

Nutrition and Food Security Survey in Anuradapura District in 2009

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UNICEF
2009**

Key findings of the survey

Nutrition status of children:	
	<ul style="list-style-type: none"> • Among all children in the age group 0–59 months, 14.3% were stunted, 11.9% wasted and 18.4% were underweight • 24.7% of children in the age group 6–59 months were anaemic • The prevalence of LBW of 28.2%.
Nutrition status of women:	
	<ul style="list-style-type: none"> • Prevalence of anaemia among pregnant women was 25.0%. Among lactating women, the prevalence was 25.2% and 22.4% among non-pregnant women
Childhood illness:	
	<ul style="list-style-type: none"> • Among the total group, 15.9% reported to have had symptoms related to respiratory illness and 7.2% had diarrhoea during the specified period In the total sample,
Caring:	
	<ul style="list-style-type: none"> • 35.5% of children under 24 months had been bottle fed • The percentage of children yet to achieve the target of dietary diversity was 59.7 which decreased with increasing income categories and wealth quintiles. • Of the children aged 36-59 months, 77.8% had attended an early childhood educational programme
Health services and sanitation:	
	<ul style="list-style-type: none"> • All children aged 36 months and over, only 77.1% had been given 3 mega doses of Vitamin A • 37.0% of the children who had diarrhoea or respiratory symptoms were obtained services from the government sector, 60.3 percent from the private sector and 2.7% from other sectors • Of all pregnant mothers, 85.7% received iron tablets of whom 84.6% took them daily while 50.0% received Thripasaha and all women had received “poshana malla” • Only 54.4% of households used both improved water source and sanitary means of excreta disposal.
Food security	
	<ul style="list-style-type: none"> • The percentage of households yet to achieve the target of dietary diversity was 74.2% which decline with increasing income and wealth quintiles. • 16.7% of the households in the highest wealth quintile also received Samurdhi beneficiary • 13.0% of households had taken loans within the preceding month to purchase food • 13.7% of the households were ‘food insecure’..

District profile - Anuradhapura

Anuradhapura district is one of the two districts in the North Central province of Sri Lanka. The city of Anuradhapura, the capital of the district is of great historical significance, documented in the ancient chronicles as the city from where the first King of Sri Lanka reigned. It is also of great importance to Buddhists with the venerated Sri Maha Bodhi and great stupas adorning the skyline.

Map of Sri Lanka showing Anuradhapura district is given in Figure 1.

Administratively, the district is divided into 19 Divisional Secretary (DS) divisions and 694 Grama Niladhari (GN) divisions. The local government institutions in the province include one Municipal Council (MC), 8 Urban Councils and 40 Pradeshiya Sabahas¹.

The district includes a land area of approximately 7,200 sq.km. with a population of 886,359 (estimated for 2007). This is an important agricultural district in the country dominated by paddy cultivation. Of the total land area, 12.5 percent is under paddy cultivation, 38 percent under forest cover and 8 percent is covered by reservoirs. These reservoirs are of historical significance as many of them were built by ancient kings, some, over 2500 years ago. They have continued to make significant contributions to the agricultural activities of the province, over centuries. Anuradhapura can be considered as the cradle of irrigated agriculture which still shows the glories of the past.

Of the employed population within the province, 62.8% are engaged in agriculture, 12.4% and 24.8% in the industrial and service sectors.

Health services are provided mainly by the state sector, western type of health services with 68 health care institutions including one General Hospital and 6 Base hospitals within the province. Preventive and promotive health services are provided through 19 Health Unit areas with Medical Officers of Health and field staff².

The literacy rate among males is 93.4% with that for females being 88.3%. The median income level of Rs. 16,133.00 compares well with that at national level (Rs.16,735)³.

A cross sectional descriptive study was carried out to assess the nutritional status of under five children and women in the 15 – 49 year age group and their correlates.

1. Methods

1.1. Selection of households

A sample of 617 households from the district of Anuradhapura were included in the study. The sampling frame used for selection of clusters was the most recently available population estimate – the 2001 census from the Sri Lanka Department of Census and Statistics. Clusters were defined at

¹ Department of Census and Statistics District Statistical Handbook 2007.

² Ministry of Health, Sri Lanka, Annual Health Bulletin, 2007.

³ Department of Census and Statistics, Income and Expenditure survey 2006/07.

the level of a Grama Niladhari (GN) division. GN divisions were identified using the probability proportional to size technique. Within each cluster, 30 households were identified using a systematic sampling procedure.

Map indicating the selected GN divisions is given in Figure 2. .

A household was defined as persons routinely sharing food from the same cooking pot and living in the same compound or physical location. Members of a household need not necessarily be relatives by blood or marriage. All selected households were included in the survey, irrespective of whether there was a child under five.

1.2.Composition of the survey teams

Each survey team included three interviewers and one team leader . A Co-ordinator was recruited to take the overall responsibility for the conduct of the survey. All team leaders and team coordinators were trained by staff from Medical Research Institute (MRI) with experience from past surveys

The three interviewers from the survey team conducted all interviews. The team leader was responsible for selection of households.

1.3.The Household survey included several components.

Administration of the questionnaire : A pre tested questionnaire was administered to the head of the household. Where possible, mothers were interviewed to obtain information on child care practices and maternal nutrition. The minimum age of respondents was 15 years.

Anthropometric assessments: All children aged 0 to 59 months, along with their mothers and any pregnant women in the household, were selected for measurement. All measurements were conducted by team leaders, and standardized procedures for measuring the height/length, weight were used (WHO,1995). Anthropometric measurements were made using UNISCALES and UNICEF measuring boards. For pregnant women, Mid Upper Arm Circumference (MUAC) was measured in addition to height and weight.

Measurement of haemoglobin levels was carried out for all individuals selected for measurements except in children less than six months of age using hemocue method, using capillary blood.

1.4. Supervision and quality assurance

Constant supervision and monitoring of all field activities was attempted. Team leaders monitored the work carried out by the interviewers, while team coordinators monitored team leaders as well as the interviewers. Routine field editing of all questionnaires was conducted by the team leaders.

1.5.Data processing and analysis

EPI Info 6.0 software package was used for data management and entry. Data cleaning was carried out in MS Access by sorting records to filter out extreme values and SQL queries to check logical errors. Consistency checks were run to detect and correct data entry errors.

Data analysis was conducted in Anthro and SPSS. Anthro was used to calculate nutrition z-scores for women and children based on the anthropometric measurements, using WHO standards as the reference value..

2. Results

A total of 601 households were included in the survey, with 7.0 percent of households being in the urban sector and 93.0 percent in the rural sector and none in the estate sector

Of the total 2,676 individuals who were usually resident in the selected households, 775 (29.0 percent) were women aged between 15.0 and 49.9 years. Children aged between 5.0 and 14.9 years was 16.1 percent and 9.5 percent were children aged less than 5 years. There were 134 children aged between 2.0-4.9 years, 5.0 percent of the total population.

2.1. Nutritional Status

2.1.1. Nutritional status of children

The three indices of physical growth that describe the nutritional status of children according to WHO growth standards (WHO, 2006) are : Height-for-age, Weight-for-height and Weight-for-age. Each of the four nutritional status indicators expressed in terms of standard deviations from the median (Z-scores) of the reference population was used to assess the prevalence of stunting (height for age $< -2SD$), wasting (weight for height $< -2SD$), underweight (weight for age $< -2SD$) and overweight (weight for height more than $+2SD$). .

Of the 253 children under five years ,244 were included in the anthropometric assessments. As shown in Table 1, among all children in the age group 0–59 months, 14.3 percent were stunted, 11.9 percent wasted and 18.4 percent were underweight . Severe stunting was seen among 3.0 percent of the total group, with the comparable figure for severe wasting and severe underweight being 1.7 and 5.7 percent. None had weight for height values more than $+2SD$.

Comparisons made between sub groups are based on relatively low numbers within each such group, hence have limitations in interpretation..

The prevalence of stunting was high during the first six months of life and was highest during the second year of life but does not show any consistent pattern with increasing age. Prevalence of underweight does not show any pattern related to age. The percentage of children with wasting was marginally high among females.

No consistent pattern was seen in the prevalence of stunting, wasting and underweight with increasing level of maternal education, monthly household income and wealth quintiles,.

Prevalence of severe stunting, was high in the second and fifth years of life and higher among males (4.4 percent)

Table 1 Prevalence of malnutrition: stunting, wasting, overweight and underweight by background characteristics

Background characteristic	Height-for- age (%)		Weight-for-height (%)			Weight-for-age (%)		Total No of Children
	<-2SD	<-3SD	<-2SD	<-3SD	≥+2SD	<-2SD	<-3SD	
Age of child (months)								
<6	17.9	7.7	10.8	5.4	0.0	10.5	7.9	41
6-11	4.8	0.0	18.2	0.0	0.0	9.1	0.0	24
12-23	20.4	4.1	6.1	2.0	0.0	22.4	8.2	53
24-35	10.2	0.0	14.3	0.0	0.0	18.4	4.1	51
36-47	16.1	0.0	14.3	0.0	0.0	21.4	3.6	32
48-59	11.9	4.8	11.9	2.4	0.0	23.8	7.1	43
Sex of child								
Male	87.7	4.4	10.6	1.8	0.0	18.4	7.9	124
Female	83.8	1.7	13.2	1.8	0.0	18.4	3.5	120
Sector								
Urban	0.0	0.0	7.7	0.0	0.0	0.0	0.0	14
Rural	15.1	3.2	12.1	1.9	0.0	19.5	6.0	230
Mother's education								
No schooling	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1
Primary	14.3	14.3	0.0	0.0	0.0	14.3	14.3	7
Secondary	18.5	6.2	10.6	1.5	0.0	22.7	4.5	69
Passed O' Level	17.2	2.3	12.2	2.4	0.0	18.3	6.1	89
Higher	5.0	0.0	9.1	0.0	0.0	11.4	6.8	46
Monthly household income								
< 9,000	13.1	3.3	14.3	1.6	0.0	20.3	6.3	67
9,000 – 13,999	24.1	10.3	3.4	0.0	0.0	20.7	6.9	30
14,000 – 19,999	11.1	4.4	6.7	2.2	0.0	15.6	8.9	47
20,000 – 31,999	17.3	0.0	14.5	2.9	0.0	20.3	4.3	77
≥ 32,000	0.0	0.0	22.2	0.0	0.0	11.1	0.0	20
Wealth index quintile								
Poorest	12.1	3.0	15.6	3.1	0.0	31.3	6.3	36
Second	9.1	3.0	6.1	0.0	0.0	12.1	6.1	35
Middle	21.7	8.7	16.3	2.3	0.0	27.3	11.4	48
Fourth	17.6	2.0	16.7	3.7	0.0	18.5	7.4	56

Background characteristic	Height-for- age (%)		Weight-for-height (%)			Weight-for-age (%)		Total No of Children
	<-2SD	<-3SD	<-2SD	<-3SD	≥+2SD	<-2SD	<-3SD	
Richest	10.3	0.0	6.2	0.0	0.0	9.2	0.0	69
Overall	14.3	3.0	11.9	1.8	0.0	18.4	5.7	244

2.1.2. Anaemia in children

The haemoglobin levels of 194 children in the age group 6–59 months were assessed using the 'haemocue' method (cut off point - Hb <11.0 gms %). As shown in Table 2, the prevalence of anaemia in this group was 24.7 percent. The highest percentage was seen in during the latter half of infancy (59.1 percent), and this percentage declined with increasing age, with the 48–59 months age group showing the lowest (9.5 percent). Male children showed a higher prevalence (32.0 percent) than females (17.0).

There was no consistent pattern in the prevalence of anaemia with increasing maternal education and indicators of income and wealth.

