

This chapter covers several related topics: infant feeding (including breastfeeding patterns and introduction of complementary weaning foods), nutritional status of young children and their mothers, and coverage of the vitamin A supplementation programme. Height and weight measurements of the respondents' children under the age of five years and those of the mothers were taken to determine their nutritional status.

## 9.1 BREASTFEEDING AND SUPPLEMENTATION

Infant feeding has an effect on both the child and the mother. Feeding practices are important determinants of children's nutritional status, and many studies have shown the beneficial effects of breastfeeding on the nutritional status, morbidity, and mortality of young infants. Exclusive breastfeeding (i.e., only breast milk) is recommended during the first 4-6 months of a child's life because it limits exposure to disease agents and provides all of the nutrients a baby requires. Breastfeeding also has an indirect effect on the postpartum fecundity of mothers. In particular, more frequent breastfeeding is associated with longer periods of postpartum amenorrhoea, which in turn is related to longer birth intervals, and thus lower fertility levels.

### Prevalence of Breastfeeding

Survey results show that breastfeeding is almost universal in Tanzania. Ninety-five percent of children are breastfed for some period, regardless of the background characteristics of the child or the mother (data not shown). Previous research confirms the universality of breastfeeding in Tanzania (Bureau of Statistics and Macro International, 1997:124).

### Timing of Introduction of Complementary Foods

The timing of introduction of complementary foods in addition to breast milk has important implications for the child and the mother. Breast milk is uncontaminated and contains all the nutrients needed by children in the first few months of life. It also provides some immunity to disease through the mother's antibodies. Early supplementation, especially under unhygienic conditions, can result in infection with foreign organisms and lower immunity to disease. The timing of introduction of food supplements also has an effect on the length of the mother's postpartum amenorrhoea. Early initiation of supplementation results in earlier resumption of the mother's menstrual periods, because supplementation reduces infants' dependence on breast milk and the frequency of suckling.

Mothers were asked about the current breastfeeding status of their children under age five and, if the child was being breastfed, whether various types of liquid or solid foods had been given to the child "yesterday" or "last night". Children who are *exclusively* breastfed are defined as receiving breast milk only, while *full* breastfeeding is defined as receiving breast milk and plain water only.

The results shown in Table 9.1 indicate that babies are breastfed for a long time; even among children 12-13 months old, 94 percent are still receiving breast milk (6 percent are weaned).

However, the data indicate that supplementation of breast milk with other liquids and foods begins early in Tanzania. Among newborns less than two months of age, most are either exclusively breastfed (58 percent) or fully breastfed (23 percent); however, almost 20 percent of these very young babies are already receiving complementary foods or liquids. Among those age 2-3 months, almost half are being given supplements.

**Table 9.1 Breastfeeding status**

Percent distribution of living children under three years of age by current breastfeeding status, according to child's current age in months, Tanzania 1999

Age in months	Not breast-feeding	Exclusively breastfed	Breastfeeding and:		Total	Using bottle with a nipple	Number of living children
			Plain water only	Complementary foods			
0-1	1.1	57.8	22.6	18.5	100.0	3.6	97
2-3	3.0	25.4	24.0	47.6	100.0	8.9	123
4-5	3.0	15.5	11.2	70.3	100.0	14.2	106
6-7	1.9	1.5	5.5	91.0	100.0	10.5	108
8-9	3.6	2.9	4.5	89.0	100.0	9.3	101
10-11	4.9	0.0	5.1	90.1	100.0	4.0	100
12-13	6.4	0.0	5.0	88.6	100.0	7.1	72
14-15	14.9	0.0	0.4	84.8	100.0	6.2	129
16-17	13.8	0.0	1.2	85.0	100.0	2.7	102
18-19	19.2	0.0	0.0	80.8	100.0	4.5	101
20-21	37.8	0.0	0.0	62.2	100.0	1.6	87
22-23	64.1	0.0	0.0	35.9	100.0	3.0	102
24-25	72.8	0.0	0.0	27.2	100.0	5.5	92
26-27	78.7	0.0	1.2	20.1	100.0	6.1	103
28-29	82.1	0.0	0.0	17.9	100.0	4.4	97
30-31	91.9	0.0	0.0	8.1	100.0	10.5	110
32-33	94.5	0.0	0.0	5.5	100.0	1.2	109
34-35	92.8	0.0	0.0	7.2	100.0	4.9	78
0-3 months	2.2	39.6	23.4	34.8	100.0	6.6	220
4-6 months	2.7	11.0	9.6	76.6	100.0	9.3	164
7-9 months	3.0	1.9	4.4	90.7	100.0	13.6	152

Note: Breastfeeding status refers to 24 hours preceding the survey. Children classified as *breastfeeding* and *plain water only* receive no complementary foods.

