

C. STUDY SUBJECTS

The respondents for this study were mothers of 0-23 month old children, pregnant women, health workers and key-informants from the community. A total of 110 mothers (~22 mothers/province), 5 pregnant women within one week of due date (~1 pregnant woman/province) and 20 key informants (~4 key informants per province) were interviewed (Tables 2-4). The desired sample sizes per category of respondents were met except in Battambang where one mother was lost in the follow-up because of the Water Festival. In Stung Treng, it was not possible to identify a pregnant woman about to deliver. Hence, the number of pregnant women interviewed in Prey Veng was adjusted to meet the required total number for the study.

Lists of children with ages from 0-23 months were gathered from the health volunteers in the villages. Each list was arranged by age group (i.e. 0-5 mos., 6-8 mos., 9-11 mos., 12-23 mos.) and one child from each of the youngest age groups was randomly selected (by simple random sampling through 'draw lots') to be subjects of the research. Two children from the older age-groups were chosen.

Community informants were divided to provide information at two different levels. The village leaders, traditional birth attendants (TBA) and officials in the health sector were grouped in one level, while the health volunteers were grouped into another. Two persons from each category were interviewed per province.

Table 2. Number of mothers interviewed for the TIPS by province and village according to age group of children, 2005

PROVINCE	VILLAGES	AGE IN MONTHS				TOTAL
		0-5	6-8	9-11	12-23	
Kratie	Chhey	0	1	2	1	4
	Kampong Sre	1	0	1	2	4
	Dei Dskrom	1	2	0	2	5
	Snoul Watkat	1	1	1	2	5
	Sre Themey	0	1	2	1	4
	Total	3	5	6	8	22
Stung Treng	Koh Sampeay	1	1	0	3	5
	Phum Svay	1	3	0	1	5
	O'Trel	1	2	0	1	4
	Kampun	1	2	1	1	5
	Sam Koi	0	0	2	1	3
	Total	4	8	3	7	22
Prey Veng	Trea	0	0	3	1	4
	Svay Prakma	1	2	2	0	5
	Hap	2	2	1	0	5
	Cham Reh	1	1	2	1	5
	Kreul	0	0	2	1	3
	Total	4	5	10	3	22
Kampot	Keatha Vong Krom	1	2	0	2	5
	Sam Por	1	1	2	1	5
	Damnak Chambok	1	1	2	1	5
	Damnak Trayueng	1	2	1	1	5

	Ponhea Angkor	0	1	1	0	2
	Total	4	7	6	5	22
Battambang	Samdach	1*	1	2	1	4
	Beung Tem	2	1	1	1	5
	Baoh Pou	1	1	1	2	5
	Kampong Madouk	0	2	1	2	5
	O'Trea	0	2	0	0	2
	Total	3	7	5	6	21

* 1 mother lost to follow-up.

Table 3. Number of pregnant women interviewed per province, 2005

PROVINCE	TOTAL
Kratie	1
Stung Treng	0
Prey Veng	2
Kampot	1
Battambang	1
TOTAL	5

Table 4. Number of community health workers and leaders interviewed per province, 2005

PROVINCE	TOTAL
Kratie	4
Stung Treng	4
Prey Veng	4
Kampot	4
Battambang	4
TOTAL	20

D. DATA COLLECTION

As earlier noted, this study was conducted in two phases. Phase 1 took place in June and July 2005 during which recipe trials and in-depth interviews were held with mothers from 1 village in Kampong Speu (for the pre-tests and as part of the interviewers' training), 3 villages of Kampong Cham and 1 village in Prey Veng.

The data collection for Phase 2 of the study was undertaken from 23 August – 18 November 2005. The schedule per province was as follows:

PROVINCE	SCHEDULE OF SURVEY
Kratie	Aug. 23-31; Sept. 7-10
Stung Treng	Sept. 13-18; Sept. 23-27 ^{a/}
Prey Veng	Oct. 7-12; Oct. 17-19

Kampot	Oct. 21-26; Oct. 31-Nov. 2
Battambang	Nov. 5-10; Nov. 16-18

^{a/} The data collection in Stung Treng was extended for a week due to the weather condition. Since the team was advised not to travel after 2PM, the schedule for the follow-up, which was supposed to be done in 2 villages per day, was done in 1 village per day.

1. Trials of Improved Practices (TIPs)

TIPs were conducted among the mothers with children aged 0-23 months in three (3) visits and the pregnant woman in two (2) visits.

Mothers with 0-23 months old children

The 1st visit (*Initial visit*) was done to collect information about the current feeding practices. Structured questionnaires were administered and observations were made regarding the actual feeding practices and food preparation of the mothers. In some cases, observations were not possible during feeding because of the culture that household members do not normally eat in the presence of visitors. There were also instances when the mother claimed that the child had already eaten. The interviewers tried as much as possible not to interfere with the normal activities in the household to be able to record normal activities.

In addition, the 24-hour food recall was conducted to determine the actual intake of the child and the usual foods that are given to the child.