Table 2 Prevalence of anaemia among children 6-59 months of age by background characteristics

Background characteristic	% of children with Anaemia (Hb<11.0g/dl)*	Number of Children who were investigated for Hb
Age of child (months)		
6-11	59.1	22
12-23	34.0	50
24-35	20.4	49
36-47	12.9	31
48-59	9.5	42
Sex of child		
Male	32.0	100
Female	17.0	94
Sector		
Urban	44.4	9
Rural	23.8	185
Mother's education		
No schooling	0.0	1
Primary	16.7	6
Secondary	26.3	57
Passed O' Level	27.5	69
Higher	28.6	35

Monthly household income		
< 9,000	21.8	55
9,000 – 13,999	20.0	20
14,000 – 19,999	25.0	36
20,000 – 31,999	26.2	65
≥ 32,000	40.0	15
Wealth index quintile		
Poorest	17.9	28
Second	33.3	30
Middle	23.7	38
Fourth	31.8	44
Richest	18.5	54
Overall	24.7	194

2.1.3. Birth weight

Birth weights were obtained from the Child Health Development Records (CHDRs). This study included children born within the 5 years preceding the survey. Considering the newborns with a birth weight of less than 2500 grams as being low birth weight (LBW), the overall prevalence was 19.0 percent. Birth weight distribution by the current age of the child enables comparison of prevalence of LBW among different birth cohorts. There is no definite pattern observed except that the cohort aged between 0-5 months at the time of the study had the highest prevalence of LBW of 28.2 percent.

The prevalence was higher among female newborns than males. Though based on limited numbers, it is seen that there was a decline in the prevalence with increasing levels of mother's education and with increasing income levels and wealth quintiles.

Mean birth weight for the total group was 2.89 ± 0.49 kg with no clear pattern observed between age groups. However, an upward trend was observed in relation to increasing levels of maternal education, income levels and higher wealth quintiles.

Table 3 Prevalence of low birth weight, and mean birth weight among children born in the 5 years preceding the survey, by background characteristics

Background characteristic	Birth Weight				Number of children
	< 2500g (%)	≥ 2500g (%)	Mean (kg)	SD	
Age of child (months)					
0-5	28.2	71.8	2.81	.56	41
6-11	16.7	83.3	2.90	.61	24
12-23	19.6	80.4	2.91	.47	53

Background characteristic	Birth Weight				Number of children
	< 2500g (%)	≥ 2500g (%)	Mean (kg)	SD	
24-35	18.0	82.0	2.87	.49	51
36-47	6.7	93.3	2.94	.36	32
48-59	20.9	79.1	2.92	.48	43
Sex of child					
Male	15.7	84.3	2.93	.52	124
Female	22.4	77.6	2.85	.46	120
Residence					
Urban	14.3	85.7	2.86	.47	14
Rural	19.3	80.7	2.89	.49	230
Mother's education					
No schooling	0.0	100.0	3.11	.	1
Primary	57.1	42.9	2.63	.50	7
Secondary	33.8	66.2	2.79	.56	69
Passed O' Level	12.6	87.4	2.90	.46	89
Higher	8.7	91.3	2.97	.47	46
Monthly household income (n=2592)					
< 9,000	25.4	74.6	2.79	.52	67
9,000 – 13,999	35.7	64.3	2.77	.51	30
14,000 – 19,999	19.1	80.9	2.93	.55	47
20,000 – 31,999	13.0	87.0	2.92	.41	77
≥ 32,000	0.0	100.0	3.10	.42	20
Wealth index quintile					
Poorest	33.3	66.7	2.78	.44	36
Second	27.3	72.7	2.80	.39	35
Middle	17.0	83.0	2.86	.54	48
Fourth	14.5	85.5	2.90	.54	56
Richest	13.0	87.	3.00	.48	69
Overall	19.0	81.0	2.89	.49	244

2.2. Nutritional status of women of 15-49 years

2.2.1. Non pregnant women (using Body Mass Index)

A total of 205 non-pregnant women aged between 15 to 49 years, and with a child under 5 years age were included in the assessment of body mass index . As shown in Table 4.4., of the total sample of non-

pregnant women, 16.9 percent had BMI less than 18.5, 26.4 percent with values between 25 and 29 (overweight) and 3.0 percent, with BMI values 30 or above (obese).

The prevalence of underweight (BMI less than 18.5) was high in the 15 -19 age group (33.3 percent) with a substantial decline in the age groups 20-29 years (23.9 percent) and 30-39 years (8.3 percent). Of all non-pregnant women studied, 29.4 percent were either overweight or obese. This percentage was highest in the 30 – 39 age group. .

There was a declining pattern in the prevalence with increasing income levels and even though the pattern is less consistent with higher wealth quintiles

Table 4 Distribution of non-pregnant women 15-49 years by BMI levels, by background characteristics

Background Characteristics	BMI category (%)				Total women
	Underweight (BMI<18.5)	Normal (BMI=18.5-24.9)	Overweight BMI=25.0-29.0)	Obese (BMI>30.0)	
Age group (years)					
15-19	33.3	55.6	11.1	0.0	10
20-29	23.9	48.9	25.0	2.2	93
30-39	8.3	56.0	31.0	4.8	86
40-49	12.5	68.8	18.8	0.0	16
Sector					
Urban	9.1	54.5	36.4	0.0	11
Rural	17.4	53.7	25.8	3.2	194
Women's education level					
no schooling	0.0	100.0	0.0	0.0	1
primary	0.0	42.9	57.1	0.0	7
Secondary	25.0	45.0	23.3	6.7	62
Passed GCE (O/L)	15.1	55.8	26.7	2.3	88
Higher	13.3	60.0	26.7	0.0	45
Monthly household income					
< 9,000	22.0	48.0	30.0	0.0	51
9,000 – 13,999	11.5	65.4	19.2	3.8	26
14,000 – 19,999	16.7	57.1	23.8	2.4	43
20,000 – 31,999	13.3	53.3	28.3	5.0	61
≥ 32,000	8.3	58.3	33.3	0.0	13
Wealth index quintiles					
Poorest	22.2	55.6	18.5	3.7	27
Second	28.6	39.3	28.6	3.6	29
Middle	25.6	53.8	15.4	5.1	42

Background Characteristics	BMI category (%)				Total women
	Underweight (BMI<18.5)	Normal (BMI=18.5-24.9)	Overweight (BMI=25.0-29.0)	Obese (BMI>30.0)	
Fourth	10.2	59.2	28.6	2.0	49
Richest	8.6	55.2	34.5	1.7	58
Overall	16.9	53.7	26.4	3.0	205

2.2.2. . Nutritional status of pregnant women (using Mid Upper Arm Circumference - MUAC)

Nutritional status of 16 pregnant women were assessed using MUAC. Using this indicator, it was seen that 6.3 percent of this group were undernourished.

2.2.3. Anaemia in women

Three groups of women were included in this component of the study (i). pregnant women (16) (ii.) lactating women (123) (iii.) all non pregnant women including lactating women (201).

Pregnant women

As shown in Table 4.6, overall prevalence of anaemia among this group was 25.0 percent. Number of pregnant women in the sub groups are limited , hence no attempt is made to draw any observations on differences between sub groups.

Lactating women

Among lactating women, the overall prevalence was 25.2 percent. There was a consistent decline in the prevalence with increasing level of mother's education, even though no consistent pattern was seen with the changes in the two income related measures.

All non-pregnant women

The overall prevalence among this group was 22. 4 percent.

Table 5 Prevalence of Anaemia*, among i) pregnant women, ii). lactating women and iii). All non-pregnant women by background characteristics

background characteristic	Pregnant		Lactating		All Non-pregnant	
	Percent	Total No of Women	Percent	Total No of Women	Percent	Total No of Women
Age group (years)						
< 20	0.0		66.7	6	40.0	10
20-29	12.5	8	19.7	61	17.8	90
30-39	37.5	8	26.1	46	24.7	85
40-49	0.0		30.0	10	25.0	16

background characteristic	Pregnant		Lactating		All Non-pregnant	
	Percent	Total No of Women	Percent	Total No of Women	Percent	Total No of Women
Residence						
Urban	100.0	1	16.7	6	18.2	11
Rural	20.0	15	25.6	117	22.6	190
Women's education level						
no schooling			0.0	1	0.0	1
primary	0.0	1	25.0	4	14.3	7
Secondary	0.0	3	25.7	35	26.2	61
Passed GCE (O/L)	42.9	7	31.4	51	24.7	85
Higher	20.0	5	13.3	30	13.3	45
Monthly household income						
< 9,000	20.0	5	25.9	27	28.6	49
9,000 – 13,999	0.0	1	37.5	16	36.0	25
14,000 – 19,999	33.3	3	40.0	25	26.2	42
20,000 – 31,999	40.0	5	17.5	40	16.4	61
≥ 32,000	0.0	2	0.0	8	0.0	13
Wealth quintile of household						
Poorest	0.0	1	38.9	18	34.6	26
Second	100.0	1	35.7	14	31.0	29
Middle	0.0	1	40.0	25	33.3	39
Fourth	28.6	7	9.1	33	10.2	49
Richest	16.7	6	18.2	33	15.5	58
Overall	25.0	16	25.2	123	22.4	201

II

All tables in section II are given in annex 1.

2.3. Childhood Illnesses

Diarrhoea and respiratory infections are the two common illnesses that lead to increased morbidity and mortality among children under 5 years. The present study sought information from respondents related to the occurrence of these two illnesses during the two weeks preceding the interview.

2.3.1. Respiratory illness

Respondents were asked whether their children less than five years of age had one or more symptoms related to respiratory illness (cough, rapid or difficult breathing) during the period of 2 weeks preceding the survey. A child who was having cough with rapid or difficult breathing, was identified as having had symptoms of respiratory illness.

Among the total group, 15.9 percent reported to have had symptoms related to respiratory illness during the specified period (Table A 1)

2.3.2 Diarrhoea

The respondents were asked whether their children under five years had experienced an episode of diarrhea during the two weeks preceding the survey. (Diarrhoea was defined as three or more loose or watery stools per day or blood in stool). If the child had diarrhea, information on giving oral dehydration fluid using the packet 'Jeewani' during the episode of diarrhoea, was inquired into.

Of the total group, 7.3 percent of children who reported to have had diarrhea during the specified period of whom 40 percent had given 'Jeevanie'.

2.4. Dietary intake and feeding practices

2.4.1. Breastfeeding practices

Percentage of children less than 24 months years of age who were ever breastfed, currently breastfed and started breastfeeding within one hour / one day of birth are given in Table A 2 . All children were 'ever breastfed'. Of them, 93.8 percent were breast fed within the first hour of birth and 94.6 percent were currently breast fed , given breast milk in the previous 24 hours .

2.4.2.Complementary feeding and bottle-feeding practices

As shown in Table A 2, of the children 6-8 months 76.9 percent were given breast milk and solid / semi solid foods. In the total sample, 35.5 percent of infants under 24 months had been bottle fed.

2.4.3. Food Consumption among children in the age group 6 – 59 months

Food consumption pattern was based on the information about the food items given to children aged 6 – 59 months on the day preceding the interview. Ten different food items were included in this analysis. Table A 3 shows the percentage of children in this age group who were given the food items within the preceding 24 hours, by background characteristics.

For the total sample, 95.1 percent of the children were given grains/roots/tubers, while 80 to 90 percent were given vitamin A rich fruits and vegetables, other fruits and vegetables, and meat fish/ poultry/ organ meats. Only 32 percent of children received each group, eggs and dairy products. Foods cooked with oil or fat were given to 37.95 percent of children and 37.4 percent had been given fortified food (commercially available cereals) with a much higher percentage (75.4 percent) having been given sugary foods (chocolates, sweets, candies, cakes, biscuits etc.).

2.4.4. Dietary diversity

Dietary diversity is based on the premise that more diverse diets are more likely to provide adequate levels of a range of nutrients.

2.4.5. Individual dietary diversity score for children aged 6-59 months

In this study, individual dietary diversity score for children aged 6 – 59 months was assessed. (according to FANTA⁴) . As shown in Table A 4, for all children in this age group, the IDDS was 5.0 (SD =1.5) .

The dietary diversity score of children aged 6-59 in the households belonging to the highest wealth quintile was used as a “target to be achieved” based on the assumption that poorer households will diversify their food consumption practices as incomes rise, and thereby attempting to follow the consumption pattern of wealthier households. Table A 4 shows the IDDS among children in the highest wealth quintile was 4.8 Based on this value, the percentage of children yet to achieve the target was assessed. This percentage was 59.7 for the total sample. The percentage decreased with increasing income categories and wealth quintiles.

Information on Minimum meal frequency, minimum dietary diversity and minimum acceptable diet for children aged 6-23 months are given in Table A 5.