## Duration of Breastfeeding

Data on the median duration and frequency of breastfeeding are presented in Table 9.2. The estimates of mean and median duration of breastfeeding are based on current status data, that is, the proportion of children under three who were being breastfed at the time of the survey, as opposed to retrospective data on the length of breastfeeding of older children who are no longer breastfed. The prevalence/incidence mean is also provided for possible comparison with other data sources.

**Table 9.2 Median duration and frequency of breastfeeding**

Median duration (months) of any breastfeeding, exclusive breastfeeding, and full breastfeeding among children under three years of age, and the percentage of children under six months of age who were breastfed six or more times in the 24 hours preceding the interview, according to background characteristics, Tanzania 1999

Background characteristic	Median duration of breastfeeding among children under 3 years <sup>1</sup>				Children under six months	
	Any breast-feeding	Exclusive breast-feeding	Full breast-feeding <sup>2</sup>	Number of children	Breastfed 6 or more times in preceding 24 hours	Number of children
<b>Child's sex</b>						
Male	21.2	0.7	2.0	1,038	92.2	161
Female	20.3	1.7	3.1	990	96.8	165
<b>Residence</b>						
Urban	19.4	0.7	2.3	388	98.8	59
Rural	21.4	1.3	2.4	1,641	93.6	267
<b>Mainland/Zanzibar</b>						
Mainland	20.9	1.2	2.4	1,978	94.4	317
Urban	19.4	0.7	2.3	374	98.9	56
Rural	21.4	1.3	2.5	1,603	93.5	260
Zanzibar	21.0	0.4	1.8	51	97.0	10
Pemba	21.1	0.4	0.9	25	*	5
Unguja	20.9	0.5	2.0	27	*	5
<b>Mother's education</b>						
No education	21.3	2.1	2.6	546	94.0	103
Primary incomplete	22.8	0.6	1.0	349	94.5	52
Primary complete	20.2	0.8	2.3	1,050	94.7	154
Secondary+	12.2	0.5	4.1	84	*	17
<b>Assistance at delivery</b>						
Health professional	20.4	0.7	2.0	871	93.8	141
Traditional midwife	21.9	0.9	2.2	374	97.2	61
Other or none	21.1	2.0	3.3	783	94.0	124
Total	20.9	1.1	2.4	2,029	94.5	326
Mean <sup>1</sup>	20.4	2.6	4.0	95.5	NA	NA
Prevalence/Incidence mean	19.9	1.9	3.4	NA	NA	NA

Note: An asterisk indicates that a figure has been suppressed because it is based on fewer than 25 respondents. Total includes 24 children under 3 years of age for whom data on assistance at delivery are missing.

NA = Not applicable

<sup>1</sup> Medians and means are based on current status and durations are in months.

<sup>2</sup> Either exclusive breastfeeding or breastfeeding and plain water only.

The median duration of breastfeeding in Tanzania is 21 months, with no major variations by background characteristics. The only exception is that babies whose mothers have some secondary school education are breastfed for shorter durations (median of 12 months) than those whose mothers are less educated (20-22 months). There has been no significant change in the median duration of breastfeeding over time.

The early introduction of supplements is reflected in the short duration of exclusive breastfeeding (median duration of one month). Few children receive only plain water as a supplement to breast milk, and thus the median duration of full breastfeeding is also quite short (two months).

The duration of postpartum amenorrhoea is affected by both the length of time spent breastfeeding and the frequency of breastfeeding. The child's health and nutritional status are also affected by the frequency of breastfeeding. Almost all children under the age of six months (95 percent) were reported to have been breastfed at least six times in the 24 hours preceding the survey. Differences among subgroups are minor.

Table 9.3 is a summary tabulation of various infant feeding indicators. Although experts recommend that babies be exclusively breastfed for 4-6 months after birth, the TRCHS data show that mothers supplement breast milk too early; only 41 percent of infants 0-3 months are exclusively breastfed with no supplementation. Among older infants, lack of supplementation is the problem. Less than two in three children 6-9 months are receiving other liquids and mushy food in addition to breast milk. Somewhat more encouraging is the fact that breastfeeding durations are long in Tanzania, with 88 percent of children 12-15 months still being breastfed and almost half of those still receiving breast milk at 20-23 months of age.

