei phtouk)
- M6 (3019) - Mother added catfish and cassava leaves
- M7 (1004) -
- M8 (1009) -
- M9 (5006) - Mother served rice with fish, taro and "sleukbas" and chinese cabbage
- M10 (5012) - Mother tried, but no vegetables were given as reflected in the 24-hour recall
- M11 (5020) - Mother added pumpkin, "sleukbas" and fish (trei phtouk)
- M12 (5021) - Mother gave pumpkin and fish (trei phtouk)
- M13 (4010) - Child was fed with rice and fish (trei phtouk) and rice with pork and pumpkin
- M14 (4013) - Mother tried for 3 days only
- M15 (4007) -
- M16 ( ) - Mother tried part of the time(mother did not always feed the child with fish and vegetables because she said she can only give plain bobor)
- M17 ( ) - Mother fed wintermelon and fish (trei phtouk)
- M18 ( ) - Mother added chicken liver, cabbage, pork and "sleukbas"
- M19 ( ) - Mother gave fish (trei phtouk) and banana flower

**Modifications:** Some mothers indicated that they did not give vegetables that they think are not good for their child.

*"I modified the recommendation I fed my child only soft vegetables, but not morning glory. I'm afraid he will choke".*

*"I modified a little when feeding vegetables. For example, I do not let my child eat pineapple (cust his mouth), morning glory (chokes )"*

**Facilitators:** Some of the motivating factors that the mothers mentioned are the following:

*"Soft vegetables like winter melon, Pa' Tee, gourd, pumpkin, my child likes them and I am not afraid of choking. My child eats a lot and he is healthy".*

*"I like it because I have vegetables int my back yard and I can fish myself"*

*"Some kinds of vegetables are easy to find in the village such as gourd, winter melon, morning glory; and fish. Some of them are grown in our house and the child likes vegetables, now he is fatter"*

*"What I like is that when I add vegetables to the rice he likes it so much. And vegetables are easy to find, also cheap; When my child is full, he plays more and sleeps more. I have more time to work"*

*"What I like about it is that when I feed my child vegetables , fish , and meat , my child likes eating , and I can fish by myself"*

*"My child like eating fish, pork and vegetables. After eating he seemed stronger and happier"*

*"What I liked about it was, I plant vegetables by myself, it was easy to find vegetables such as pumpkin , gourd , and sleuk bas"*

*"I could find it , it was good to eat and my child enjoyed eating"*

*"According to my observation, after eating a meal, my child is happy and plays more than*

*usual, and he has a smile on his face"; It is easy to obtain, morning glory I grow by myself and I catch fish by myself*

*My older sister said that, "adding vegetables and meat makes the child healthy. If the bobor is too watery, the liquid of the bobor will come through the urine and the child will get hungry easily".*

*"Feeding with vegetables, makes my child healthy and clever"*

*"What I liked about it is when I fed him, he was happy and enjoyed eating"*

*The child is able to eat more, sleep well and it's easy to make; After feeding rice, my child is happy, heavier and cries less*

**Obstacles:** On the other hand, the mothers mentioned some constraints to practising the recommendation:

*"I don't want to feed my child hard vegetables like morning glory, It's not easy to smash. It might get stuck in the child's throat".*

*"What I don't like is that fish is more expensive, in relation to my income. Furthermore, it's difficult to buy".*

*She can only follow the recommendation every other day, "because we do not cook soup all the time, sometimes we eat dry food like fried fish with no vegetables*

*"What I don't like about it is that vegetables are expensive (Chinese greens, taro )"*

*"I don't want my child to eat vegetables such as pineapple, which can harm his mouth (cut ), and morning glory which can get stuck in the child's throat"*

*"What I didn't like about it was that fish was expensive"*

*"It was difficult because my child could not eat as much as the other children and I didn't have enough money to buy meat"*

*She doesn't like it, fish is expensive, she cannot catch enough fish by herself.*

*Because she is poor, she didn't like adding pork because it's expensive and it's difficult to buy.; vegetables couldn't be grown because it was flooded.*

*"When I feed my child with rice and gourd soup, my child eats less because she doesn't like gourd, but if it's pumpkin, she eats a lot because she likes pumpkin."*

**Intention to continue:** All the mothers intend to continue the recommendation.

**Discussion/conclusion:** Foods in the villages are usually prepared with liquids and this is usually the food for the family and not just for the child. It can be said that, most mothers can adapt this practice since it is less time consuming than to prepare a different dish for the child. However, mothers will need counselling in order to overcome their fear of choking their children because of certain vegetables such as morning glory, which is actually good for their child. With proper information on food preparation, this recommendation can be doable.