2.5. Care Practices

Care practices were studied in relation to activities on early childhood development including promoting early learning at household level, practices related to play activities, early childhood education, school enrolment. The age group to be included in the different components in the study of care practices varied, depending on the relevance.

2.5.1. Promoting early learning at household level

As shown in Table A 6, the average number of ' education related activities' undertaken by the children was 5.5. For 97.7 percent of children, an adult was engaged in more than three activities that promoted early learning, during the 3 days preceding the survey. Considering the children under 5 years of age, 11.6 percent were looked after by a child under the age of 10 years, during the week preceding the interview.

2.5.2. Childhood education

⁴ Anne Swindale & Paula Bilinsky Household Dietary Diversity Score (HDDS) for Measurement of Household Food Access: Indicator Guide VERSION 2 September 2006

As shown in Table A 7, of the children aged 36-59 months, 77.8 percent had attended an early childhood educational programme and 99.6 percent of the children who have completed 5 years by 31st January 2009 were enrolled in grade 1 and the same percentage of all children 5-10 years of age were attending Primary School (Table A 8).

Information related to play items and child labour are given in Tables A 9 and A 10 respectively.

2.6. Use of health services

2.6.1. Attendance at Child Welfare Clinic

As shown in Table A 11, 97.8 percent of the children under 5 years had received care at a Child Welfare Clinic (CWC) and 89.8 percent of the children had their Child Health Development Records (CHDRs) with them at the time of interview. Of the mothers who attended the child welfare clinics, 95.0, 93.2 and 91.2 percent received advice on growth, nutrition and early childhood development respectively. Of this group, 5.9 percent of children aged 6-59 months had received at least one packet of thripasha in the previous month.

2.6.2. Vitamin A supplementation for children

Of the group, 82.4 percent of children who had completed 9 months of age had received a mega dose of vitamin with the percentage of children who received a vitamin A mega dose at 18 months, 36 months being 86.8, 76.8 and 78.6 percent respectively. Considering all children aged 36 months and over 77.1 percent had been given 3 mega doses of Vitamin A (Table A 12).

2.6.3. Source of medical care for common childhood illnesses

Source of medical care for those children who reported diarrhoea / respiratory symptoms within the 2 weeks preceding the interview was considered under services provided by the government sector, private sector and other sectors. As shown in Table A 13, 37.0 percent of the total group used services from the government sector, 60.3 percent from the private sector and 2.7 percent from other sectors.

2.6.4. Use of services at antenatal clinics

A total of 92.9 percent of the pregnant mothers had attended antenatal clinics regularly as shown in Table A 14. Of these mothers, 85.7 percent received iron tablets of whom 84.6 percent took them daily.

2.6.5. Food and nutrient supplementation for women

The two main nutrition supplementation programmes aimed at pregnant women are the provision of a food basket ("poshana malla") through the Samurdhi programme implemented by the Ministry of Samurdhi and Poverty Alleviation and the Thripasha programme implemented by the Ministry of Health care and Nutrition. Of all pregnant mothers, 50.0 percent received Thriposaha and all women had received "poshana malla" (Table A 14).

Of the lactating mothers with a child under 6 months of age, 85.7 percent had received "thripasha" (Table A 15) and vitamin A mega dose has been given to 74.1 percent, after childbirth.

2.6.6. Samurdhi beneficiaries

In the households included in the study, there were a total of 109 non pregnant, non lactating women in the age group 15 – 49 years. Of this group, 13.9 percent received Samurdhi benefits being members of

households that were beneficiaries under the *Samurdhi* programme. (Table A 16). Percentage beneficiaries among the pregnant women and lactating women were 5.9 percent and 15.9 percent respectively.

2.7. Water and Sanitation

2.7.1. Use of improved water sources

As shown in Table A 17, 60.7 percent of the households had improved sources of water. The households with piped water inside the dwelling increased with increasing wealth quintiles, from 54.1 percent in the lowest quintile to 72.8 percent in the highest quintile. A similar increase was seen as the income increases. Of the households, 58.2 percent used any one of the appropriate water treatment methods to treat their drinking water with 'straining water through cloth' being the most frequently used method, practiced by 39.2 percent of the households included in the study (Table A 18). The percentage of households that used boiling as a method of making water safe, increased from the lowest wealth quintile to the highest. In some households, more than one method was used

2.7.2. Use of sanitary means of excreta disposal

Use of flush toilets connected to sewage systems, or septic tanks was considered as sanitary means of excreta disposal. As shown in Table A 19, the percentage of households using sanitary means of excreta disposal was 89.4 percent

2.7.3. Use of improved water sources and sanitary means of excreta disposal

Table A 20 shows the distribution of households that use both improved sources of drinking water and sanitary means of excreta disposal. For the district sample, 54.4 percent of households reported used both improved water source and sanitary means of excreta disposal. The percentage of households that had both facilities increased with increasing levels of income and levels of wealth quintiles.

Information on the time consumed to collect water and the person collecting water are given in Tables A 21 and A 22 respectively.

2.8. Food Security and Coping Strategies

2.8.1. Household food consumption

The food items consumed by households were grouped into 11 categories based on the FAO classification of food groups with some modifications to include coconut and sugar separately. These food groups were used in assessing the food consumption pattern as shown in Tables A 23 and A 24 .

Table A 23 provides information on food items consumed within 24 hours preceding the survey. Consumption of rice and rice products, coconuts and sugar was nearly 100 percent and consistent across all sub groups studied. Bread and wheat products were consumed by 35.6 percent of all households. Only 56.2 percent of households consumed nuts/pulses. Of all households, 85.7 percent consumed meat/ poultry/ fish or dry fish, and this percentage showed a marked increase with increasing income and wealth categories. Consumption of eggs was low , 31.2 percent. A total of 66.7 percent of households consumed

fruits. An increasing trend of consumption of fruits was seen with increasing levels of income and higher wealth quintiles.

The percentages of households that consumed milk and milk products was 81.5. Consumption of oils and fats were 90.8 percent and was high across most strata.

Information on the consumption of different foods for at least 5 days during the week preceding the survey is shown in Table A 24. This information indicated the consistency of consumption of the foods and shows important differences from the Table A. 23, which focused on the consumption pattern during the 24 hours preceding the survey.

Similar to the 24-hour consumption pattern, rice, coconut and sugar were consumed by more than 95 percent of the households. However, the consumption of food groups such as bread and wheat products, nuts and pulses, fruits, meat/poultry/fish and dry fish, eggs, and milk/dairy products were markedly lower during the 7-day period.

Table A 25 provides information on the household members who consume three or more main meals a day.

2.8.2. Household dietary diversity

Household dietary diversity score (HDDS) is a proxy measure of households consuming a variety of food indicating a nutritionally 'satisfactory' diet and the method used to make this assessment is given in Table A 26 . This table indicates that the mean HDDS for the total group was 7.7 (SD 1.5). The value shows an increasing trend with increasing income and wealth quintile. t.

The HDDS obtained by the households in the highest wealth quintile category (8.4) was taken as the 'target ' to be achieved and the percentage of households yet to achieve the target was calculated. For the total sample, the percentage of households yet to achieve the target was 74.2 .The percentage showed a consistent decline with increasing income and wealth quintiles.

2.8.3. Expenditure on food and other goods and services

Study of broad categories under which household expenditure for a one-month period showed that considering all households included in the study, 31.8 percent of the total household monthly income was spent on food, and 54.2 percent on other goods and services (Table A 27).

Type of food groups by source is given in Table A 28. Food availability at household, food stocks and food aid are given in tables A 29, 30 and 31 respectively.

2.8.3. Coping Strategies

During the periods when there were limitations in food availability, different coping strategies were adopted by households (Table A 32). Use of such strategies during the month preceding the survey was studied paying attention to the frequency of practice. Of the total number 20.5 percent of households had adopted one or more coping strategies. Of them, more of the households adopted food related coping strategies compared to non-food coping strategies.

The common strategies adopted were: to rely on less preferred food (15.8 percent) and purchased food on credit (15.8 percent). Between 10 - 12 percent, had borrowed food or reduced meal size. The main non-food strategies adopted were : borrowing money from relatives/neighbours (10.8 percent), pawning jewellery (6.7 percent) and using savings (23.6 percent).

The distribution of the households that adopted a specific food-related coping strategy by background characteristics is shown in Table A 33. However, there are limitations in drawing conclusions due to the limited number of households in the sub groups.

Taking loans is a commonly adopted strategy to cope with difficult situations, whether it be food related or not. As shown in Table A 34, 23.5 percent of households had taken loans within the preceding month which were used for: income generation activities (29.3 percent), repair damaged house (15.7 percent) and for purchase food (13.0 percent)

2.8.4. Food insecurity

A state of food insecurity exists when nutritionally adequate and safe foods are not readily available or there is inability to acquire acceptable foods. In this study, food insecurity levels were determined according to the method described by the World Food Programme (WFP), given in annex 2..

2.8.4.1. Household food consumption adequacy score (HFCAS)

As shown in Table A 35, the mean HFCAS for all households was 63.9(SD=12.6). The scores differed between sectors, highest in the urban sector,71.4% and lower in the *rural* sector, 63.2% . Study of HFCAS categories indicates that none of the households had poor food consumption, 1.8percent were borderline and 98.2 percent , had adequate food consumption. .

2.8.4.2. Food insecurity categories

Food insecurity levels obtained by cross-tabulating food access categories (as indicated by percentage expenditure on food) and food consumption categories for households with a child aged less than 5 years (n= 243) are presented in Table 36. Of these households, 0.4 percent were found to be 'severely food insecure' with comparable percentages for 'moderately insecure' and 'secure' were 13.2 and 86.3 percent respectively.

In interpreting food insecurity, the two categories, moderately and severely food insecure categories were considered together. There were no food insecure households in the urban sector. The percentage of secure households increased with increasing number of members in the household from 71.7 percent in households with 1-2 persons to 90.3 percent in those with 7 or more (Table A 37).

Considering the key socio-economic indicators included in this study, the marked influences such indicators have on food insecurity is clearly shown. There was a consistent upward trend in the percentage of food secure households, with increasing level of education of the head of the household and increasing income levels and wealth quintiles. However, these observations have to be interpreted with caution as numbers in some of the such categories are small.

ANNEX I

Table A.1 : Percentage of under-5 children who reported symptoms of respiratory illness and diarrhoea by background characteristics

background characteristic	Total number of children	% reported symptoms of		Total No. of children reported Diarrhoea	% Given Jeewanee *
		Respiratory illness	Diarrhoea		
Age of child (months)					
<6	39	15.4	12.8	5.0	0.0
6-11	23	21.7	13.0	3.0	33.3
12-23	51	3.9	5.9	3.0	33.3
24-35	50	6.0	8.0	4.0	50.0
36-47	30	20.0	10.0	3.0	33.3
48-59	42	11.9	7.1	3.0	0.0
Sex of child					
Male	120	12.5	8.3	10.0	20.0
Female	115	10.4	9.6	11.0	30.0
Sector					
Urban	13	15.4	0.0	0.0	0.0
Rural	222	11.3	9.5	21.0	25.0
Mother's education					
No schooling					
Primary	1	0.0	0.0	0.0	0.0
Secondary	7	14.3	14.3	1.0	100.0
Passed O' Level	65	10.8	16.9	11.0	27.3
Higher	86	11.6	7.0	6.0	16.7
Monthly household income	45	15.6	2.2	1.0	0.0
< 9,000					
9,000 – 13,999	67	9.0	13.4	9.0	0.0
14,000 – 19,999	30	13.3	3.3	1.0	0.0
20,000 – 31,999	46	10.9	8.7	4.0	66.7
≥ 32,000	71	12.7	8.5	6.0	33.3
Wealth quintile	19	15.8	5.3	1.0	100.0
Poorest					
Second	36	5.6	16.7	6.0	0.0
Middle	33	6.1	15.2	5.0	40.0
Fourth	44	11.4	2.3	1.0	100.0
Richest	53	13.2	7.5	4.0	0.0

background characteristic	Total number of children	% reported symptoms of		Total No. of children reported Diarrhoea	% Given <i>Jeewanee</i> *
		Respiratory illness	Diarrhoea		
Overall	69	15.9	7.2	5.0	40.0