**Table 9.3 Infant feeding indicators**

Percentage of children with specific feeding indicators, by breastfeeding status, age, and selected background characteristics, Tanzania 1999

Background characteristic	Children 0-3 months		Children 6-9 months		Children 12-15 months		Children 20-23 months	
	Percent exclusively breastfed	Number of children	Percent receiving solid/mushy food	Number of children	Percent still breastfed	Number of children	Percent still breastfed	Number of children
<b>Sex of child</b>								
Males	37.6	109	65.3	94	82.3	112	45.7	95
Female	45.2	111	63.2	115	95.5	89	50.2	94
<b>Residence</b>								
Urban	39.8	33	66.3	39	84.3	35	26.4	41
Rural	41.7	187	63.7	171	89.0	166	53.9	148
<b>Mainland/Zanzibar</b>								
Mainland	42.5	213	63.8	203	88.3	196	47.7	184
Urban	42.0	31	65.5	38	84.4	34	25.2	39
Rural	42.5	182	63.4	166	89.1	161	53.7	144
Zanzibar	8.6	7	74.4	6	83.7	5	58.6	5
<b>Education</b>								
No education	42.2	59	48.8	51	81.3	53	43.8	44
Primary incomplete	36.7	41	63.3	30	89.3	32	66.5	37
Primary complete	45.2	106	70.1	124	94.7	108	44.0	104
Secondary+	*	14	*	5	*	9	*	4
<b>Total</b>	<b>41.4</b>	<b>220</b>	<b>64.1</b>	<b>210</b>	<b>88.2</b>	<b>201</b>	<b>48.0</b>	<b>189</b>

Note: An asterisk indicates that a figure has been suppressed because it is based on fewer than 25 respondents.

**Table 9.4 Ideal duration of breastfeeding**

Percent distribution of all women 15-49 by ideal length of exclusive breastfeeding, according to selected background characteristics, Tanzania 1999

Background characteristic	Ideal length of exclusive breastfeeding					Don't know	Total	Number of women
	0-3 months	4-6 months	7-11 months	12+ months	Other			
<b>Age</b>								
15-19	37.8	38.4	2.1	0.5	0.2	21.0	100.0	909
20-24	38.6	55.1	0.4	1.1	0.1	4.7	100.0	811
25-29	37.7	58.1	1.1	0.9	0.7	1.4	100.0	749
30-34	34.3	61.7	0.5	0.9	0.1	2.6	100.0	490
35-39	39.5	55.7	1.3	1.5	0.8	1.1	100.0	456
40-44	36.8	60.1	0.5	1.1	0.1	1.4	100.0	299
45-49	41.5	53.0	1.1	1.1	1.0	2.3	100.0	315
<b>Residence</b>								
Urban	39.0	55.4	0.3	0.1	0.0	5.2	100.0	1,122
Rural	37.5	52.0	1.4	1.3	0.5	7.3	100.0	2,907
<b>Mainland/Zanzibar</b>								
Mainland	38.0	52.9	1.1	1.0	0.4	6.6	100.0	3,929
Urban	39.2	55.4	0.3	0.1	0.0	5.0	100.0	1,088
Rural	37.6	52.0	1.4	1.3	0.5	7.2	100.0	2,841
Zanzibar	33.8	54.3	0.1	0.0	1.9	9.9	100.0	100
Pemba	31.7	55.3	0.3	0.0	3.9	8.9	100.0	44
Unguja	35.5	53.6	0.0	0.0	0.3	10.7	100.0	56
<b>Education</b>								
No education	37.4	50.8	1.4	1.5	1.1	7.8	100.0	1,093
Primary incomplete	35.0	52.3	1.5	0.9	0.2	10.1	100.0	854
Primary complete	39.0	54.7	0.8	0.7	0.1	4.7	100.0	1,866
Secondary+	42.5	51.5	0.8	0.6	0.0	4.7	100.0	215
<b>Total</b>	<b>37.9</b>	<b>53.0</b>	<b>1.1</b>	<b>1.0</b>	<b>0.4</b>	<b>6.7</b>	<b>100.0</b>	<b>4,029</b>

Because studies show that exclusive breastfeeding provides the optimum nutrition for infants up to six months of age, Tanzania has implemented education programmes to convey this fact to women. In the TRCHS, all women 15-49 were asked how long they thought a mother should breastfeed her baby without giving any food or liquid other than breast milk. The results are shown in Table 9.4. They indicate that more than half of women say the ideal duration of exclusive breastfeeding is four to six months. More than one-third say that exclusive breastfeeding should last less than three months, while 7 percent of women say they do not know. Differences by background characteristics of the woman are generally small, except that teenage girls are less likely to have an opinion than older women.