At the end of the initial visit, the information gathered was analyzed and discussed to identify the existing problems and strengths with regard to the feeding practices. Actual feeding practices recorded were then compared with the counselling guides which served as basis for giving specific recommendations to mothers on the problems identified.

The 2nd visit (*Counselling visit*) was conducted a day after the initial visit. Information gathered during the previous visit and the problems identified were discussed with the mother. At this point, specific recommendations were presented to the mothers according to the problems identified. Specific questions about the recommendations were then posed to the mothers. In some cases, more than one recommendation was presented to the mother and often, the mothers were willing to try the given recommendations.

The 3rd visit (*Follow-up visit*) was held 7-10 days after the counselling visit. This was conducted to determine if the recommendations presented were put into practice and whether or not the mother had been able to continue them, if they noted changes in the child, etc. A structured questionnaire was administered to determine compliance with the recommendations. The 24-hour food recall was repeated to ascertain any changes in the dietary pattern and nutrient intake of the children.

Pregnant women

The 1st visit to the pregnant woman was a combination of an initial and counselling visit. A structured questionnaire was administered specifically focusing on how the mother was planning to feed her newborn and specifically how soon she would initiate breastfeeding after giving birth.

Breastfeeding within 1 hour after delivery was recommended to those who did not plan to put it into practice.

The 2nd visit was made after the mother had given birth to determine whether the recommendation was put into practice. Specific questions about the recommendation were asked to determine compliance.

2. Recipe Trials

Six (6) mothers in each province with children aged 6-23 months were invited to participate in the recipe trial. Mothers were asked about the usual foods and their preparation for their children. They were also asked about the foods that are predominantly available and affordable in the village.

During the recipe trials, mothers were requested to cook food that is thick, and easy to prepare at home. The mothers decided which food preparation to cook. All ingredients included in the trials were those predominantly available and affordable in the village. The preparation of food was limited to what the mothers can actually provide their children.

Observations were recorded during the conduct of the recipe trials and specific measurements and the method of cooking was listed down. When the food preparation appeared to be too watery (such as the preparation of *bobor*) or not very nutrient rich, the mothers were given suggestions on how to improve this and were asked to prepare the improved recipe. Cooking method and measurements of ingredients were recorded and acceptability of the improved recipe was noted.

3. In-depth Interviews with Key Informants and health workers

A semi-structured questionnaire was administered to key informants and health workers regarding food availability and health projects in the province.

E. DATA PROCESSING AND ANALYSIS

The processing and analysis of data employed methods that were appropriate to the qualitative and quantitative nature of the data. All responses to the qualitative questions particularly those to open-ended questions were first encoded into Word or Access and subsequently grouped according to corresponding analysis categories that emerged and/or were pre-established (e.g., by province, age groups, etc.). Where appropriate, these were entered/ imported into Excel for the purpose of generating the data summaries. Tables and charts were presented by province after which an overall summary was derived.

Processing of all the dietary information was accomplished using Propan, a software developed by the Pan American Health Organization (PAHO) for analysing the nutrient content of child diets. Propan was also the program used for the preparation of a Food Composition Table (FCT) that paved for the analysis of caloric intake and other nutrients present in the food intakes of the children. Also as appropriate, data were imported into the Statistical Package for the Social Sciences (SPSS) for the preparation of the data summaries and/or for the checking of observed patterns in the data.

F. RESEARCH CONSTRAINTS

1. Limited experience of the research team

Most of the field research interviewers had limited experience in conducting qualitative nutrition research and dietary assessment. Composed of individuals who represented different backgrounds (e.g., education, pharmacy and medical assistance), their experience had been largely as interviewers with local NGOs or governmental agency. This limitation was addressed through two extended trainings to ensure that the interviewers had a good grasp of this study's concepts and qualitative information gathering techniques. Despite the extensive training and pre-tests initial weaknesses surfaced in the early part of the research but they were gradually overcome as the interviewers gained confidence with time.

2. Limited sources of Food Composition Tables (FCT) with Khmer foods

The available Cambodian FCT does not include all the foods mentioned by mothers during the 24-hour food recalls. There was difficulty finding foods in other available FCTs that could be used as an alternate to analyze the dietary data. In addition, the translation of Cambodian foods to English proved to be quite challenging considering the many plant sources not previously recognized by nutritionists.

3. Difficulty in obtaining master lists for children 0-23 month-old

The team had a difficult time gathering the master list for each village since not all health volunteers had such a list. In addition, data collection coincided with the planting season and most of the mothers were in the field. In one such instance, sampling with replacement was undertaken so that the desired sample size was obtained. The team also encountered situations where the ages of the children in the list were inaccurate. To address this problem, the age group to be randomised in the next village was adjusted accordingly to fill-up the age group that could not be completed in the previous village since the desired number of children for each age group could not be found in a single village.

Most of the interview schedules among the mothers (especially for those working in the fields) were arranged by the health volunteers, and the validation of ages was done only during the actual interview.

4. Locating the pregnant woman who will deliver in a week's time

The number of pregnant women who were about to deliver in a week's time was very limited. Although the study only required one interview per province, it was difficult locating women fulfilling this rigid requirement.