Table A2 : . Infant and young child feeding practices by background characteristics.

background characteristic	Percent						No. of children under 2 year
	Ever breastfed	Currently breastfed	Initiated breastfeeding within one hour of birth*	initiated breastfeeding within one day of birth	Introduced complementary food among infants 6-8 months	bottle-fed	
Age of child in months							
<6	100.0	100.0	94.9	94.9	0.0	14.3	41
6-11	100.0	95.5	91.3	95.7	0.0	47.8	24
12-23	100.0	90.2	94.1	100.0	0.0	44.2	53
Sex of child							
Male	100.0	95.1	88.7	95.2	71.4	39.0	64
Female	100.0	94.1	100.0	100.0	83.3	31.4	54
Residence							
Urban	100.0	100.0	100.0	100.0	0.0	20.0	5
Rural	100.0	94.4	93.5	97.2	76.9	36.2	113
Estate							
Maternal education							
no schooling	100.0	100.0	100.0	100.0	0.0	0.0	1
Primary	100.0	100.0	50.0	50.0	0.0	50.0	2
Secondary	100.0	91.4	94.4	97.2	50.0	42.9	36
Passed GCE (O/L)	100.0	97.7	93.0	97.7	80.0	34.2	43
Higher	100.0	95.0	100.0	100.0	80.0	19.0	23
Monthly household income							
< 9,000	100.0	92.3	88.5	96.2	100.0	100.0	26
9,000 – 13,999	100.0	88.2	94.1	100.0	66.7	100.0	17
14,000 – 19,999	100.0	91.7	92.0	92.0	33.3	100.0	27
20,000 – 31,999	100.0	100.0	97.2	100.0	100.0	100.0	37
≥ 32,000	100.0	100.0	100.0	100.0	100.0	100.0	9
Wealth quintile of household							
Poorest	100.0	95.2	95.2	100.0	33.3	40.9	22
Second	100.0	91.7	100.0	100.0	0.0	41.7	12
Middle	100.0	92.6	85.7	89.3	75.0	40.0	28
Fourth	100.0	92.3	96.2	100.0	100.0	24.0	27
Richest	100.0	100.0	96.2	100.0	100.0	34.6	29
Overall	100.0	94.6	93.8	97.3	76.9	35.5	118

Table A 3 : Percentage of children aged 6-59 months, who were given different food groups on the day preceding the interview, by background characteristics

[illegible]

Table A4 : Individual dietary diversity score in children (IDDS) according to background characteristics fro children 6 – 59 months.

Background characteristic	IDDS (range 0-8)		% of individuals yet to achieve the target	Total number of children
	Mean	SD		
Age of child in months				
6-11	4.2	2.0	79.2	19
12-23	5.1	1.8	60.4	32
24-35	5.2	1.5	62.7	32
36-47	5.5	1.6	50.0	16
48-59	4.8	1.8	62.8	27
Sex of child				
Male	4.9	1.8	64.8	68
Female	5.0	1.7	59.2	58
Residence				
Urban	5.5	1.5	72.7	8
Rural	5.0	1.8	61.5	118
Estate	.	.		
Maternal education				
no schooling	6.0	.	0.0	0
Primary	5.5	1.6	50.0	3
Secondary	4.8	1.8	64.4	38
Passed GCE (O/L)	4.9	1.7	66.2	47
Higher	5.1	2.0	56.4	22
Monthly household income				
< 9,000	4.8	1.5	67.2	39
9,000 – 13,999	5.0	1.7	60.0	12
14,000 – 19,999	4.5	2.1	65.8	25
20,000 – 31,999	5.2	1.8	59.7	40
≥ 32,000	6.0	1.3	41.2	7
Wealth quintile of household				
Poorest	4.2	2.0	74.2	23
Second	5.1	1.8	71.0	22
Middle	5.2	1.5	69.2	27
Fourth	5.5	1.6	60.9	28
Richest	4.8	1.8	46.4	26
Overall	5.0	1.7	62.1	126

Table A 5 : Minimum meal frequency, dietary diversity, and minimum acceptable diet in children 6-23 months, by background characteristics

Background characteristic	Minimum meal frequency		Minimum Dietary diversity score, Mean (range 0-7)	% with minimal dietary diversity (≥4 groups)	Percentage of minimum acceptable diet	Total no. of children
	Breastfed	Non-Breastfed				
Age group in months						
6-8	81.8	50.0	3.5	61.5	53.8	13
9-11	50.0	0.0	4.3	81.8	27.3	11
12-14	46.7	0.0	4.6	82.4	41.2	17
15-17	70.0	0.0	5.0	90.9	54.5	11
18-20	53.8	0.0	4.1	73.3	40.0	15
21-23	50.0	0.0	5.3	100.0	40.0	10
Sex of child						
Male	56.4	16.7	4.5	80.0	42.2	45
Female	60.7	0.0	4.4	81.3	43.8	32
Residence						
Urban	50.0	10.0	4.5	100.0	50.0	2
Rural	58.5	0.0	4.4	80.0	42.7	75
Estate	0.0	0.0	.	0.0	0.0	0
Maternal education						
no schooling	100.0	0.0	5.0	100.0	100.0	1
Primary	0.0	0.0	6.0	100.0	0.0	1
Secondary	45.5	0.0	4.3	69.2	26.9	26
Passed GCE (O/L)	70.8	0.0	4.5	88.0	60.0	25
Higher	57.1	50.0	4.2	75.0	43.8	16
Monthly household income						
< 9,000	60.0	50.0	4.7	94.1	52.9	17
9,000 – 13,999	60.0	0.0	3.7	71.4	28.6	7
14,000 – 19,999	53.3	0.0	3.8	61.1	27.8	18
20,000 – 31,999	61.5	0.0	4.7	81.5	51.9	27
≥ 32,000	60.0	0.0	5.2	100.0	50.0	6
Wealth quintile of household						
Poorest	53.3	0.0	3.9	82.4	35.3	17
Second	42.9	0.0	4.4	75.0	25.0	8
Middle	68.8	0.0	4.2	73.7	47.4	19
Fourth	50.0	33.3	4.5	82.4	41.2	17
Richest	66.7	0.0	5.2	87.5	56.3	16
Overall	58.2	10.0	4.4	80.5	42.9	77

Table A6 :. Participation of adult members in activities of children aged 2 to 5 years, and percentage of under 5 children cared for by a child <10 years, by background characteristics

Background characteristic	Household adult member involved		father's involvement		Total children 2- up to 5 years	% of children left under the care of <10 year old child in the past week	Total Children under 5 years
	Mean No. of activities	% of children with four or more activities	Mean No. of activities	% of children with at least one activity			
Age in months							
24-35	5.5	97.7	1.9	53.5	43	11.6	43
36-47	5.8	100.0	1.7	53.8	26	7.7	26
48-59	5.7	97.3	1.4	48.6	37	21.6	37
Sex of child							
Male	5.6	95.9	1.6	51.0	49	8.4	83
Female	5.7	100.0	1.7	52.6	57	16.0	81
Residence							
Urban	5.9	100.0	1.1	50.0	8	18.2	11
Rural	5.6	98.0	1.7	52.0	98	11.8	153
Estate	0.0	0.0	0.0	0.0	0	0.0	0
Maternal education							
no schooling	0.0	0.0	0.0	0.0	0	0.0	0
primary	3.5	100.0	0.0	0.0	3	25.0	4
Secondary	5.2	100.0	1.9	53.6	28	8.0	50
Passed GCE (O/L)	5.5	97.7	1.3	46.5	43	8.3	60
Higher	5.7	93.8	1.8	56.3	16	16.7	30
Monthly household income							
< 9,000	5.8	100.0	1.9	57.6	33	15.9	44
9,000 – 13,999	5.4	92.3	2.2	69.2	13	9.1	22
14,000 – 19,999	5.7	100.0	1.7	44.4	18	10.3	29
20,000 – 31,999	5.6	96.9	0.8	34.4	32	11.1	54
≥ 32,000	5.9	100.0	3.1	77.8	9	14.3	14
Wealth quintile of household							
Poorest	3.8	100.0	0.9	36.4	11	16.7	18
Second	5.3	100.0	2.0	63.2	19	12.5	24
Middle	5.7	100.0	1.7	36.8	19	14.7	34
Fourth	5.6	91.7	1.4	50.0	24	13.2	38
Richest	5.6	100.0	1.9	60.6	33	8.0	50

Background characteristic	Household adult member involved		father's involvement		Total children 2- up to 5 years	% of children left under the care of <10 year old child in the past week	Total Children under 5 years
	Mean No. of activities	% of children with four or more activities	Mean No. of activities	% of children with at least one activity			
Overall	5.5	97.7	1.9	53.5	43	11.6	43

Table A 7 : Percentage of children aged 36-59 months who were attending an early childhood education programme, by background characteristics

Background characteristic	Percent attending Preschool or Daycare	Mean	SD	Total number of children
Age group in months				
36-47	57.7	4.9	0.7	26
48-59	91.9	4.7	0.9	37
Sex of child				
Male	75.8	4.8	0.4	33
Female	80.0	4.7	1.2	30
Residence				
Urban	100.0	5.0	0.0	3
Rural	76.7	4.8	0.9	60
Estate				
Maternal education				
no schooling	0.0	0.0	0.0	1
primary	95.2	0.0	0.0	21
Secondary	68.0	4.6	1.1	25
Passed GCE (O/L)	87.5	4.8	0.8	8
Higher	0.0	5.0	0.0	1
Monthly household income				
< 9,000	75.0	4.9	0.3	16
9,000 – 13,999	77.8	4.7	0.5	9
14,000 – 19,999	75.0	4.8	0.4	12
20,000 – 31,999	76.2	4.6	1.5	21
≥ 32,000	100.0	5.0	0.0	4
Wealth quintile of household				
Poorest	75.0	4.8	0.4	8
Second	61.5	4.3	1.8	13
Middle	100.0	5.2	0.6	10
Fourth	71.4	4.8	0.4	14

Background characteristic	Percent attending Preschool or Daycare	Mean	SD	Total number of children
Richest	83.3	4.8	0.6	18
Overall	77.8	4.8	0.9	63

background characteristic	Percentage of children of primary school age currently attending Primary School	No. of children of primary school age (5-10 years)	% entered Grade 1	No. of Children Completed 5 yrs By 31 st of Jan 2009
Sex of child				
Male	99.1	8	99.1	8
Female	100.0	8	100.0	8
Residence				
Urban	100.0	1	100.0	1
Rural	99.6	15	99.6	15
Estate				
Monthly household income				
< 9,000	100.0	1	100.0	1
9,000 – 13,999	100.0	4	100.0	4
14,000 – 19,999	100.0	3	100.0	3
20,000 – 31,999	100.0	4	100.0	4
≥ 32,000	100.0			
Wealth quintile of household				
Poorest	100.0	4	100.0	4
Second	100.0	3	100.0	3
Middle	100.0	3	100.0	3
Fourth	98.5	2	98.5	2
Richest	100.0	4	100.0	4
Overall	99.6	16	99.6	16

Background characteristic	percentage of children who play with:					Total number of children <5 year
	household objects	outdoor material	homemade toys	ready-made toys	3 or more types of play items	
Age group in months						
24-35	81.0	85.7	83.3	85.7	81.4	43
36-47	73.1	73.1	96.2	88.5	76.9	26
48-59	83.8	81.1	91.9	91.9	83.8	37
Sex of child						

Background characteristic	working outside household in the previous week			working outside household in the last year		Total number of children aged 5-14 year
	paid work	unpaid work	mean hours per week	paid work	unpaid work	
Age group in years						
9-11	0.0	0.0	0.0	0.0	0.0	70
12-14	1.4	0.0	0.0	1.4	0.0	69
Sex of child						