#### **Recommendation No. 8:** Add vegetables, fish or meat to your child's diet

**Results:** This recommendation was given because several mothers were giving only steamed rice with very limited or sometimes no vegetables or meat. This recommendation is different from recommendation no. 7 in the sense that, the mothers give only rice and nothing else or sometimes rice but with very small amounts of vegetables and meat. Seven mothers (7) were asked to try the recommendation and all of them agreed.

M1 (1021) - Mother served rice with morning glory soup

M2 (1002) - No vegetables added

M3 (5003) -

M4 (5010) - Mother added fish

M5 ( ) - Mother added wintermelon and fish

M6 ( ) - Mother added fish (trei phtouk)

M7 ( ) - Mother added pumpkin

**Modifications:** No modifications were made.

**Facilitators:** Some of the motivating factors that the mothers mentioned were:

*"When the child eats vegetables, his body becomes strong".*

*"I like it because it's easy to buy"*

*"I'm happy to see my child likes eating vegetables, fish and meat. He seems to be stronger"*

*I am happy when I see my child likes the food I prepared for him. The child is also happy, gains more weight and he cries less: It is easy to do*

The mother feels happy when her baby eats the food that was advised. Because that will help the child grow strong, healthy, with strong bones, and the child will be able to eat more food.

The mother is happy to see the child eats more as she puts vegetables in the child's food. She liked it because it's easy to find vegetables, she plants vegetables by herself and the child liked the vegetables

**Obstacles:** Money is always an issue when buying meats. One mother mentioned that fish is expensive and difficult to buy. She didn't have money.

Another mother said, "I don't have much money to buy good meat for my child"

**Intention to continue:** All mothers have the intention to continue the recommendation.

**Discussion/conclusion:** Based on the responses given by the mothers, it can be said that this recommendation can be put into practice. With proper information and guidance, mothers can be taught how they can make use of the available vegetables in their surroundings.

## FREQUENCY AND QUANTITY OF MEALS

**Recommendation No. 9:** Increase meal frequency until baby is fed 2 times per day (6 months) or 3 times per day (7-12 months)

**Results:** Twelve (12) mothers tried this recommendation. The results showed that almost all of the mothers increased the meal frequency to 2-3 times per day. Children were often fed 1 (for those who are 6 months) to 2 (those who are 7-12 months) main meals in a day.

M1 (2009) From 1 meal, mother increased to 2 meals

M2 (2014) Mother partially tried

M3 (2016) Mother fed the child 3x (used to feed 2x only)

M4 (1021) Child is fed 3 main meals

M5 (1014) Mother served 3 meals

M6 (1019) Mother served 3 meals

M7 (5006)

M8 (4009) Child is fed 3 times (before, 2 times only)

M9 (4004) Mother served 3 meals (used to serve 2)

M10 (4018) Mother increased the meal time to 3x

M11 ( ) Mother added 1 main meal

M12 ( )

**Modifications:** Several modifications were made. For instance, instead of feeding the child 3 times, mother fed 2 times because she had no time to prepare food while she was working in the field. Another mother also tried to increase the frequency of meals up to 4 times.



**Facilitators:** Most of the mothers' replies were related to the observations they noticed related to their children's behaviours after trying the recommendation.

*"It was easy to do, and the child ate more than usual; According to my observation, after the child eats more bobor than usual, he is happy, doesn't disturb me, and gains weight".*

*"What I like is that when I feed my child 3 times a day, I can tell that my child is healthier and stronger. And also the food is not difficult to find."*

*"My observation is that, after my child has had enough to eat, he feels happy and sleeps well. I have time to work more"*

*"I like it, because it is easy to prepare"*

*"After eating, my child feels good, happy and sleeps for long hours".*

*"After I have increased meal frequency to 3 times per day, my child eat well, he doesn't spit the food out. Then he becomes stronger and more active".*

*"I like it because it's easy to prepare"*

*After eating bobor the child is happy but he still feels like vomiting*

*"When the child eats more, he doesn't cry. He's bigger than before, and feels healthy and happy. I 'm so glad".*

She feels happy when the baby eats the food that she prepares. The child seems to be able to eat more food than he used to eat. And his bones seem to be getting stronger.

