

CHAPTER IV

STUDY POPULATION CHARACTERISTICS

Among 2000 sampled children in the Young Lives study, there were 6 children not measured for height and weight. Thus, all of my analyses were based on the data obtained from 1994 children who have complete collected data.

4.1 Characteristics of surveyed children

Table 2 provides information on the general characteristics of the survey sample in total and by province. Overall, the proportion of children aged 6-8 months (the youngest group) and the proportion of children aged 15-17 months (the oldest) were 20 per cent and 22.1 per cent of the survey sample, less than those in the other age groups (28.7 per cent of children aged 9-11 months and 29.2 per cent of children aged 12-14 months). Almost of all surveyed samples of the five provinces shared the same characteristics of child age. Only in PhuYen the percentage of children in the 15-17 months age group (30.6 per cent) was higher than the other groups (proportions of children aged 6-8 months, 9-11 months and 12-14months were 12.5 per cent, 29.6 per cent, and 27.3 per cent respectively).

Beside age, gender of a child is very important when assessing child nutrition in population. Among the surveyed sample, the proportion of male was slightly higher than that of female (51.5 per cent compared with 48.5 per cent), yet in BenTre the proportion of male was less than that of female. The sex-distribution of the survey sample reflects that of the population, according to Vietnam Population Census Survey 1999,

In the survey sample, 56.8 per cent of the children in LaoCai and 13.3 per cent of the children in PhuYen were non-kinh group (ethnic minority). In Vietnam, there are 54 ethnic groups. However, the Kinh make up 87 per cent of the total population. The minority ethnic groups tend to live in mountainous, under-developed areas.

Table 2 also presents information on child' siblings, ethnicity and living with parents. Overall, nearly half of the children had no siblings at that point of time. In PhuYen and LaoCai, the percentages of children having 2 or more siblings were much higher than that in the others (27 per cent and 25.6 per cent compared with 7.8 per cent 12 per cent and 15.8 per cent). The reason is that PhuYen and LaoCai have high proportions of ethnic minority households who usually have many children. The

proportion of children living with both mother and father was 95.7 per cent of the survey sample. The proportions in HungYen and DaNang were slightly lower than that in the others because people in those provinces usually work and live far from their houses.

Characteristics of pregnancy and delivery with the children are shown in Table 3. Weight of birth is the most important index of child nutritional status when delivered. Overall, 8.6 per cent of the children were reported as having a less than 2.5 kilograms weight at birth (low birth weight). The figure was an under-estimate of low birth weight proportion as for 12.1 per cent of the children birth weight was not known or not remembered. However, the proportion of low birth weight children in the survey sample is accurate compared with the UNICEF/WHO estimates of the incidence of low birth weight in 2000 [51]. Regarding antenatal care, nearly 1 in every 5 mothers of the children received no antenatal care during the pregnancy period. The proportions in PhuYen (25 per cent) and LaoCai (41 per cent) were much higher than that in the others (10 per cent in BenTre, 9 percent in HungYen and 6 per cent in DaNang). Overall, half of the children were delivered at hospitals, 1 in every 5 children were delivered at home. The proportions of children delivered at home were very high in LaoCai (55.5 per cent) and PhuYen (29.1 per cent). The figures from Table 2 show that pregnancy and delivery care in PhuYen and LaoCai was not as good as that in the others.

Breastfeeding is the most important nutrition source for children during the first year of life. Among the surveyed children, almost of them were breastfeed (98.1 per cent – Table 4). 96.7 per cent of children were breastfeed at least 6 months. With respect to vaccination status of the children, 79 per cent of children were reported receiving as BCG vaccination, 9.9 per cent did not receive it and 10.5 per cent their parents did not remember or did not know. For measles vaccination, the figures were 80.3 per cent, 11.1 per cent and 8.7 per cent respectively. Overall, the coverage percentages of the vaccinations in the survey sample are less than that shown in Vietnam National Demographic and Health Survey 2002 (the coverage of BCG vaccination among children in Vietnam in 2002 was 93 per cent and that of measles vaccination was 83 per cent [52]). The number of children reported not receiving BCG vaccinations in PhuYen (12 per cent), LaoCai (14 per cent) and HungYen (18 per cent) were higher than that in the others (4.3 per cent in BenTre and 1.8 per cent in DaNang).

Table 5 shows physical health of children. Overall, 5.6 per cent of surveyed children reported diarrhoea and 3.7 per cent reported a high fever with cough lasting at least 24 hours. 4.3 per cent of children were perceived as having long-term health problems. 13 per cent of children were reported to have a life threatening illness or injury. The proportions of children illness are not much different across provinces except diarrhoea and life threatening illnesses/injuries.