Background characteristic	working outside household in the previous week			working outside household in the last year		Total number of children aged 5-14 year
	paid work	unpaid work	mean hours per week	paid work	unpaid work	
Male	0.0	0.0	0.0	0.0	0.0	83
Female	1.0	0.0	0.0	1.0	0.0	104
Residence						
Urban	0.0	0.0	0.0	0.0	0.0	13
Rural	0.6	0.0	0.0	0.6	0.6	174
Estate	0.0	0.0	0.0	0.0	0.0	0
Monthly household income						
< 9,000	2.0	0.0	0.0	2.0	0.0	51
9,000 – 13,999	0.0	0.0	0.0	0.0	0.0	25
14,000 – 19,999	0.0	0.0	0.0	0.0	0.0	29
20,000 – 31,999	0.0	0.0	0.0	0.0	0.0	39
≥ 32,000	0.0	0.0	0.0	0.0	0.0	11
Wealth quintile of household						
Poorest	3.4	0.0	0.0	3.4	0.0	29
Second	0.0	0.0	0.0	0.0	0.0	23
Middle	0.0	0.0	0.0	0.0	0.0	49
Fourth	0.0	0.0	0.0	0.0	0.0	56
Richest	0.0	0.0	0.0	0.0	0.0	30
Overall	0.5	0.0	0.0	0.5	0.5	187

Table A 11: Percentage of children less than 5 years of age who received care at child welfare clinic, by background characteristics

background characteristic		Availability of CHDR	Children Attended CWC	% of children whose mothers received advice on			% Received Thripasha*	Total No. of Children
		%	%	Growth	Nutritional status	ECCD		
Age group in months	<6	90.2	91.9	93.8	90.3	86.7	0.0	
	6-11	87.5	100.0	95.5	95.5	90.9	4.2	24
	12-23	94.3	100.0	96.1	96.1	92.0	5.7	53
	24-35	86.3	100.0	95.7	93.6	91.1	9.8	51
	36-47	93.8	100.0	93.5	93.5	93.5	3.1	32
	48-59	86.0	94.7	94.7	89.5	92.1	4.7	43
Sex of child	Male	90.3	97.2	95.2	95.2	92.2	7.6	105
	Female	89.2	98.3	94.8	91.3	90.4	4.1	98
Residence	Urban	92.9	83.3	90.9	90.9	88.9	0.0	11
	Rural	89.6	98.6	95.2	93.3	91.3	6.3	192
	Estate							
Maternal education**	no schooling	100.0	100.0	100.0	100.0	100.0	0.0	1
	primary	100.0	100.0	100.0	100.0	100.0	16.7	6
	Secondary	95.7	100.0	98.5	94.0	90.9	6.8	59
	Passed GCE (O/L)	91.0	98.8	95.0	93.7	93.6	5.6	71
	Higher	95.7	93.0	90.2	90.2	87.2	0.0	39
Monthly household income*** (up to 9000	92.5	98.4	92.1	91.9	88.7	5.2	58
	9000-13999	93.3	100.0	92.9	96.4	92.6	5.0	20
	14000-19999	91.5	100.0	97.7	90.7	92.9	10.5	38
	20000-31999	85.7	97.1	97.1	94.1	90.9	6.0	67
	32000 +	85.0	88.9	93.8	93.8	93.8	0.0	17
Wealth quintile of household	Poorest	97.2	97.0	94.3	94.3	91.4	6.5	31
	Second	94.3	100.0	94.1	94.1	90.9	9.7	31
	Middle	85.4	100.0	97.7	93.0	88.4	15.4	39
	Fourth	87.5	96.2	91.7	89.6	87.2	2.2	46
	Richest	88.4	96.7	96.7	95.0	96.6	0.0	56
Overall		89.8	97.8	95.0	93.2	91.2	5.9	203

Table A 12 : Percentage distribution of children who received Vitamin A mega dose supplement at 9, 18 and 36 months, by background characteristics.

background characteristic		Children 9-59 months		Children 18-59 months		Children 36-59months			Of the children 36-59, percentage never received Vit A.
		Number of children	% received Vit A at 9 months	Number of children	% received Vit A at 18 months	Number of children	% received Vit A at 36 month	% received 3 doses of Vit A	
Sex of child	Male	93	88.2	68	89.7	36	86.1	86.1	8.3
	Female	90	86.7	76	84.2	34	70.6	67.6	3.1
Residence	Urban	10	100.0	8	100.0	3	100.0	100.0	0.0
	Rural	173	86.7	136	86.0	67	77.6	76.1	6.2
	Estate	0	0.0	0	0.0	0	0.0	0.0	0.0
Maternal education	no schooling	1	100.0	5	100.0	0	0.0	0.0	0.0
	primary	6	100.0	41	90.2	2	100.0	100.0	0.0
	Secondary	56	85.7	48	79.2	22	86.4	81.8	4.5
	Passed GCE (O/L)	63	82.5	28	92.9	24	75.0	75.0	4.5
	Higher	34	94.1	1	0.0	12	83.3	83.3	7.7
Monthly household income	up to 9000	53	90.6	45	86.7	20	75.0	75.0	15.0
	9000-13999	17	94.1	15	93.3	9	77.8	77.8	12.5
	14000-19999	34	79.4	25	84.0	12	75.0	75.0	0.0
	20000-31999	60	85.0	44	86.4	24	87.5	83.3	0.0
	32000 +	16	93.8	12	83.3	4	50.0	50.0	0.0
Wealth quintile of household	Poorest	27	88.9	20	85.0	8	87.5	87.5	12.5
	Second	31	83.9	26	80.8	16	68.8	62.5	14.3
	Middle	33	84.8	26	80.8	10	70.0	70.0	0.0
	Fourth	42	78.6	32	87.5	16	75.0	75.0	6.3
	Richest	50	98.0	40	95.0	20	90.0	90.0	0.0
Overall		183	87.4	144	86.8	70	78.6	77.1	5.9

Table A 13 : Source of care provider for children who had diarrhoea or respiratory illness during 2 weeks preceding survey, by background characteristics

background characteristic		Source of provider (%)			Number of children who had diarrhoea or respiratory illness in previous 2 weeks
		Gov. sector	Private sector	Other	
Age of child in months	<6	25.0	75.0	0.0	14
	6-11	50.0	50.0	0.0	9
	12-23	29.4	58.8	11.8	18
	24-35	44.4	55.6	0.0	12
	36-47	27.3	72.7	0.0	14
	48-59	50.0	50.0	0.0	18
Sex of child	Male	32.5	65.0	2.5	48
	Female	42.4	54.5	3.0	37
Residence	Urban	20.0	80.0	0.0	5
	Rural	38.2	58.8	2.9	80
	Estate	0.0	0.0	0.0	5
Mother's education	No schooling	100.0	0.0	0.0	3
	Primary	40.0	60.0	0.0	30
	Secondary	45.5	45.5	9.1	26
	Passed O' Level	20.0	80.0	0.0	15
	Higher	100.0	0.0	0.0	3
Monthly household income	up to 9000	78.9	21.1	0.0	24
	9000-13999	28.6	71.4	0.0	7
	14000-19999	37.5	50.0	12.5	18
	20000-31999	16.0	84.0	0.0	30
	32000 +	0.0	100.0	0.0	6
Wealth quintile of household	Poorest	70.0	20.0	10.0	13
	Second	66.7	33.3	0.0	11
	Middle	50.0	50.0	0.0	13
	Fourth	26.7	66.7	6.7	19
	Richest	14.8	85.2	0.0	29
Overall		37.0	60.3	2.7	85

Table A 14: Percent of pregnant mothers who attended antenatal clinics, and who received “poshana malla”, “thriposha” and Iron tablets, by background characteristics.

background characteristic		Regular ANC Visits*		“poshana malla”,		“thripasha”		Iron tablets			Total No. of Pregnant women
		Percent	Total No of Mothers	Percent	Total No of Mothers	Percent	Total No of Mothers	percent received tablets	Of the received, percent took daily	Total No of Mothers	
Residence	Urban	100.0	1	100.0	2	0.0	2	100.0	100.0	1	2
	Rural	92.3	13	100.0	12	58.3	12	84.6	83.3	13	15
	Estate	0.0	0	0.0	0	0.0	0	0.0	0.0	0	0
Maternal education	no schooling	0.0	0	0.0	0	0.0	0	0.0	0.0	0	0
	primary	100.0	1	100.0	1	0.0	1	100.0	100.0	1	1
	Secondary	100.0	2	100.0	1	100.0	1	100.0	100.0	2	3
	Passed GCE (O/L)	100.0	6	100.0	6	50.0	6	83.3	83.3	6	7
	Higher	80.0	5	100.0	6	50.0	6	80.0	75.0	5	6
Monthly household income	up to 9000	100.0	5	100.0	5	40.0	5	80.0	80.0	5	5
	9000-13999	100.0	1	100.0	1	100.0	1	100.0	100.0	1	1
	14000-19999	100.0	3	100.0	2	50.0	2	100.0	100.0	3	3
	20000-31999	100.0	3	100.0	3	66.7	3	100.0	100.0	3	5
	32000 +	50.0	2	100.0	3	33.3	3	50.0	0.0	2	3
Wealth quintile of household	Poorest	100.0	1	100.0	1	100.0	1	100.0	100.0	1	1
	Second	100.0	1	100.0	1	0.0	1	0.0	100.0	1	1
	Middle	100.0	1	100.0	1	0.0	1	100.0	100.0	1	1
	Fourth	100.0	6	100.0	5	40.0	5	100.0	83.3	6	7
	Richest	80.0	5	100.0	6	66.7	6	80.0	75.0	5	7
Overall		92.9	14	100.0	14	50.0	14	85.7	84.6	14	17

*(First visits were excluded)

Table A 15 : Percentage of lactating mothers who received “thripasha” and Vitamin A by background characteristics

background characteristic		“thripasha” (child <6 months)		Vitamin A mega dose (child <24 months)	
		Percent	Total No of Women	Percent	Total No of Women
Sector	Urban	66.7	3	50.0	4
	Rural	66.7	30	61.8	55
	Estate	0.0	0	0.0	0
Maternal education	no schooling	0.0	0	0.0	0
	primary	100.0	1	0.0	1

background characteristic		“thripasha” (child <6 months)		Vitamin A mega dose (child <24 months)	
		Percent	Total No of Women	Percent	Total No of Women
	Secondary	66.7	9	64.3	14
	Passed GCE (O/L)	68.8	16	57.1	28
	Higher	66.7	6	73.3	15
Monthly household income	up to 9000	75.0	8	46.2	13
	9000-13999	60.0	10	71.4	14
	14000-19999	62.5	8	73.3	15
	20000-31999	83.3	6	38.5	13
	32000 +	0.0	1	100.0	4
Wealth quintile of household	Poorest	75.0	4	66.7	12
	Second	75.0	4	50.0	6
	Middle	66.7	9	76.9	13
	Fourth	57.1	7	57.1	14
	Richest	66.7	9	50.0	14
Overall		66.7	33	61.0	59

Table A 16 : “Samurdhi” beneficiaries” among women 15-49 years by background characteristics

background characteristic		Pregnant		Lactating		Non-pregnant & non-lactating	
		Percent	Total No of Women	Percent	Total No of Women	Percent	Total No of Women
Residence	Urban	0.0	2	0.0	6	20.0	5
	Rural	6.7	15	16.7	120	13.5	74
	Estate	0.0	0	0.0	0	0.0	0
Maternal education	no schooling	0.0	0	0.0	0	0.0	0
	primary	0.0	1	100.0	1	0.0	3
	Secondary	33.3	3	50.0	4	11.5	26
	Passed GCE (O/L)	0.0	7	16.7	36	17.1	35
	Higher	0.0	6	11.3	53	13.3	15
Monthly household income	up to 9000	20.0	5	39.3	28	13.0	23
	9000-13999	0.0	1	23.5	17	0.0	9
	14000-19999	0.0	3	7.7	26	17.6	17
	20000-31999	0.0	5	2.5	40	19.0	21
	32000 +	0.0	3	12.5	8	20.0	5
Wealth quintile	Poorest	100.0	1	36.8	19	0.0	8

background characteristic		Pregnant		Lactating		Non-pregnant & non-lactating	
		Percent	Total No of Women	Percent	Total No of Women	Percent	Total No of Women
of household	Second	0.0	1	7.1	14	6.7	15
	Middle	0.0	1	14.8	27	26.7	15
	Fourth	0.0	7	18.2	33	12.5	16
	Richest	0.0	7	6.1	33	16.0	25
Overall		5.9	17	15.9	126	13.9	79

Table A 17 : Distribution of households according to main source of drinking water, and households with improved source of water, by background characteristics