In addition, some pregnant women did not have due dates for delivery. For instance, in Stung Treng, one pregnant woman who said she was in her last stage of pregnancy and was to deliver in a week's time was interviewed. But upon return by the team for the follow-up, the woman had not given birth, and was not said to be due for three more weeks.

To compensate, the number of pregnant women to interview in another province was adjusted accordingly to meet the required number for the study (i.e. n=5).

III. RESULTS AND DISCUSSION

A. DESCRIPTION OF THE SAMPLE

Key descriptive information for mothers and children included in the study is presented to provide an in-depth background to better understand the infant and young child feeding practices. Demographic characteristics are described by province to illustrate any differences by geographical location.

1. Maternal characteristics

Table 5 presents selected maternal characteristics, by province. Almost all basic characteristics of mothers are the same regardless of province. Data obtained on maternal age, the number of children with ages 0-23 months old, and involvement in income generating activities do not vary by province. Just slightly less than half of the mothers were under 25 years of age so it was not a sample of young mothers but well distributed by age. About half of the mothers were engaged in income generating activities while the other half was not.

The exception was level of education. Almost half of mothers in Kratie reported to have no schooling as compared to the mothers interviewed from the other four provinces. It is consistent with the data obtained regarding the ability to read and write: about two thirds (68.2%) of the mothers from Kratie said they were not literate. Overall, however, two thirds of the sample of mothers was literate. Respondents from Stung Treng, Prey Veng, Kampot and Battambang are similar in terms of their educational level obtained. In general, a small percentage of the respondents finished primary (11%) and secondary (5%) schooling.

Table 5. Characteristics of Mothers by Province

Variable	All subjects ^{a/}		Provinces ^{b/}				
	n	%	Kratie	Stung Treng	Prey Veng	Kampot	Battambang
Age							
18 - 22	15	13.64	0	3	6	3	3
23 - 25	35	31.82	10	5	9	7	4
26 - 29	18	16.36	6	0	3	4	5
30 - 33	15	13.64	1	7	0	2	5
34 - 37	16	14.55	2	4	4	3	3
38 - 41	9	8.18	3	2	0	2	2
42 - 44	2	1.82	0	1	0	1	0
Total number subjects (N)	110		22	22	22	22	22
Mean Age	27.89		28.14	29.32	25.05	27.95	28.73
Number of children with ages 0-23 months old							
1	108	98.18	22	21	22	21	22
2	2	1.82	0	1	0	1	0
Total number subjects (n)	110		22	22	22	22	22
Ability to read and write							
Yes	71	64.55	7	20	10	18	16
No	39	35.45	15	2	12	4	6
Total number subjects (n)	110		22	22	22	22	22

Level of Education							
No Schooling	25	22.73	10	1	7	2	5
Incomplete Primary	56	50.91	8	15	11	15	7
Completed Primary	12	10.91	1	3	2	2	4
Incomplete Secondary	11	10.00	1	1	2	2	5
Completed Secondary	6	5.45	2	2	0	1	1
Total number subjects (n)	110		22	22	22	22	22
Involvement in income generating activities							
Yes	56	50.91	11	14	13	11	7
No	54	49.09	11	8	9	11	15
Total number subjects (n)	110		22	22	44	22	22

^{a/} Results expressed as frequencies and percent of group

^{b/} Results expressed as frequencies

2. Child characteristics

The over-all distribution of children according to age group does not vary significantly by province (Table 6). Their mean age is about 9 months, due to over sampling of the young children when the pattern of poor practices often begins. There were more male young children than female at 56% and 43%, respectively, reflecting a national pattern among 0-4 year old children where there are more boys (11.8%) than girls (10.4%) (MoP, 2005:37). Nearly all of the infants and young children in each province had their mothers as their primary caregiver.

Table 6. Characteristics of Children by Province

Variable	All subjects ^{a/}		Provinces ^{b/}				
	n	%	Kratie	Stung Treng	Prey Veng	Kampot	Battambang
Age (in months)							
0-5	24	21.82	3	5	6	4	6
6-8	30	27.27	7	7	4	7	5
9-11	29	26.36	4	4	8	6	7
12-23	27	24.55	8	6	4	5	4
Total number subjects (n)	110		22	22	22	22	22
Mean Age	9.33		11.09	9.41	8.32	9.05	8.77
Sex							
Male	62	56.36	15	10	13	13	11
Female	48	43.64	7	12	9	9	11
Total number subjects (n)	110		22	22	22	22	22
Primary caregiver							
Mother of child	106	96.36	20	22	20	22	22
Female relative (grandmother, aunt, etc)	4	3.64	2	0	2	0	0
Total number subjects (n)	110		22	22	22	22	22

^{a/} Results expressed as frequencies and percent of group

^{b/} Results expressed as frequencies

B. GEOGRAPHIC AND HOUSEHOLD CONTEXTS

An understanding of geographic conditions, as well as socio-economic and demographic characteristics is necessary to fully analyse practices in the household and community. General descriptions of the geographic and household attributes are presented based on observations and informal interviews gathered from each village.