Table 2 General characteristics of studied children by province

Characteristics	PhuYen	BenTre	LaoCai	HungYen	DaNang	Total
	n %	n %	n %	n %	n %	n %
Total	399	399	398	399	399	1994
	100	100	100	100	100	100
Age groups (months)						
6 - < 9	50 12.5	91 22.8	90 22.6	90 22.6	77 19.3	398 20.0
9 - < 12	118 29.6	107 26.8	115 28.9	129 32.3	104 26.1	573 28.7
12 - < 15	109 27.3	125 31.3	132 33.2	90 22.6	126 31.6	582 29.2
15 - < 18	122 30.6	76 19.1	61 15.3	90 22.6	92 23.1	441 22.1
Sex						
Male	206 51.6	197 49.4	206 51.8	215 53.9	203 50.9	1027 51.5
Female	193 48.4	202 50.6	192 48.2	184 46.1	196 49.1	967 48.5
Number of siblings						
No	155 38.9	211 52.9	176 44.2	189 47.4	175 43.9	906 45.4
1	135 33.8	157 39.4	120 30.2	162 40.6	161 40.4	735 36.9
2 and more	109 27.2	31 7.8	102 25.6	48 12.0	63 15.8	353 17.7
Ethnicity						
Kinh	346 86.7	399 100	172 43.2	399 100	397 99.5	1713 85.9
Others	53 13.3	0 0	226 56.8	0 0	2 0.5	281 14.1

Living with parents						
<i>With mother and father</i>	388	385	384	374	377	1908
	97.2	96.5	96.5	93.7	94.5	95.7
<i>With either mother or father</i>	11	14	13	20	20	78
	2.8	3.5	3.3	5.0	5.0	3.9
<i>With neither mother nor father</i>	0	0	1	5	2	8
	0	0	0.3	1.3	0.5	0.4

Table 3 Characteristics of pregnancy and delivery with the children by province

Characteristics	PhuYen	BenTre	LaoCai	HungYen	DaNang	Total
	n %	n %	n %	n %	n %	n %
Total	399	399	398	399	399	1994
	100	100	100	100	100	100
Weight of birth(kg)						
<i>2.5 and more</i>	291	372	204	344	371	1582
	72.9	93.2	51.3	86.2	93.0	79.3
<i>Less than 2.5</i>	48	26	25	47	25	171
	12.0	6.5	6.3	11.8	6.3	8.6
<i>Not known, not remembered</i>	60	1	169	8	3	241
	15.0	0.3	42.5	2.0	0.8	12.1
Antenatal visits						
<i>No</i>	99	39	162	35	23	358
	24.9	9.9	40.7	8.8	5.8	18.0
<i>1-2 times</i>	160	132	148	125	78	643
	40.3	33.3	37.2	31.3	19.6	32.3
<i>3 times and more</i>	138	225	88	239	298	988
	34.8	56.8	22.1	59.9	74.7	49.7
Place of delivery						
<i>Hospital</i>	190	200	94	219	293	996
	47.6	50.1	23.6	54.9	73.4	50.0
<i>Commune health centre</i>	77	147	81	162	96	563
	19.3	36.8	20.4	40.6	24.1	28.2
<i>Home</i>	116	16	221	17	6	376
	29.1	4.0	55.5	4.3	1.5	18.9
<i>Other</i>	16	36	2	1	4	59
	4.0	9.0	0.5	0.3	1.0	3.0

Table 4 Characteristics of child care among the children by province

Characteristics	PhuYen	BenTre	LaoCai	HungYen	DaNang	Total
	n %	n %	n %	n %	n %	n %
Total	399 100	399 100	398 100	399 100	399 100	1994 100
Duration of breastfeeding						
<i>No</i>	2 0.5	3 0.8	6 1.5	15 3.8	12 3.0	38 1.9
<i>Less than 6 months</i>	0 0	6 1.5	1 0.3	1 0.3	20 5.0	28 1.4
<i>6 months and more</i>	397 99.5	390 97.7	391 98.2	383 96.0	367 92.0	1928 96.7
Total	399 100	399 100	398 100	399 100	399 100	1994 100
BCG vaccination						
<i>Yes</i>	303 75.9	351 88.0	283 71.1	278 69.7	373 93.5	1588 79.6
<i>No</i>	48 12.0	17 4.3	55 13.8	70 17.5	7 1.8	197 9.9
<i>Not know</i>	48 12.0	31 7.8	60 15.1	51 12.8	19 4.8	209 10.5
Total	399 100	399 100	398 100	399 100	399 100	1994 100
Measles vaccination (for children > 12 months)						
<i>Yes</i>	152 65.8	170 84.6	143 74.1	157 87.2	199 91.3	821 80.3
<i>No</i>	51 22.1	13 6.5	22 11.4	16 8.9	11 5.1	113 11.1
<i>Not know</i>	28 12.1	18 9.0	28 14.5	7 3.9	8 3.7	89 8.7
Total	231 100	201 100	193 100	180 100	218 100	1023 100