Background Characteristics		Main source of drinking water								Unimproved sources	Improved source of drinking water*
		Improved sources									
		Piped into dwelling	Piped into yard or plot	Public tap /standpipe	Tubewell/ borehole	Protected well	Protected spring	Rainwater collection	Bottled water		
Sector	Urban	54.8	19.0	14.3	2.4	2.4	0.0	0.0	7.1	0.0	100.0
	Rural	5.0	11.4	4.8	3.8	29.9	2.5	0.4	0.0	42.2	57.8
	Estate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Income group	< 9,000	6.3	12.6	3.7	4.2	25.8	1.6	0.5	0.0	45.3	54.7
	9,000 -13,999	7.4	14.8	4.9	3.7	27.2	2.5	1.2	0.0	38.3	61.7
	14,000 – 19,999	1.9	10.4	6.6	0.9	32.1	1.9	0.0	0.9	45.3	54.7
	20,000 – 31,999	11.6	11.6	4.1	4.1	29.5	4.1	0.0	0.7	34.2	65.8
	≥ 32,000	23.3	6.7	15.0	3.3	25.0	0.0	0.0	1.7	25.0	75.0
Wealth index quintiles	Poorest	3.0	12.1	3.0	3.0	31.3	1.0	0.0	1.0	45.5	54.5
	Second	3.0	19.0	8.0	6.0	24.0	0.0	0.0	0.0	40.0	60.0
	Middle	4.1	11.4	4.9	1.6	32.5	2.4	0.8	0.0	42.3	57.7
	Fourth	7.7	10.5	6.3	4.2	24.5	2.1	0.7	0.7	43.4	56.6
	Richest	21.3	8.8	5.1	3.7	27.9	5.1	0.0	0.7	27.2	72.8
Overall		8.5	12.0	5.5	3.7	28.0	2.3	0.3	0.5	39.3	60.7

Table A 18 : Distribution of households according to drinking water treatment methods used, by background characteristics*

Background Characteristics		Water treatment method used in the household								Appropriate water treatment method *	Total No of household
		None	Boil	Add bleach/chlorine	Strain through a cloth	Use water filter	Solar disinfection	Let it stand and settle	Other		
Sector	Urban	9.5	66.7	11.9	23.8	38.1	2.4	0.0	0.0	78.6	42
	Rural	15.0	30.9	2.9	40.6	29.2	0.7	2.3	0.9	56.7	559
	Estate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Wealth index quintiles	Poorest	24.2	25.3	0.0	45.5	15.2	0.0	2.0	0.0	39.4	99
	Second	15.0	27.0	2.0	41.0	26.0	1.0	1.0	2.0	54.0	100
	Middle	13.0	28.5	4.1	44.7	30.9	1.6	1.6	0.8	56.9	123
	Fourth	13.3	33.6	4.9	37.1	32.9	0.7	2.8	0.7	60.1	143
	Richest	10.3	48.5	5.1	31.6	39.0	0.7	2.9	0.7	74.3	136
Income group	< 9,000	18.9	30.5	1.6	43.7	23.7	1.6	2.1	1.1	51.1	190
	9,000 – 13,999	13.6	30.9	2.5	38.3	27.2	0.0	2.5	1.2	55.6	81
	14,000 – 19,999	13.2	31.1	3.8	38.7	30.2	0.9	2.8	0.9	60.4	106
	20,000 – 31,999	13.0	34.9	4.1	37.7	34.9	0.0	2.1	0.0	63.0	146
	≥ 32,000	11.7	50.0	10.0	26.7	41.7	1.7	1.7	1.7	73.3	60
Overall		14.6	33.4	3.5	39.4	29.8	0.8	2.2	0.8	58.2	601

Table A 19 : Distribution of household members according to type of toilet used by the household, by background characteristics

Background Characteristics	Type of toilet facility used by household	Percentage of	Number of households
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		Flush	Pit	Temporary	No toilet	Missing	population using sanitary means of excreta disposal *	
Sector	Urban	90.5	7.1	0.0	0.0	2.4	90.5	42
	Rural	89.3	3.6	3.4	2.3	1.4	89.3	559
	Estate	0.0	0.0	0.0	0.0	0.0	0.0	0
Wealth index quintiles	Poorest	55.6	13.1	18.2	12.1	1.0	55.6	99
	Second	90.0	4.0	1.0	1.0	4.0	90.0	100
	Middle	95.1	3.3	0.0	0.0	1.6	95.1	123
	Fourth	97.9	1.4	0.0	0.0	0.7	97.9	143
	Richest	99.3	0.0	0.0	0.0	0.7	99.3	136
Income group	< 9,000	85.3	2.1	6.8	4.2	1.6	85.3	190
	9,000 – 13,999	88.9	6.2	1.2	1.2	2.5	88.9	81
	14,000 – 19,999	89.6	5.7	1.9	1.9	0.9	89.6	106
	20,000 – 31,999	95.2	2.7	0.7	1.4	0.0	95.2	146
	≥ 32,000	90.0	5.0	0.0	0.0	5.0	90.0	60
Overall		89.4	3.8	3.2	2.2	1.5	89.4	601

Table A 20 : Distribution of households using both improved drinking water sources and sanitary means of excreta disposal, by background characteristics

Background Characteristics		Percentage of household population using improved sources of drinking water *	Percentage of household population using sanitary means of excreta disposal **	Percentage of household population using improved sources of drinking water and using sanitary means of excreta disposal	Number of household
Sector	Urban	100.0	90.5	90.5	42
	Rural	57.8	89.3	51.7	559
	Sector	0.0	0.0	0.0	0
Wealth index quintiles	Poorest	54.5	55.6	29.3	99
	Second	60.0	90.0	54.0	100
	Middle	57.7	95.1	54.5	123
	Fourth	56.6	97.9	55.2	143
	Richest	72.8	99.3	72.1	136
Income group	< 9,000	54.7	85.3	47.4	190
	9,000 – 13,999	61.7	88.9	53.1	81
	14,000 – 19,999	54.7	89.6	48.1	106
	20,000 – 31,999	65.8	95.2	64.4	146
	≥ 32,000	75.0	90.0	66.7	60
Overall		60.7	89.4	54.4	601

Table A 21: Distribution of households according to duration to and from the source of drinking water, by background characteristics.

Background Characteristics		Time to source of drinking water				Mean time to source of drinking water (excluding those on premises)	Number of households
		Water on premises	Less than 15 minutes	15 minutes to less than 30 minutes	More than 30 minutes		
Sector	Urban	73.8	4.8	0.0	0.0	4.6	42
	Rural	16.5	52.4	11.4	6.6	10.0	559
	Estate	0.0	0.0	0.0	0.0	0.0	0
Wealth index	Poorest	15.2	58.6	15.2	9.1	16.2	99

Background Characteristics		Time to source of drinking water				Mean time to source of drinking water (excluding those on premises)	Number of households
		Water on premises	Less than 15 minutes	15 minutes to less than 30 minutes	More than 30 minutes		
quintiles	Second	22.0	55.0	11.0	7.0	8.6	100
	Middle	15.4	56.9	14.6	3.3	9.8	123
	Fourth	18.2	47.6	9.8	5.6	8.9	143
	Richest	30.1	32.4	4.4	6.6	8.6	136
Income group	< 9,000	18.9	54.7	16.3	6.3	10.7	190
	9,000 – 13,999	22.2	45.7	8.6	9.9	11.5	81
	14,000 – 19,999	12.3	57.5	8.5	4.7	8.2	106
	20,000 – 31,999	23.3	45.2	10.3	3.4	8.7	146
	≥ 32,000	30.0	30.0	1.7	8.3	11.3	60
Overall		20.5	49.1	10.6	6.2	10.1	601
%							

Table A 22: Distribution of households according to the person collecting water used in the household, by background characteristics

Background Characteristics		Person collecting drinking water					Number of households
		Adult man	Adult woman	Male child (under 15)	Female child (under 15)	Other	
Sector	Urban	20.0	60.0	0.0	0.0	20.0	42
	Rural	16.8	81.0	0.5	0.5	1.2	559
	Estate	0.0	0.0	0.0	0.0	0.0	0
Wealth index quintiles	Poorest	19.0	78.6	0.0	1.2	1.2	99
	Second	17.9	79.5	0.0	1.3	1.3	100
	Middle	13.8	85.1	0.0	0.0	1.1	123
	Fourth	18.0	80.9	1.1	0.0	0.0	143
	Richest	15.4	78.5	1.5	0.0	4.6	136
Income group	< 9,000	16.3	82.4	0.0	0.7	0.7	190
	9,000 – 13,999	20.4	79.6	0.0	0.0	0.0	81
	14,000 – 19,999	12.8	84.6	1.3	0.0	1.3	106
	20,000 – 31,999	14.6	83.1	1.1	0.0	1.1	146
	≥ 32,000	17.4	69.6	0.0	0.0	13.0	60
Overall		16.8	80.7	0.5	0.5	1.5	601

Table A 23: Percentage of household members (in broad age groups) who consume three or more main meals a day, by background characteristics

Background Characteristic	5-17 years		18-59 years		60 years or above	
	male	female	male	female	male	female
No. of members in family						
1-3	90.3	100.0	98.4	95.4	88.9	86.4
4-6	98.8	97.4	98.9	99.0	89.2	93.4
≥ 7	100.0	96.2	97.6	97.6	85.7	84.6
Sector						
Urban	100.0	100.0	100.0	100.0	100.0	93.3
Rural	97.6	97.4	98.6	97.9	86.2	89.3
Estate	0.0	0.0	0.0	0.0	0.0	0.0
Monthly household income (LKR)						
< 9,000	94.8	97.4	98.1	95.3	84.6	82.1
9,000 – 13,999	100.0	100.0	100.0	100.0	100.0	100.0
14,000 – 19,999	97.3	94.4	97.1	98.0	83.3	87.5
20,000 – 31,999	100.0	100.0	99.3	99.3	83.3	92.6
≥ 32,000	100.0	95.2	100.0	100.0	100.0	94.1
Wealth quintile						
Poorest	90.6	96.9	96.2	91.6	83.3	80.0
Second	97.0	100.0	98.8	98.9	83.3	81.8
Middle	97.9	98.4	99.1	100.0	90.0	94.4
Fourth	100.0	96.6	98.5	97.8	81.8	93.5
Richest	100.0	96.3	100.0	100.0	100.0	96.3
Overall %	97.7	97.6	98.7	98.0	88.5	89.8

Table A 24 : Proportion of households by type of foods consumed at least once in the day or night preceding the interview , by to background characteristics

Background Characteristic	Food Groups										
	Rice	Wheat	Nuts/pulses	vegetables	fruits	meat/poultry/fish	eggs	milk/dairy products	oils/fats	Coconut	Sugar
No. of members in family											
1-3	99.4	33.3	54.5	87.2	64.6	78.8	26.5	77.6	82.5	98.8	100.0
4-6	100.0	35.8	54.5	89.1	67.7	87.8	30.3	82.5	93.8	99.5	99.5
≥ 7	100.0	41.7	76.7	92.9	65.0	93.0	50.0	84.8	95.3	100.0	100.0
Sector											
Urban	100.0	44.8	78.0	100.0	81.0	92.9	40.7	97.5	87.8	100.0	100.0
Rural	99.8	34.7	54.5	88.0	65.5	85.2	30.5	79.8	91.1	99.3	99.6
Estate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Religion of the HH Head											
Buddhist	99.8	29.4	57.9	88.5	67.2	85.8	30.7	80.6	91.0	99.3	99.8
Hindu	100.0	0.0	0.0	100.0	50.0	0.0	0.0	0.0	100.0	100.0	100.0
Islam	100.0	87.9	41.2	91.2	58.1	88.6	39.1	96.0	88.6	100.0	97.1
Catholic	100.0	0.0	0	100.0	0	0	100.0	0	100.0	100.0	100.0
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Monthly household income											
< 9,000	99.5	35.8	52.6	86.0	56.0	80.0	25.2	72.1	85.9	99.5	99.5
9,000 – 13,999	100.0	24.3	60.0	90.1	63.6	87.7	25.0	76.0	88.8	98.8	98.8
14,000 – 19,999	100.0	38.8	52.0	92.3	72.2	84.6	32.5	78.0	92.3	100.0	100.0
20,000 – 31,999	100.0	33.7	54.7	86.8	75.7	91.1	33.0	88.7	95.1	99.3	100.0
≥ 32,000	100.0	41.7	70.7	93.2	74.5	94.9	52.4	100.0	98.3	100.0	100.0
Wealth quintile											
Poorest	100.0	33.9	55.7	90.6	53.4	67.4	24.2	58.8	84.9	99.0	100.0
Second	100.0	30.2	53.3	85.4	57.8	81.4	26.6	76.9	89.8	98.0	98.0
Middle	99.2	36.9	53.2	88.5	64.0	85.2	29.5	84.6	87.6	99.2	100.0
Fourth	100.0	40.3	61.8	83.8	76.0	90.1	28.7	85.5	95.1	100.0	100.0
Richest	100.0	35.1	55.2	95.6	74.2	97.0	41.7	87.5	94.1	100.0	100.0
Overall %	99.8	35.6	56.2	88.9	66.7	85.7	31.2	81.5	90.8	99.3	99.7
Total No.	601	323	557	592	546	588	417	411	589	601	599