## 9.2 NUTRITIONAL STATUS IN EARLY CHILDHOOD

In addition to questions about breastfeeding practices, the 1999 TRCHS included an anthropometric component in which all children under five listed in the Household Schedule were weighed and measured. Each interviewing team carried a scale and a measuring board. The scales were lightweight, bathroom-type scales with a digital screen designed and manufactured under the authority of UNICEF. The boards were specially designed for use in field surveys. Children younger

than 24 months were measured lying down on the board (recumbent length), whereas standing height was measured for older children.

Evaluation of nutritional status is based on the rationale that in a well-nourished population, there is a statistically predictable distribution of children of a given age with respect to height and weight. In any large population, there is variation in height and weight; this variation approximates a normal distribution. Use of a standard reference population as a point of comparison facilitates the examination of differences in the anthropometric status of subgroups in a population and of changes in nutritional status over time. The World Health Organisation has recommended the use of the U.S. National Center for Health Statistics (NCHS) reference population.

### Nutritional Status Indicators

Three standard indices of physical growth that describe the nutritional status of children are presented:

- Height-for-age (stunting)
- Weight-for-height (wasting)
- Weight-for-age (underweight).

Each of these indices gives different information about growth and body composition that can be used to assess nutritional status.

Height-for-age is a measure of linear growth, and its deficits indicate long-term, cumulative inadequacies of health or nutrition. A child who is below minus two standard deviations (-2 SD) from the median of the NCHS reference population in terms of height-for-age is considered short for his/her age, or *stunted*, a condition reflecting the cumulative effect of chronic malnutrition. If the child is below minus three standard deviations (-3 SD) from the reference median, then the child is considered severely stunted. A child between -2 SD and -3 SD is considered moderately stunted. Stunting reflects failure to receive adequate nutrition over a long period and is frequently associated with poor overall economic conditions, chronic or repeated infections, and inadequate nutrient intake. Height-for-age, therefore, represents a measure of the long-term effects of malnutrition in a population and does not vary appreciably according to the season of data collection. Stunted children are not immediately obvious in a population: a stunted three-year-old child could look like a well-fed two-year-old.

Weight-for-height measures body mass in relation to body length and describes current nutritional status. A child who is below minus two standard deviations (-2 SD) from the reference median for weight-for-height is considered too thin for his/her height, or *wasted*, a condition reflecting acute malnutrition. Wasting indicates a deficit in tissue and fat mass compared with the amount expected in a child of the same height or length and may result either from failure to gain weight or from actual weight loss. Wasting represents the failure to receive adequate nutrition in the period immediately preceding the survey and may be the result of inadequate food intake or recent episodes of illness causing loss of weight and the onset of malnutrition. As with stunting, wasting is considered severe if the child is more than three standard deviations below the reference mean. Severe wasting is closely linked to an elevated risk of mortality. Prevalence of wasting may vary considerably by season.

Weight-for-age is primarily a composite index of both weight-for-height and height-for-age, and its summary nature makes interpretation complex. A child can be underweight for his age because he is stunted, wasted, or both. Weight-for-age is a useful tool in clinical settings for

continuous assessment of nutritional progress and growth. Children whose weight-for-age is below minus two standard deviations from the median of the reference population are classified as *underweight*. In the reference population, only 2.3 percent of children fall below minus two standard deviations (-2 SD) for each of these three indices.

In the survey, all children under age five who were listed on the Household Questionnaire were eligible for height and weight measurement.<sup>1</sup> Of the 2,990 children eligible for measurement, 94 percent were weighed and measured. For 2 percent of the children, data were missing, mostly because the child was not at home. Of the children who were both weighed and measured, a little more than 2 percent were considered to have implausibly low or high values for height-for-age or weight-for-height, while another 1 percent were missing the date of birth information. The following analysis focuses on the 2,820 children under five for whom complete and plausible anthropometric data were collected. Table 9.5 shows the percentage of children who are classified as malnourished according to height-for-age, weight-for-height, and weight-for-age indices, by the child's age and selected background characteristics.

### Current Levels of Malnutrition

The height-for-age results suggest that 44 percent of children under five are stunted, with 17 percent being severely stunted. Stunting increases from 9 percent among children less than six months old to more than half of the children 12-59 months old. Rural children are much more likely to be short for their age than urban children (48 versus 26 percent). Stunting seems to be less common among children in Zanzibar than in the Mainland.