Geographic characteristics

The villages selected for the study are situated mostly in remote areas of the provinces. Several villages were generally surrounded by water such as in Kratie and Stung Treng. In Prey Veng, Kampot and Battambang, a vast land of rice fields largely surrounds the villages.

Most of the respondents chosen for the study lived in the “innermost” part of the village, where access to transportation is limited. Oftentimes, the research team has to walk for a few kilometers to reach the respondents living in the middle of the rice fields through the floods and rice paddies.

Kratie

In relation to the other study provinces, Kratie may be said to be poorer because of flooding, remoteness, and inaccessibility by transportation. Here, three (3) ODs were chosen for the study, namely, Chhlong, Preak Prosob and Snoul.

In Chhlong, the villages of Chhey and Kampong Sre were selected. Chhey is a small village situated about 3 km away from the OD. The road condition is good and is accessible to any types of vehicle. Rice fields surround the village, but during the rainy season, it is usually under water. Kampong Sre is a poor village situated about 2 km away from Chhey. During the rainy season, the entire village is heavily underwater for more than 3 months and is accessible only by small boats.

The Operational District of Preak Prosob is about 20 minutes ride by boat from Chhlong proper. Taken here as a study village is Dei Doskrom, which is located along the Mekong River. Dei Doskrom is about 5 km away from the docking area. The road condition is good and is accessible to all types of vehicles.

In Snoul, Snoul Watkat and Sre Themey were selected. Snoul Watkat is about 5 km away from the national road. The road condition is poor especially during the rainy season. Sre Themey is the farthest among the villages in Snoul. Limited transportation is available. The road going to Sre Themey is about 15 km away from the national road and is separated by a small river that is inaccessible to big vehicles. The village is about 3 km away from the river.

Stung Treng

Most of the study villages in this province are situated along the Mekong and Sesan Rivers. Accessible mainly by motor-boats, the selected villages of Koh Sampeay, Svay, O'Trel, Kampun and Sam Koi represented the OD of Stung Treng.

Koh Sampeay is a large village lying west of the provincial town and is about 25 minutes ride by boat from the provincial town. Svay is a poor village situated at the southwest of the provincial town, about 25 minutes by boat. O'Trel is approximately 10 minutes by boat, situated at the south of Stung Treng. Kampun is situated along the Sesan River, approximately 25 minutes from the

town. It is situated on the north of the town. Sam Koi is about 20 minutes ride by boat, situated on the north of the town. Unlike the other villages, Sam Koi has a vast land area for rice planting. Access to road is good.

Prey Veng

Three (3) ODs were chosen in this province for the conduct of the study: Neak Loeung, Kampong Trabek and Mesang. Most of the villages selected are situated in a large area of rice fields.

In Neak Loeung, Trea and Svay Prakma were selected. Trea is a small village and access to road is good. Adjacent to Trea is Svay Prakma. The distance between these two villages is approximately 5 km.

In Kampong Trabek, 2 villages were selected. Hap is a large village situated about 16 km from the national road. Cham Reh is a small village, about 15 km from the national road and 1 km from Hap.

In Mesang, only one village was selected. Phum Kreul is situated about 10 km away from the national road. The road condition is good and is accessible to any type of vehicles.

Kampot

The study was conducted in only one OD, at Angkor Chey. Although Angkor Chey is not a relatively poor district, the villages selected were still the poorest as indicated by the nutrition coordinator of the district.

Keatha Vong Krom is situated approximately 1 km from the national road.

Sam Por is about 3-4 km from national road.

Damnak Chambok is considered as the poorest among the villages selected and is situated along the national road.

Damnak Trayueng is approximately 2.5 km from the national road.

Ponhea Angkor is about 6 km from the national road.

Battambang

Sanke is the only OD chosen for the study. Most of the selected villages are situated near the provincial town. Access to road is good.

Samdach is a poor village situated about 15 km from the national road.

Bang Tem is the farthest among the villages selected. It is situated along the Tonle Sab Lake, about 20 km from the national road.

Bos Pho is situated about 7 km from the provincial town.

Kampong Madoch is a small village. It is about 5 km away from the provincial town.

O'Trea is about 2 km away from the town proper.

Household characteristics

Limited information on demographic characteristics were collected hence, a general description of the household environment and other pertinent information are given.

Literacy

Most of the people in the communities have not attained a higher degree of education than secondary schooling. Aside from economic reasons, difficult road conditions or limited access to transportation is crucial to gain access to basic services such as education and health. In remote areas, access to these basic services are often nil. Hence, the rate of illiteracy and malnutrition is often highest in remote areas.

Secondary data obtained from the SEILA report ([Annex 4](#)) reveal that the remotest villages among the study sites in Kratie, Stung Treng and Prey Veng, have the highest rate of illiteracy among 15 years old and above.