Table 5 Physical health of the children by province

Health problems	PhuYen	BenTre	LaoCai	HungYen	DaNang	Total
	n %	n %	n %	n %	n %	n %
Total	399 100	399 100	398 100	399 100	399 100	1994 100
Last 24 hours						
3 or more loose or watery stools	34 8.5	14 3.5	17 4.3	32 8.0	15 3.8	112 5.6
High fever and cough	16 4.0	8 2.0	22 5.5	13 3.3	15 3.8	74 3.7
Perceive of long term health problem	13 3.3	18 4.5	12 3.0	18 4.5	24 6.0	85 4.3
Occurrence of life threatening illnesses or injuries	74 18.6	46 11.5	68 17.1	40 10.0	33 8.3	261 13.1

4.2 Characteristics of the primary caregivers

Table 6 shows information about the primary caregivers of the surveyed children (hereafter called "the caregivers"). It can be seen that almost all caregivers were biological mothers (98.7 per cent). The majority of the caregivers were in the 20 to 29 years age group. Thus, 1 in every 10 caregivers was less than 20 years of age, the proportion was double in LaoCai. Only 2.9 per cent of the caregivers were older than 40 years.

The education levels of the caregivers are presented in Table 6. Overall, the proportion of low educated caregivers (no schooling and not completed primary) was 27.3 per cent. The proportion was highest in LaoCai, and then is PhuYen and BenTre. Even in DaNang, a big city, 10 per cent of the surveyed caregivers were in a low education group. The percentage of caregivers completing high school and above was low (6 per cent in PhuYen, 7.6 per cent in BenTre, and 5.3 per cent in LaoCai). That figure in DaNang is much higher (20.5 per cent).

Ethnicity of the caregivers was the same as that of their children. More than half of the caregivers in LaoCai were non-kinh ethnic groups and the rate in PhuYen was 13.3 per cent.

Table 6 Characteristics of the primary caregivers by province

Health problems	PhuYen	BenTre	LaoCai	HungYen	DaNang	Total
	n %	n %	n %	n %	n %	n %
Total	399 100	399 100	398 100	399 100	399 100	1994 100
Relationship to the child						
<i>Biological mother</i>	397 99.5	397 99.5	392 98.5	388 97.2	393 98.5	1967 98.7
<i>Others</i>	2 0.5	2 0.5	6 1.5	11 2.8	6 1.5	27 1.4
Age						
<i>Less than 20</i>	23 5.8	45 11.3	91 22.9	43 10.8	10 2.5	212 10.6
<i>20 to less than 30</i>	266 66.7	233 58.4	245 61.6	279 69.9	212 53.1	1235 61.9
<i>30 to less than 40</i>	102 25.6	114 28.6	48 12.1	65 16.3	160 40.0	489 24.5
<i>40 and more</i>	8 2.0	7 1.8	14 3.5	12 3.0	17 4.3	58 2.9
Education level						
<i>No schooling/not completed primary</i>	135 33.8	135 33.8	216 54.3	20 5.0	39 9.8	545 27.3
<i>Primary</i>	184 46.1	182 45.6	117 29.4	153 38.4	115 28.8	751 37.7
<i>Secondary</i>	56 14.0	52 13.0	44 11.1	178 44.6	123 30.8	453 22.7
<i>High school</i>	12 3.0	15 3.8	11 2.8	34 8.5	54 13.5	126 6.3
<i>Higher</i>	12 3.0	15 3.8	10 2.5	14 3.5	68 17.0	119 6.0
Ethnic						
<i>Kinh</i>	346 86.7	399 100	172 43.2	399 100	397 99.5	1713 85.9
<i>Others</i>	53 13.3	0 0	226 56.8	0 0	2 0.5	281 14.1

4.3 Characteristics of the households

Table 7 presents information on the main characteristics of the surveyed households. Each household had only one child aged 6-17 months of age involved in this study. Therefore, the total surveyed households was equal to the total of surveyed children (1994).