The more the child eats, the more he plays. After sleeping, he was more delightful than before.

The mother tested the recommendations and she liked them because she wanted her child to grow well and be healthy.

**Obstacles:** Mothers cited several reasons that make it difficult for them to try the recommendation on some occasions. One mother said that she cannot provide 3 main meals for her child because she doesn't have enough money to buy food. One mother observed that when her child was fed *bobor* at night, the child vomits. One mother tried feeding the child 4 times, but the child did not finish his food.

**Intention to continue:** The mothers are willing to continue practicing the recommendation.

**Discussion/conclusion:** It is a common practice among the households in the villages to eat 2 main meals in a day, normally just lunch and dinner. This may be because some of the household do not have the means to provide 3 complete meals in a day.

Despite the inability of some mothers to provide the recommended number of meals, most were able to increase the number of meals.. Therefore, this recommendation can be feasible for the mothers to continue.

**Recommendation No. 10:** Gradually increase amount of food given to baby until the child is eating at least **1/3** of a small bowl (or 2-3 T) per meal (for 6 months)

**Results:**

M1 (2014) Mother tried but up to 2 teaspoons only

M2 (1009) Mother increased the amount of food

**Modifications:** Mother modified the given recommendation. Her child wasn't able to eat 1/3? bowl of bobor because he vomited the food (1or 2 teaspoons only)

**Facilitators:**

M1 (2014) - After eating meal, the child's happy, but he still vomits

M2 (1009) - She's happy seeing the child eat more. The child is full of energy and clever.

**Obstacles:**

M1 (2014) – “When I gradually increased amount of food given to baby, he did not want to eat (he eats 1 or 2 teaspoons only) and he vomits; Husband said, " Do not force the child to eat if he doesn't finish his food because his stomach is small.”

**Intention to continue:** One (M2-1009) mother intends to continue the recommendation but one mother (M3-2014) will wait until the baby is 8 months before she increases the amount of food.

**Discussion/conclusion:**

**Recommendation No. 11:** Gradually increase amount of food given to child until he is eating at least 1/2 bowl per meal

**Results:** Twenty-two (22) mothers tried this recommendation.

- M1(2009) Amount in grams increased
- M2 (2016) Amount of food given is almost the same as the first visit
- M3 (2018) Amount served is increased
- M4 (2015) Child is fed ½ bowl
- M5 (3005) Amount served is increased to at least ½ bowl
- M6 (4009) Mother increased the amount
- M7 (3011) Partially tried (small amount only abt. 2 Tablespoons)
- M8 (1004) Mother increased amount of food served
- M9 (1014) Mother served ½ small bowl
- M10 (1019) Mother tried
- M11 (3010) Mother increased the amount to 1/2 bowl
- M12 (5019)
- M13 (5021)
- M14 (4009) Quantity is increased to at least half a bowl
- M15 (4002) Mother served half small bowl of bobor
- M16 (4020) Amount consumed is increased
- M17 (4010)
- M18 (4007)
- M19 (4013) Mother tried for 3 days only
- M20 (2022) Mother tried to increase to ½ small bowl
- M21 ( ) Mother tried in part
- M22 ( ) Increased amount of food

**Modifications:** One mother added only up to 2 teaspoons of food because the child felt like vomiting when fed more than that amount. Another mother could only give 1/3 bowl because the child could not finish the meal. Another mother whose child was sick tried the recommendation for 3 days because the child refused to eat.

**Facilitators:** The mothers replied that their children looked healthier, happier, and more satisfied. The children cried less and became more playful. The children's change in behaviour gave the mothers more time to work without being disturbed by the children. In addition, mothers commented that the recommendation is easy to do.

**Obstacles:** Mothers who tried the recommendation think that 1/2 bowl of food is too much for their children to eat. One mother observed that when trying to feed her child more than 2 teaspoons, the child felt like vomiting. For this reason, the husband told the mother not to force the child to eat when he doesn't want to because the child's stomach is still small. Another mother thinks that her child cannot finish the meal because the amount is too much. Another issue is the ability of the mothers to buy the foods to give their children. Some mothers said that they want to feed their children with meat but it is difficult to do because they have to ride a boat