In Kratie for instance, Kampong Sre and Srei Themey have 52% and 47% illiteracy rate, respectively. Kampong Sre is usually under water during the rainy season, which lasts for more than 3 months in a year. The flooding makes it difficult for the residents to travel in and out of the village and most likely for the students to go to school everyday. Likewise, Srei Themey is the farthest village in Snoul. Of all the villages visited for the study, Srei Themey is the remotest and access to vehicle is very difficult. A small river has to be crossed to reach the village. Motorcycle is the only vehicle that can be transported on the other side of the river. There is one primary school that is about 1 km away from the village. The only secondary school nearest to the village is about 5 km away, where access to transportation is very limited.

In Stung Treng, the villages of Kampun, Sam Koi and Koh Sampeay is reported to have more than 50% of the 15 years old and above age bracket as illiterates. All the villages are accessible mainly by boat. There is one primary school that caters to several villages but the secondary school is located in the town proper. Most of the students do not finish the secondary schooling. Aside from the limited financial resources, transportation going to the town is also limited.

In Prey Veng, Kreul which is under the district of Mesang, has more than 70% illiteracy rate among the 15 years old and above. Although the road is accessible, there is very limited transportation going to the village.

The other villages that have easy access to the national road showed a small percentage of illiterates. In Kampot and Battambang, there are nearby schools in the selected villages. The illiteracy rates are lower among the respondents in the villages selected in these two provinces.

Occupation

Most of the residents in the villages are engaged in farming and fishing. With the vast agricultural land in the provinces, most residents rely on farming as a source of income. Some families who do not have their own land resort to having their labour hired to “cut the rice” during the harvesting season. In Stung Treng, Kratie and Prey Veng, many are also into fishing which they sell in the nearby markets.

Some residents work as labourers for private factories. In Kratie, for instance, many people are involved in collecting resins from the trees to be used for boat making or collecting “saps” from the rubber trees. With the abundant sugar palm trees in the provinces, many residents are into sugar palm making as well. In Kampot, some skilled family members are into clay pot making.

Seasonal migration for work is not uncommon among the villagers. During the dry season, when the planting season is over, many travel to the city to work as factory workers or perform other jobs such as construction, *motodop* driving, etc to support their families.

Household Environment

The socio-economic condition of the respondents in each province varies to a certain degree. For instance, there are respondents who own huge houses made of wood with zinc roof and those who live under a thatch roof. In Kratie, Prey Veng, Kampot, and Battambang, there are more who live under a thatch roof than a concrete one. These respondents usually are the ones living in the “remote” part of the village. In Stung Treng, the houses are usually made of wood with zinc roof. The flooring in most of the houses observed is usually made of bamboo slats.

The environment, in which the study participants live, typifies the common rural living conditions. The houses do not usually have a divider for rooms. For the households who live in a very small house, everything is done in one big space. For instance, the whole vacant space is used for sleeping and dining. The kitchen is usually separated from the main room but there are cases where even cooking is done inside the small space for the whole family. As such, the household is usually disorganized.

On average, 2 families usually comprise one household. This living arrangement is more common among the younger couples, who stay with the in-laws or the real parents of either partner. In such cases, the grandmothers become the primary caregiver of the young children when both parents are working in the rice fields.

There is no supply of electricity in most of the villages selected. The use of battery cars as an alternative for power supply is very common among the households. It is widely being used in Kratie, Stung Treng and Prey Veng than in Kampot and Battambang.

Hygiene-related Practices

In all of the villages visited in the five provinces, not a single household had source of water from a main pipe. Potable water, by acceptable standards, is not available in the village. Water for drinking and cooking is mainly either from the river or rainwater. Water is usually murky and obviously unhygienic. Water from the river or ponds used for drinking is also accessible to animals roaming in the village such as the pigs and cows. In addition, most of the residents use the rivers for bathing, washing clothes and defecating. The idea of acquiring diarrhoea and other diseases from this practice does not seem to bother the entire community.

During the rainy season when the villages are all flooded, water is collected directly from the flood. Each household also usually has a huge jar placed outside the house where rainwater is collected and stored for use. Oftentimes, these jars are covered but in some households visited, the jars are left open. Water is seldom boiled and is given to young children and sometimes, the infants.

There are deep wells available in some villages but are located far from the respondents' houses. These wells were provided by an NGO, the Partners for Development. During the dry season, water is more difficult as the rivers and deep wells dry-up.

Most of the selected villages do not have latrines except in Stung Treng where PFD built latrines for the villagers. Several households in Kampot and Battambang have latrines but a larger percentage of the households do not have. Defecating is done in the rivers and nearby bushes or just near the house. During the survey, it was observed that the small children defecate directly thru the bamboo slats inside the house. Mothers would pour water just enough to wash the floor but not really enough to totally remove the baby's waste. In this same floor, the young children or infants are made to crawl and where children were also fed and often times, given bath as well.

Hand washing is not practiced before eating. Although most mothers use spoons to feed their children, hand washing before food preparation is not observed.

Issues of Food Availability (need to add observations)

Most of the villages included in the study are situated in a vast area of land where vegetable gardens can be made. Vegetables and fruits that are available year round are abundant in the surroundings. Different vines and tubers are aplenty.