Majority of the households had 4-6 household members (medium size) living and eating together. 22.6 per cent of the household were of a small size (3 or fewer members) and 17 per cent a large size (7 or more members). Among the 5 provinces, households in HungYen had the smallest average household size. Table 7 also provides information about the highest education levels in the households. When compared with education levels of the caregivers (table 6), the highest education levels in the households were much better. The proportion of household where no one had completed primary school was 7.5 per cent, compared with 27.3 per cent of caregivers. Almost all low educated households were in PhuYen, BenTre and LaoCai.

Household characteristics are shown in table 7. 58.6 per cent of household had walls built of brick or concrete, 47.7 per cent had sturdy roofs and 55 per cent had floors of finished materials. The house characteristics varied province by province. Houses of the households in Ben Tre and Lao Cai had poorer quality than others. In HungYen and DaNang, the three characteristics were not consistent. The floor characteristic in HungYen was not as good as wall and roof. Conversely, the roofs in DaNang were not as good as walls and floors.

Regarding durable assets, table 7 shows information on 4 main assets in the surveyed households. More than half of the households had colour TVs, nearly half had motorbikes, and 1 in every 10 households had refrigerators and phones. The proportions changed across provinces. LaoCai had fewest households having these assets and DaNang had most households having these assets.

Like owning durable assets, using basic services also shows household economic status. Electricity is the most basic service. 15.6 per cent of the households did not use electricity (most settled in LaoCai, PhuYen and BenTre). Very few households in BenTre, LaoCai and BenTre reported using clean sources of drinking water (1.5 per cent, 2.8 per cent and 6.8 per cent respectively). In DaNang the proportion using flush/septic tank toilets was high (84 per cent). The proportions in the other provinces were less than 10 per cent. Half of the households in DangNang used gas or electricity for cooking. The percentages in the others were very low.

Table 7 Characteristics of the studied households by province

Characteristics	PhuYen	BenTre	LaoCai	HungYen	DaNang	Total
	n %	n %	n %	n %	n %	n %
Total	399 100	399 100	398 100	399 100	399 100	1994 100
Household size (person)						
3 and less than	95 23.8	84 21.1	80 20.1	120 30.1	72 18.1	451 22.6
4 – 6	254 63.7	239 59.9	233 58.5	246 61.7	232 58.2	1204 60.4
7 and more	50 12.5	76 19.1	85 21.4	33 8.3	95 23.8	339 17.0
Highest education						
No schooling/not completed primary	34 8.5	38 9.5	71 17.8	3 0.8	3 0.8	146 7.5
Primary school	175 43.9	161 40.4	191 48.0	93 23.3	58 14.5	678 34.0
Secondary school	134 33.6	107 26.8	91 22.9	185 46.4	115 28.8	632 31.7
High school	32 8.0	61 15.3	23 5.8	74 18.6	96 24.1	286 14.3
Above	24 6.0	32 8.0	22 5.5	44 11.0	127 31.8	249 12.5
Housing quality						
Wall – brick or concrete	266 66.7	124 31.1	29 7.3	372 93.2	377 94.5	1168 58.6
Roof – sturdy	241 60.4	42 10.5	157 39.5	357 89.5	155 38.9	952 47.7
Floor – finished material	282 70.7	95 23.8	139 34.9	199 49.9	382 95.7	1097 55.0

Characteristics	PhuYen	BenTre	LaoCai	HungYen	DaNang	Total
	n %	n %	n %	n %	n %	n %
Durable assets						
Colour television	200 50.1	247 61.9	113 28.4	219 54.9	326 81.7	1105 55.4
Motorbike	152 38.1	189 47.4	94 23.6	115 28.8	292 73.2	842 42.2
Phone	17 4.3	52 13.0	4 1.0	16 4.0	162 40.6	251 12.6
Refrigerator	13 3.3	39 9.8	7 1.8	12 3.0	139 34.8	210 10.5
Services						
Electricity	306 76.7	308 77.2	275 69.1	399 100	398 99.8	1686 84.6
Drinking water – cleaned	27 6.8	6 1.5	11 2.8	278 69.7	338 84.7	660 33.1
Toilet facility – Flush/septic tank toilet	30 7.5	39 9.8	12 3.0	24 6.0	335 84.0	440 22.1
Cooking material – Gas/electricity	20 5.0	53 13.3	7 1.8	21 5.3	196 49.1	297 14.9

4.4 Characteristics of the communes

The 1994 surveyed children were distributed in 31 communes. The information on the 31 communes was collected by Community Questionnaire. Among the surveyed communes, there were urban and rural communes (ratio 4:27); low, medium and high population density communes (one third of the communes in each group); coastal, plain and mountainous communes (14, 8 and 9 communes respectively). 18 of the 31 surveyed communes had no ethnic minority groups. There were 4 communes (Pacheo, PhongNien, BanXeo, Tachai) in which at least half of the population was ethnic minority people (H'mong, Nung, Tay).