Table A 25 : Proportion of households by type of foods consumed in 5 days and more preceding the interview, by background characteristics

Background Characteristic	Food Groups										
	Rice	Wheat	Nuts/p ulses	vegetables	fruits	meat/ poultr y/fish	eggs	milk/diar y products	oils/fats	Coconut	Sugar
No. of members in family											
1-3	97.0	6.5	11.2	73.4	20. 7	50. 9	4.7	45.0	56.2	91.7	91.1
4-6	98.2	4.9	13.1	80.2	30. 1	56. 8	5.1	54.5	84.1	98.5	95.9
≥ 7	100.0	4.7	18.6	79.1	39. 5	51. 2	11.6	62.8	90.7	97.7	93.0
Sector											
Urban	97.6	14.3	40.5	90.5	42. 9	59. 5	4.8	92.9	81.0	100.0	100.0
Rural	98.0	4.7	10.9	77.3	27. 0	54. 4	5.5	49.4	76.4	96.2	93.9
Estate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Religion of the HH Head											
Buddhist	98.2	3.1	13.4	79.4	29. 1	56. 3	5.6	52.2	76.7	96.6	94.0
Hindu	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
Islam	94.3	40.0	5.7	60.0	28. 8.6	6	5.7	54.3	80.0	94.3	97.1
Catholic	100.0	50.0	0.0	100.0	50. 0	0.0	0.0	100.0	100.	100.0	100.0
other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Monthly household income											
< 9,000	95.8	4.2	7.4	70.5	16. 8	45. 8	4.2	35.3	68.4	93.7	91.6
9,000 – 13,999	98.8	1.2	8.6	84.0	27. 2	54. 3	3.7	42.0	76.5	97.5	95.1
14,000 – 19,999	98.1	8.5	10.4	79.2	31. 1	52. 8	7.5	59.4	76.4	97.2	93.4
20,000 – 31,999	99.3	4.1	17.8	82.2	31. 5	63. 0	6.2	65.8	84.2	97.9	95.9
≥ 32,000	100.0	10.0	30.0	80.0	50. 0	70. 0	8.3	80.0	93.3	100.0	98.3
Wealth quintile											
Poorest	97.0	6.1	7.1	76.8	21. 2	35. 4	4.0	28.3	65.7	89.9	86.9
Second	98.0	4.0	11.0	73.0	19. 0	50. 0	4.0	33.0	72.0	97.0	93.0
Middle	96.7	4.9	4.9	75.6	28. 5	56. 9	8.1	49.6	74.8	95.1	96.7

Background Characteristic	Food Groups										
	Rice	Wheat	Nuts/p ulses	vegetables	fruits	meat/ poultr y/fish	eggs	milk/diar y products	oils/fats	Coconut	Sugar
Fourth	98.6	6.3	19.6	76.2	24. 5	53. 1	3.5	64.3	81.8	98.6	97.2
Richest	99.3	5.1	19.1	87.5	43. 4	72. 1	7.4	74.3	84.6	100.0	95.6
Overall %	98.0	5.3	13.0	78.2	28. 1	54. 7	5.5	52.4	76.7	96.5	94.3

Table A 26 : Household dietary diversity score according to background characteristics

Background Characteristic	Household diversity score		% of households yet to achieve the target	No of households
	mean	SD		
No. of members in Household				
1-3	7.2	1.5	81.1	169
4-6	7.8	1.4	65.8	389
≥ 7	8.5	1.5	51.2	43
Sector				
Urban	8.9	1.2	33.3	42
Rural	7.6	1.5	71.7	559
Estate	.	.		
Religion of the HH Head				
Buddhist	7.6	1.5	70.4	554
Hindu	4.5	.7	100.0	2
Islam	8.3	1.6	48.6	35
Catholic	9.5	.7	0.0	2
Other	.	.		
Monthly household income				
< 9,000	7.1	1.5	81.6	190
9,000 – 13,999	7.5	1.3	77.8	81
14,000 – 19,999	7.8	1.3	67.0	106
20,000 – 31,999	8.0	1.4	58.9	146
≥ 32,000	8.6	1.4	45.0	60
Wealth quintile				
Poorest	6.9	1.5	87.9	99
Second	7.1	1.5	80.0	100
Middle	7.6	1.5	74.8	123
Fourth	8.0	1.3	60.8	143
Richest	8.4	1.3	50.7	136
overall	7.7	1.5	69.1	601

Table A 27 : Average monthly expenditure for food, services, health, education and productive assets, by background characteristics (add Total income as total of means)

Background characteristic	Average monthly expenditure in LKR						Number of households
	food	liquor/tobacco	Utility services	health	education	productive assets	

Table A 28 : Food groups by the main and secondary sources

Background Characteristic	Food Groups											
	Rice	Wheat	Nuts/pulses	vegetables	fruits	meat/poultry	fish	eggs	milk/dairy products	oils/fats	Coconut	Sugar
Main source												
Own production	56.1	2.2	8.6	46.7	49.3	0.7	1.5	6.7	3.7	13.2	37.2	1.5
Purchase	42.8	96.8	88.0	50.4	45.4	96.0	96.3	88.2	91.9	84.7	59.2	93.5
Purchase on credit	0.3	0.3	0.7	0.5	0.4	0.3	0.2	0.2	0.2	0.3	0.3	1.0
Traded goods or services	0.0	0.0	0.0	0.0	0.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Borrowed	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gift from family or relatives	0.7	0.3	0.7	1.2	2.6	0.7	0.5	0.7	0.2	0.2	1.7	0.0
Food aid	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cash assistance	0.0	0.0	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.5
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table A 29 : Current food stock duration, and size compared to last year, by background characteristics

background characteristic	Size of food stock compared to last year				mean No. of days current food stock last	No. of households
	more (%)	same (%)	less (%)	much less (%)		
No. of members in family						
1-3	8.0	49.4	37.7	4.9	6.37	162
4-6	24.7	41.5	30.7	3.1	6.33	381
≥ 7	29.3	34.1	36.6	0.0	5.33	41
Sector						
Urban	19.0	66.7	14.3	0.0	7.88	42
Rural	20.5	41.3	34.5	3.7	6.15	542
Estate						
Education of household Head						
No schooling	11.8	47.1	29.4	11.8	4.05	17
Primary	19.7	37.8	40.9	1.6	6.28	127
Secondary	15.1	39.6	39.6	5.7	5.94	212
Passed O' Level	25.3	51.1	22.1	1.6	6.51	190
Higher	18.2	72.7	9.1	0.0	7.17	11
Monthly household income						
< 9,000	11.5	39.6	44.5	4.4	4.46	182
9,000 – 13,999	16.0	51.9	28.4	3.7	6.51	81

background characteristic	Size of food stock compared to last year				mean No. of days current food stock last	No. of households
	more (%)	same (%)	less (%)	much less (%)		
14,000 – 19,999	18.6	40.2	35.3	5.9	6.40	102
20,000 – 31,999	32.9	40.4	24.7	2.1	6.99	146
≥ 32,000	26.3	50.9	22.8	0.0	8.81	57
Wealth quintile						
Poorest	13.3	35.7	43.9	7.1	4.22	98
Second	13.5	37.5	45.8	3.1	5.65	96
Middle	23.5	42.9	29.4	4.2	7.02	119
Fourth	14.0	50.0	33.8	2.2	6.19	136
Richest	34.1	45.9	18.5	1.5	7.58	135
Overall	20.4	43.2	33.0	3.4	6.27	584

Table A 30 : . Percent of households reported food had run out at some time during the previous 12 months, and months of adequate household food provisioning (MAHFP) by background characteristics

Background characteristic	% household food had run out during past 12 months	Average MAHFP	% yet to achieve the target	No. of Households
No. of members in family				
1-3	32.5	10.6	11.9	174
4-6	20.4	11.0	8.5	407
≥ 7	14.0	9.9	17.8	50
Residence				
Urban	4.8	7.1	40.6	70
Rural	24.7	11.2	6.4	561
Estate				
Education of household Head				
No schooling	36.8	12.5	-4.2	16
Primary	41.2	13.3	-10.7	106
Secondary	23.5	11.7	2.7	213
Passed O' Level	10.4	9.0	25.4	251
Higher	0.0	7.2	40.0	20
Monthly household income				
< 9,000	43.2	10.0	16.5	203
9,000 – 13,999	18.8	7.4	38.2	126
14,000 – 19,999	16.0	12.4	-3.6	99
20,000 – 31,999	11.6	14.7	-22.6	116
≥ 32,000	6.7	9.1	24.1	78
Wealth quintile				
Poorest	49.5	17.9	-49.3	56
Second	39.4	11.4	4.8	96
Middle	14.6	10.3	13.8	138
Fourth	16.1	9.1	24.4	184
Richest	8.1	10.2	14.8	157
Overall	23.3	10.8	10.2	631

Table A 31: Average number of times a household received food aid in the last 6 months, by background characteristics

Characteristic	Not received food aids	Type of food aid (mean no. of times per 6 month)									No. of house holds
		WFP /GA	Samurdhi	Food Basket	School feeding	CSB	Thripasha		Food for work	Other	
No. of members in family											
1-3	70.8	0.0	4.0	6.0	0.0	0.0	1.8	0.0	0.0	6.0	169
4-6	73.5	6.0	3.8	4.7	4.0	0.0	1.4	0.0	0.0	1.0	389
≥ 7	72.1	0.0	4.3	0.0	20.0	0.0	0.0	0.0	6.0	0.0	43
Sector											
Urban	81.0	0.0	3.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	42
Rural	72.0	6.0	3.9	5.3	9.3	0.0	1.5	0.0	6.0	4.3	559
Estate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Monthly household income											
< 9,000	61.9	0.0	3.7	6.0	6.0	0.0	1.4	0.0	0.0	4.3	190
9,000 – 13,999	69.1	0.0	3.6	0.0	0.0	0.0	1.5	0.0	0.0	0.0	81
14,000 – 19,999	73.6	0.0	5.2	4.0	0.0	0.0	1.5	0.0	6.0	0.0	106
20,000 – 31,999	85.5	0.0	3.6	0.0	11.0	0.0	1.2	0.0	0.0	0.0	146
≥ 32,000	83.3	6.0	3.3	0.0	0.0	0.0	1.0	0.0	0.0	0.0	60
Wealth index quintile											
Poorest	53.1	0.0	3.9	6.0	0.0	0.0	2.3	0.0	0.0	1.0	99
Second	66.0	0.0	3.5	2.0	2.0	0.0	1.5	0.0	0.0	6.0	100
Middle	72.1	0.0	4.5	6.0	13.0	0.0	1.3	0.0	0.0	6.0	123
Fourth	76.9	6.0	4.1	0.0	0.0	0.0	1.3	0.0	6.0	0.0	143
Richest	87.5	0.0	3.2	0.0	0.0	0.0	1.3	0.0	0.0	0.0	136
Overall	72.6	6.0	3.9	5.3	9.3	0.0	1.5	0.0	6.0	4.3	601

Table A 32 : Percent of households with coping strategy adopted in the previous 30 days, with its frequency