About 14 out of 20 of this study's key informants claimed that the sources of food for the family are their own produce (Table 7). Many villagers grow their own vegetables in their backyard. Fishes in the village are the main source of animal protein and are easily caught in rice paddies and rivers.

Vegetables and fishes are the easiest to find and are always available in the villages. However, 9 out of 20 key informants noted that there is not enough food available in the villages and people need to buy from the markets. Pork and beef are almost never available. Although many households own pigs and cows, more often these are not for family consumption. Pigs are sold in the market or among the villagers. Cows are used in farming and are often butchered only during special occasions or festivities. Pork and beef are considered as the most expensive foods in the villages. Hence, very few households consume these foods.

Many of the key informants agree that foods in the village are expensive. They added that the price of fish and other meats doubled during the past year. For this reason, many of the households plant their own vegetables and raise animals such as poultry, pigs and cows. The families use their own produce for their daily foods or harvest them and sell to the markets for additional income.

Table 7. Insights on Food Availability of the Key Informants

Issues	All respondents (n=20) ^{a/}
Information on Food Availability in the village	
The foods in the village are easy to find and not expensive such as vegetables and fish	7
There are more vegetables and fish in the rainy season but very limited in the dry season	3
There is not enough foods available in the village, people need to buy foods from market and it is expensive	9

The rice produce is not enough for the whole year	2
Foods that are always available in adequate amounts	
Vegetables	18
Fish	12
Meat	5
Rice	2
Foods that are almost never available	
Pork	11
Beef	15
Chicken	4
Sources of food for the family	
Villagers grow vegetables	14
Villagers buy vegetables/fish/meat	13
Villagers do fishing	5
Villagers buy food from market/small shops in the village	10
Prices of foods in this village	
Expensive	15
Not expensive	5
Change of prices in the past year	
The price of food does not changed	4
The price of fish or meat move up nearly double	18
Foods people think are most expensive and out of their reach	
Beef	19
Pork	16
Fish	1
People can buy all the foods	1
Foods that can be bought in small quantities	
Vegetables	19
Fish	15
Pork	8
Egg	1
Condiments	2

^{a/} Expressed in frequencies and multiple responses

C. HEALTH COMMUNICATION

Information regarding infant and young child feeding is an important factor that influences the decision making of mothers in terms of what foods to give their child. In rural areas where access to basic health services is often difficult, most mothers depend on mass media and key persons in terms of health education.

Respondents of the study indicated that information regarding infant feeding comes from a variety of sources.

Mass media

Table 8 shows that majority of the respondents have heard or read a message about child feeding from a variety of media channels.

The kind of feeding messages that the respondents have heard or read also play a vital role in their usual feeding practice. The fact that these messages were more often than not remembered, it could be an influencing factor in feeding their own children. The most remembered message about child feeding is the introduction of solid foods at the age of 6 months. Exclusive breastfeeding until 6 months of age and breastfeeding initiation immediately after birth are among the messages which most of the respondents also remembered.

Figure 2 shows that among the media channels, television and radio are the primary sources of infant feeding information in all of the study sites except in Stung Treng where there is no supply of electricity in the villages. A total of 46.36% (~51) and 44.54% (~49) of the respondents indicated that they have heard about infant feeding from television and radio, respectively.

Posters also prove to be an important tool for information source. In Kratie, 22.7% replied that they get information from posters, which are mostly displayed in the health centres and nearby stores. Similarly, 18.2% of the respondents from Stung Treng and Prey Veng and 13.6% from Kampot replied the same. Unexpectedly, respondents from Battambang did not indicate posters as source of information. The information gathered from the posters can be an indication that the health sector's campaign to promote breastfeeding practice is successful.