Table 9 presents information on infrastructure and services of the surveyed communes. Among the communes, there were 6 communes with no public telephone, only 8 communes had piped water systems, 2 communes did not have any shops selling basic provisions. Some communes had no market (3 in 31), some had weekly markets (4 in 31). Most of them had daily markets. The type of toilet used and how rubbish is treated shows the level of development and levels of public health

provision Half of the communes in which households with no toilet were common. Among the surveyed communes, only 6 of them had garbage collection system.

The main economics activities in 25 communes were agriculture for 3 it was fishing and for 3 others handicraft, trade and services (table 10). This is to be expected as 27 of the surveyed communes were in rural areas where agriculture plays a very important role in the life of people.

Table 11 shows distribution of the communes by on-going projects and programmes. At that time, 24 of the 31 communes had programmes on preventing child malnutrition. Those programmes were implemented by both government and non-government organizations. Other programmes like general health or poverty alleviation were also very popular in the surveyed communes. Other child health programmes like preventing ARI, Diarrohea (not including Expanded Programme on Immunization programme that was being run in every commune of Vietnam) were being carried out in more than half of the communes.

Tables 12, 13 and 14 provide information on the health care situation for local people. In Vietnam, commune health centres (CHCs) play a very important role in the government health care system. The CHCs provide basic health care services to people both preventing and treating, especially in rural areas. Fee reduction for the poor and children of CHCs helps reduce the burden of health care expenditure for vulnerable people. Tables 13 shows that 25 CHCs in 31 surveyed CHCs had fee reduction policy for children and 26 CHCs had that policy for the poor. Besides that, the distance from commune to public hospital is one of factors affecting the ability of health care utilization. Among 31 surveyed communes, 45 per cent were settled far from public hospitals (more than 10 kilometers). Private clinics provide more choices for people when seeking health care services. 17 communes in all the surveyed communes had no private clinic, 7 communes had 1 to 5 clinics, and the same number of communes had more than 5 clinics (Table 14). However, 24 communes had at least one medicine shop.

Table 8 Geographic and demographic characteristics of surveyed communes

Characteristics	n	%
Total	31	100
Urban/rural		
<i>Urban</i>	4	12.9
<i>Rural</i>	27	87.1
Sub-ecological zones		
<i>Coastal area</i>	14	45.2
<i>Plain area</i>	8	25.8
<i>Mountainous area</i>	9	29.0
Area (/km²)		
< 10	13	41.9
10 to < 30	8	25.8
30 and more	10	32.3
Population density (person/km²)		
< 200	10	32.3
200 to < 1000	11	35.5
1000 and more	10	32.3
Percentage of ethnic minority people		
None	18	58.1
Less than 5%	4	12.9
5% to less than 50%	5	16.1
50% and more	4	12.9

Table 9 Infrastructure and services of the surveyed communes

Characteristics	n	%
Total	31	100
Services available in commune		
Public telephone	25	80.7
Piped water	8	25.8
Shop selling basic provisions	29	93.6
Market available in commune		
No market	3	9.7
Daily market	24	77.4
Weekly market	4	12.9
Common types of toilet used		
No toilet	16	51.6
Flush/septic tank toilet	19	61.3
Other	10	32.3
How rubbish is treated		
Garbage collection	6	19.4
Burned	24	77.4
Dumped	10	100
Other	14	45.2

Table 10 Distribution of the surveyed communes by main economic activities of the inhabitants

Characteristics	n	%
Agriculture	25	80.6
Fishing	3	9.7
Handicraft, trade, services	3	9.7
Total	31	100

Table 11 On-going projects and programmes in the surveyed communes

Characteristics	n	%
Total	31	100
Preventing child malnutrition	24	77.4
General health programme	25	80.7
Poverty alleviation	26	83.9
Education programme	16	51.6
Other child health	17	54.8

Table 12 Distribution of commune health centres by fee reduction for children and the poor

Characteristics	n	%
Total	31	100
For children	25	100
For the poor	26	100

Table 13 Distribution of the communes by distance to public hospital

Characteristics	n	%
Total	31	100
Less than 2 kilometers	15	48.4
2 to less than 10 kilometers	2	6.5
10 kilometers and more	14	45.2

Table 14 Private clinics and medicine shops in the communes

Characteristics	n	%
Total	31	100
Number of private clinics		
None	17	54.8
1-5	7	22.6
6 and more	7	22.6
Number of medicine shops		
None	7	22.6
1-5	16	51.6
6 and more	8	25.8