Coping Strategy	% of households adopted strategy				Total households
	Never	Ever			
		Once in a while (1-2 per week)	Pretty often (3-6 per week)	Daily (>24 days)	
Food-related coping strategy					
a. Relied on less preferred food	84.2	7.3	6.2	2.3	601
b. Borrowed food	89.9	5.8	4.0	0.3	601
c. Purchased food on credit	84.2	11.2	3.8	0.8	600
d. Consumed seeds held for next season	100.0	97.0	2.0	1.0	600
e. Reduced meal size	91.7	5.5	1.8	1.0	601
f. Reduced number of meals per day	93.7	4.3	1.2	0.8	599
g. Restricted consumption for adults	92.5	4.5	2.7	0.3	601
h. Sent children to live with relatives	98.7	0.8	0.3	0.2	600
i. Reduced expenditure on health and education	96.7	2.0	1.0	0.3	600
		% of Households			Total households
Non-food coping strategies		No	Yes		
j. Sold livestock		99.5	0.5		599
k. Pawned jewellery		93.3	6.7		600
l. Sold agricultural tools, seeds		98.5	1.5		601
m. Sold other assets		99.2	0.8		600
n. Used savings		95.2	4.8		599
o. Borrowed money from relatives/neighbours		89.2	10.8		601
p. Took children out of school to earn income		99.8	0.2		600

Table A 33 : Food-related coping strategies adopted during the 30 days preceding the survey, by background characteristics

Background Characteristic	Percent of households adopted strategy at least once during the preceding 30 days									
	No of households adopted coping strategies	Relied on less preferred food	Borrowed food	Purchased food on credit	Consumed seeds held for next season	Reduced meal size	Reduced number of meals per day	Restricted consumption for adults	Sent children to live with relatives	Reduced expenditure on health and education
No. of members in Household										
1-3	46	87.0	63.0	67.4	13.0	56.5	41.3	28.3	13.0	17.4
4-6	70	70.0	41.4	84.3	12.9	30.0	24.3	40.0	2.9	12.9
≥ 7	7	85.7	42.9	71.4	42.9	42.9	28.6	57.1	0.0	42.9
Sector										
Urban	3	100.0	33.3	100.0	0.0	33.3	66.7	66.7	0.0	33.3
Rural	120	76.7	50.0	76.7	15.0	40.8	30.0	35.8	6.7	15.8
Estate										
Monthly household income										
< 9,000	69	84.1	59.4	72.5	21.7	47.8	39.1	37.7	7.2	21.7
9,000 – 13,999	18	88.9	50.0	83.3	11.1	27.8	11.1	38.9	5.6	11.1
14,000 – 19,999	11	90.9	27.3	72.7	0.0	54.5	27.3	63.6	9.1	18.2
20,000 – 31,999	18	38.9	33.3	88.9	0.0	22.2	22.2	27.8	5.6	0.0
≥ 32,000	3	33.3	0.0	66.7	0.0	0.0	0.0	0.0	0.0	0.0
Wealth quintile										
Poorest	37	86.5	56.8	73.0	16.2	48.6	43.2	27.0	13.5	27.0
Second	35	74.3	51.4	77.1	20.0	42.9	31.4	37.1	5.7	11.4
Middle	23	87.0	47.8	78.3	13.0	52.2	30.4	56.5	0.0	13.0
Fourth	18	72.2	55.6	83.3	11.1	22.2	16.7	38.9	5.6	16.7
Richest	10	40.0	10.0	80.0	0.0	10.0	10.0	20.0	0.0	0.0
overall	123	77.2	49.6	77.2	14.6	40.7	30.9	36.6	6.5	16.3

Table A 34 : Households taken loans and reasons for borrowing money, by background characteristics

Background Characteristic	Received loan		Main reason for loan (% of the total received loan)								
	No	%	Purchase food	Medical cost	Repair of damaged house	Transport	Repay loan	support additional members	Marriage	Income generation	other
No. of members in Household											
1-3	31	18.5	22.6	3.2	9.7	3.2	12.9	0.0	0.0	25.8	22.6
4-6	97	25.3	11.2	4.1	15.3	0.0	5.1	0.0	0.0	31.6	32.7
≥ 7	12	27.9	9.1	9.1	36.4	9.1	0.0	0.0	0.0	18.2	18.2
Sector											
Urban	4	9.5	25.0	0.0	0.0	50.0	0.0	0.0	0.0	25.0	0.0
Rural	136	24.6	13.2	4.4	16.2	0.0	6.6	0.0	0.0	29.4	30.1
Estate											
Monthly household income											
< 9,000	50	27.0	21.6	5.9	17.6	0.0	3.9	0.0	0.0	25.5	25.5
9,000 – 13,999	22	27.2	9.1	4.5	0.0	0.0	9.1	0.0	0.0	31.8	45.5
14,000 – 19,999	24	22.6	12.5	0.0	8.3	8.3	12.5	0.0	0.0	29.2	29.2
20,000 – 31,999	34	23.4	8.8	5.9	20.6	0.0	5.9	0.0	0.0	29.4	29.4
≥ 32,000	9	15.0	0.0	0.0	37.5	0.0	0.0	0.0	0.0	50.0	12.5
Wealth quintile											
Poorest	26	26.8	18.5	7.4	14.8	0.0	3.7	0.0	0.0	14.8	40.7
Second	27	27.3	29.6	3.7	14.8	0.0	14.8	0.0	0.0	25.9	11.1
Middle	26	21.5	7.7	7.7	11.5	0.0	3.8	0.0	0.0	26.9	42.3
Fourth	34	23.9	5.9	0.0	20.6	2.9	2.9	0.0	0.0	38.2	29.4
Richest	27	19.9	7.7	3.8	15.4	3.8	7.7	0.0	0.0	38.5	23.1
overall	595	23.5	13.6	4.3	15.7	1.4	6.4	0.0	0.0	29.3	29.3

Table A 35 : Household Food Consumption Adequacy Score (HFCAS) and prevalence of household food insecurity status, by background characteristics

Background characteristic	Mean (SD) HFCAS Score*		HFCAS Score Category (%)			No. of households
			Poor	Borderline	Adequate	
No. of members in family						
1-3	60.6	(13.4)	0.0	3.6	96.4	169
4-6	64.5	(12.0)	0.0	1.3	98.7	389
≥ 7	69.8	(11.2)	0.0	0.0	100.0	43
Residence						
Urban	71.4	(13.3)	0.0	0.0	100.0	42
Rural	63.2	(12.4)	0.0	2.0	98.0	559
Estate	0.0	0.0	0.0	0.0	0.0	0
Religion of household Head						
Buddhist	63.2	(12.3)	0.0	2.0	98.0	554
Hindu	51.0	(20.5)	0.0	0.0	100.0	2
Islam	73.0	(13.1)	0.0	0.0	100.0	35
Catholic and other Christian	76.8	(30.8)	0.0	0.0	100.0	2
Education of household Head						
No schooling	56.0	(12.8)	0.0	0.0	100.0	19
Primary	57.7	(12.5)	0.0	5.3	94.7	131
Secondary	64.1	(11.9)	0.0	1.4	98.6	218
Passed O' Level	68.3	(11.2)	0.0	0.0	100.0	192
Higher	71.8	(8.8)	0.0	0.0	100.0	12
Monthly household income						
< 9,000	59.7	(12.7)	0.0	4.2	95.8	190
9,000 – 13,999	60.8	(11.6)	0.0	1.2	98.8	81
14,000 – 19,999	65.7	(12.2)	0.0	0.9	99.1	106
20,000 – 31,999	67.0	(11.3)	0.0	0.0	100.0	146
≥ 32,000	70.6	(12.1)	0.0	0.0	100.0	60
Wealth quintile						

Background characteristic	Mean (SD) HFCAS Score*	HFCAS Score Category (%)			No. of households
		Poor	Borderline	Adequate	
Poorest	56.3 (13.2)	0.0	8.1	91.9	99
Second	59.4 (12.4)	0.0	2.0	98.0	100
Middle	64.5 (12.5)	0.0	0.8	99.2	123
Fourth	65.7 (10.4)	0.0	0.0	100.0	143
Richest	69.7 (10.8)	0.0	0.0	100.0	136
Overall	63.8 (12.6)	0.0	1.8	98.2	601

Table A 36 :Distribution of households by food security Levels

<div>Food Consumption</div> <div>Food Access (Percent expenditure on food)</div>	Poor (0-21)	Borderline (21.01 – 35)	Adequate (> 35.01)
Poor (> 90 %)	0 (0.0)	1 (0.0)	30 (13.2)
Average (75-90 %)	0 (0.0)	0 (0.0)	103 (45.4)
Good (<75 %)	0 (0.0)	0 (0.0)	93 (41.0)

Table A 37 Distribution of households by food security levels by background characteristics

<i>Background characteristic</i>	Food Security Level			<i>No. of households</i>
	Food Secure (%)	Moderately Food Secure (%)	Food Insecure (%)	
No. of members in family				
1-3	73.3	23.3	3.3	30
4-6	88.0	12.0	0.0	166
≥ 7	90.3	9.7	0.0	31
Sector				
Urban	100.0	0.0	0.0	14
Rural	85.4	14.1	0.5	213
Estate	0.0	0.0	0.0	0
Education of household Head				
No schooling	33.3	66.7	0.0	3
Primary	69.2	30.8	0.0	26
Secondary	82.5	16.3	1.3	80
Passed O' Level	93.3	6.7	0.0	104
Higher	100.0	0.0	0.0	2
Monthly household income				
< 9,000	74.6	23.8	1.6	63
9,000 – 13,999	81.5	18.5	0.0	27
14,000 – 19,999	91.1	8.9	0.0	45

20,000 – 31,999	95.7	4.3	0.0	69
≥ 32,000	100.0	0.0	0.0	19
Wealth quintile				
Poorest	59.5	38.1	2.4	42
Second	80.0	20.0	0.0	25
Middle	93.3	6.7	0.0	45
Fourth	93.6	6.4	0.0	47
Richest	95.6	4.4	0.0	68
Overall	86.3	13.2	0.4	227

ANNEX 2

The steps followed in estimating levels of food insecurity were as follows:

Step1: Calculate a household food consumption adequacy score (HFCAS) based on food groups consumed during 1 week prior to survey, grouped into 3 categories as described in footnote⁵.

Step 2: Estimating the expenditure on food as a percentage of the total household expenditure, and categorizing the households into 3 groups indicating different levels of food access (<75 percent - good; 75 to 90 percent - average and >90 percent - poor food access).

Step 3: Cross-tabulation between food consumption categories and food access categories.

⁵ Eight food groups were used to calculate the Food consumption adequacy score.

Food group	Food times
1. Staple foods (starches)	Rice, bread / chapiti /roti
2. Pulses/legumes	Pulses
3. Vegetables	vegetables (including leaves)
4. Fruits	fruits
5. Animal protein	Fish, meat (beef, pork, chicken), eggs
6. Sugar	sugar/ jaggary
7. Dairy products	Curd, milk (liquid or powder)
8. Oil/fats	palm oil, vegetable oil, fats, coconut products (dried copra)

The number of days the food items were consumed during the previous week was summed for the food items in each of the 8 food groups. If the total sum of the number of days of the separate items in a food group was higher than 7 days, the sum is converted to 7. Thus, the maximum score for each food group is 7 days. The food score of each household is calculated as follows:

Simple food score = 2 * staple + 3 * pulses + 1 * vegetables + 1* fruit + 4 * animal protein + 0.5 * sugar + 3 * dairy + 0.5 * oil

The households were grouped according to their scores by applying the standard cut-offs as follows:

- Poor food consumption: simple food score is 0 – 21
- Borderline food consumption: simple food score is 21.01 – 35
- Adequate food consumption: simple food score is 35.01 and higher

Food insecurity levels were assessed in accordance with the classification given in Figure X.

Figure X. Assessment of food insecurity levels

Food consumption	Poor	Borderline	Adequate
Food access			
Poor	<i>Severely food insecure</i>	<i>Severely food insecure</i>	<i>Moderately food insecure</i>
Average	<i>Severely food insecure</i>	<i>Moderately food insecure</i>	<i>Food Secure</i>
Good	<i>Moderately food insecure</i>	<i>Food Secure</i>	<i>Food Secure</i>