Table 8. Mass media information about child feeding per Province

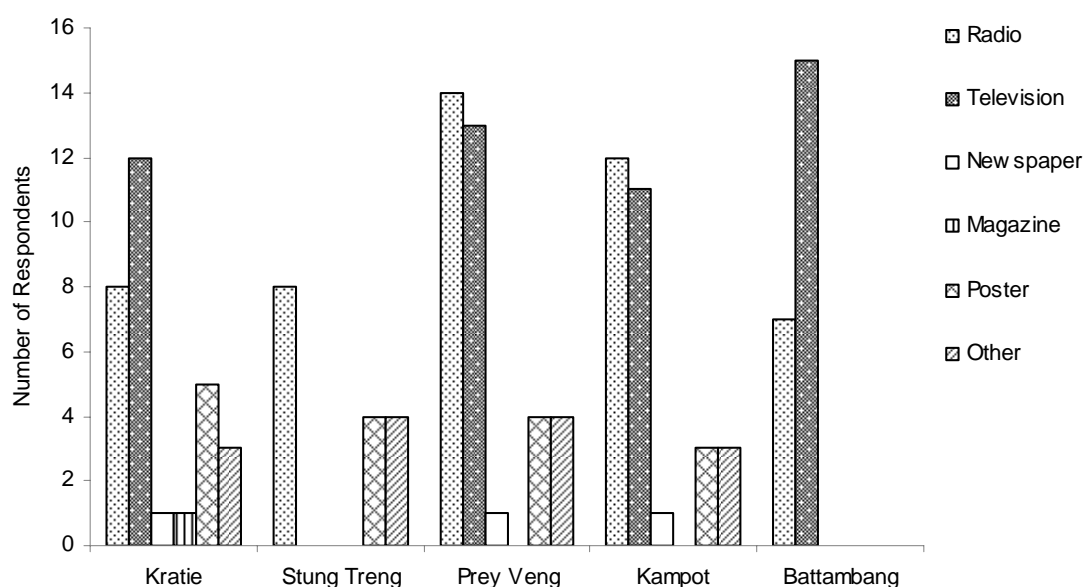
Variable	All subjects ^{a/}		Provinces ^{b/}				
	n	%	Kratie	Stung Treng	Prey Veng	Kampot	Battambang
Have heard or read a message on television, radio, newspaper, poster or magazine about child feeding							
Yes	93	84.55	21	16	20	19	17
No	17	15.45	1	6	2	3	5
Total number subjects (n)	110	-	22	22	22	22	22
Type of child feeding messages ^{c/}							
Exclusively breastfeed your child until the 6 months of age	34	22.67	4	5	6	12	7
Breastfeed your child immediately after birth	37	24.67	7	7	9	7	7
When the child reaches 6 months of age, feed the child additional foods	73	48.67	13	11	16	17	16
Breastfeed/feed the child frequently	1	0.67	1	0	0	0	0
Feed your child fish, meat and vegetables	5	3.33	1	2	2	0	0
Total number subjects (n)	150	-	26	25	33	36	30

^{a/} Results expressed as frequencies and percent of group

^{b/} Results expressed as frequencies

^{c/} Multiple responses

Figure 2. Sources of Information on Infant Feeding, Per Province



Key Persons

Other sources of information that could play a vital role in the feeding of children are the key persons whom the mothers usually talk to. Table 9 shows that most of the respondents in each province have heard about child feeding from other persons. Majority of them cited health personnel as their frequent source of information, followed by a family member (Figure 3). Nearly three in four respondents (70%) noted that the dissemination of the message was usually in the home of the respondents, while about a fourth (23%) said that they received the information at the hospital, clinic, health centre, a doctor's office or a mobile health unit. Respondents from the study provinces did not significantly differ on this overall observation.

As from different media channels, the most relayed or heard feeding message from other persons relates to feeding the child with solid foods at the age of 6 months, with some 44% of the respondents mentioning this. Messages about exclusive breastfeeding and breastfeeding initiation immediately after birth follow as the most remembered messages on child feeding according to 25% and 19%, respectively.

Table 9. Source of feeding information from key persons, by province

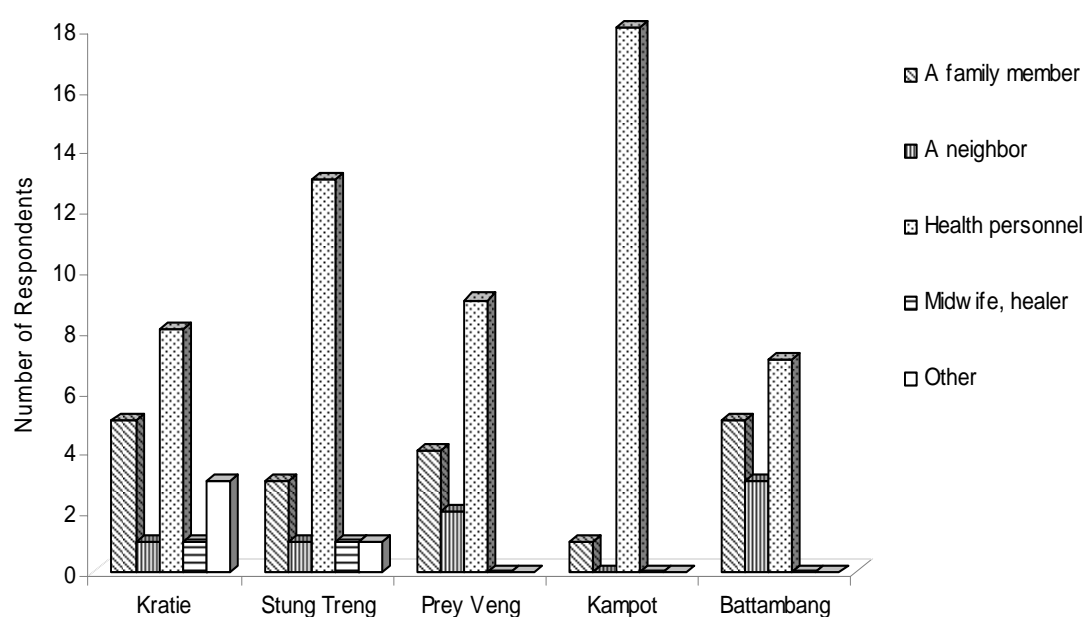
Variables	All subjects		Provinces				
	n	%	Kratie	Stung Treng	Prey Veng	Kampot	Battambang
Do you remember if a relative, friend or health worker talked to you about child feeding?							
Yes	86	78.18	18	19	15	19	15
No	23	20.91	4	2	7	3	7
Does not know/ remember/ answer	1	0.91	0	1	0	0	0
Total number subjects (n)	110	-	22	22	22	22	22
Where did they talk to you about this?							
At home	60	69.77	13	12	12	13	10

At hospital, clinic, health centre, doctor's office/ mobile unit	20	23.26	3	5	2	6	4
At school	1	1.16	1	0	0	0	0
Other	5	5.81	1	2	1	0	1
Total number subjects (n)	86	-	18	19	15	19	15

Type of message

Exclusively breastfeed your child until the 6 months of age	30	25.42	3	6	4	10	7
Breastfeed your child immediately after birth. Feed your child colostrum	23	19.49	3	8	4	5	3
When the child reaches 6 months of age, feed the child additional foods	52	44.07	8	13	8	13	10
Do not feed the child with foods that are not clean. Wash your hands or your child's hands before eating	2	1.69	0	1	1	0	0
Breastfeed/feed the child frequently	2	1.69	1	0	1	0	0
Feed your child fish, meat and vegetables	7	5.93	6	0	1	0	0
Wash your breasts before breastfeeding the baby	2	1.69	0	1	1	0	0
Total number subjects (n)	118	-	21	29	20	28	20

Figure 3. Key persons from whom respondents receive feeding-related information, by province



D. CURRENT NUTRITIONAL AND HEALTH SITUATION AND CHILD FEEDING PRACTICES

The mothers' general perception regarding their child's health is illustrated in Fig. 4. The percentage of mothers who perceived their children as generally healthy (37%) is far below than those who are generally experiencing different illnesses (77%). The most common illnesses mentioned by the mothers that their children experience are colds, fever and cough. Diarrhoea is the second most common disease condition mentioned by the mothers. It was expected to be widespread across all provinces but surprisingly, only mothers from Kratie (9.1%), Stung Treng (31.8%) and Kampot (13.65%) mentioned diarrhoea as one of the most common condition that affect their children.

The prevalence of malnutrition is unexpectedly not widely prevalent among the young children in the study. Surprisingly, ninety three percent (93%) of the children are normal in weight. There is no difference in prevalence of malnutrition across all provinces. Out of the 22 children per province, only 4-5 children were found to have low-weight-for-age.

Figure 4. Over-all health status of children as described by mothers by province

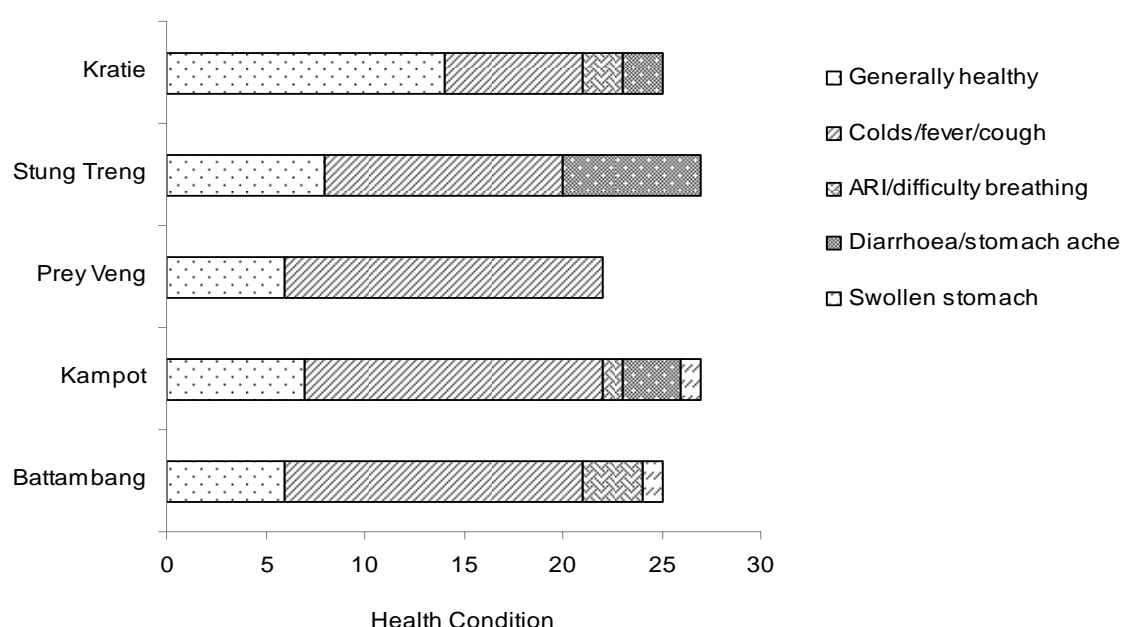


Figure 5. Nutritional status of children, by province