The weight-for-height results show that 5 percent of children under five are wasted, with less than 1 percent being severely wasted. Differences in wasting by background characteristics are small except for some fluctuations by age of the child.

The proportion of children classified as underweight for their age is 29 percent. As with stunting, children older than six months of age are much more likely to be underweight than are very young infants. There is a sizeable difference in levels of underweight between urban and rural areas (21 versus 31 percent, respectively).

Figure 9.1 shows the distribution of children by age and the extent to which their weight and height deviate from the median of the reference population for height-for-age, weight-for-height, and weight-for-age indices. The results agree with previous findings of the 1991-92 TDHS and 1996 TDHS. For all three anthropometric indices, there is remarkable deterioration in nutritional status that begins shortly after birth, continues through the first year and a half, and then levels off or improves slightly thereafter to the third birthday.

---

<sup>1</sup> Note that this procedure is a change from previous surveys in which the children measured were those born in the five years preceding the survey to women who were interviewed individually. The current procedure is considered less biased because children whose mothers have died or who reside in different households from their mothers are not excluded.

Table 9.5 Nutritional status of children

Percentage of children under five years of age who are classified as malnourished according to three anthropometric indices of nutritional status: height-for-age, weight-for-height, and weight-for-age, and mean Z-scores, by selected background characteristics, Tanzania 1999

Background characteristic	Height-for-age			Weight-for-height			Weight-for-age			Number of children
	Percentage below -3 SD	Percentage below -2 SD <sup>1</sup>	Z score	Percentage below -3 SD	Percentage below -2 SD <sup>1</sup>	Z-score	Percentage below -3 SD	Percentage below -2 SD <sup>1</sup>	Mean Z-score	
<b>Child's age</b>										
<6 months	2.5	9.2	-0.7	0.0	3.3	0.4	0.0	3.9	-0.1	304
6-11 months	5.5	23.2	-1.3	0.4	5.8	-0.2	3.9	21.5	-1.2	303
12-23 months	21.0	50.8	-2.0	1.0	10.0	-0.8	11.8	41.8	-1.7	571
24-35 months	17.3	48.5	-2.0	1.2	5.4	-0.5	9.0	38.2	-1.6	568
36-47 months	23.9	51.9	-2.1	0.4	1.9	-0.2	6.0	26.4	-1.4	527
48-59 months	20.8	54.5	-2.1	0.4	4.7	-0.2	3.9	29.0	-1.4	547
<b>Sex</b>										
Male	16.9	44.9	-1.8	0.1	5.4	-0.3	6.0	28.5	-1.3	1,423
Female	17.3	42.7	-1.8	1.2	5.3	-0.3	7.0	30.4	-1.4	1,397
<b>Residence</b>										
Urban	7.7	26.1	-1.3	0.4	5.9	-0.3	4.9	20.6	-1.0	500
Rural	19.1	47.6	-1.9	0.7	5.3	-0.3	6.8	31.3	-1.4	2,321
<b>Mainland/Zanzibar</b>										
Mainland	17.2	44.0	-1.8	0.6	5.3	-0.3	6.5	29.5	-1.3	2,746
Urban	7.8	26.1	-1.3	0.4	5.9	-0.3	5.0	20.7	-1.0	479
Rural	19.2	47.8	-1.9	0.7	5.2	-0.3	6.8	31.4	-1.4	2,268
Zanzibar	12.2	35.8	-1.6	0.5	6.3	-0.4	7.0	25.8	-1.3	74
Pemba	18.3	46.2	-1.8	0.8	9.5	-0.6	12.7	36.0	-1.6	34
Unguja	7.0	27.0	-1.3	0.3	3.5	-0.3	2.2	17.2	-1.0	40
<b>Total</b>	<b>17.1</b>	<b>43.8</b>	<b>-1.8</b>	<b>0.6</b>	<b>5.4</b>	<b>-0.3</b>	<b>6.5</b>	<b>29.4</b>	<b>-1.3</b>	<b>2,820</b>

Note: Figures are for children born in the period 0-59 months preceding the survey. Each index is expressed in terms of the number of standard deviation (SD) units from the median of the NCHS/CDC/WHO international reference population. Children are classified as malnourished if their Z-scores are below minus two or minus three standard deviations (-2 SD or -3 SD) from the median of the reference population.

<sup>1</sup> Includes children who are below -3 SD

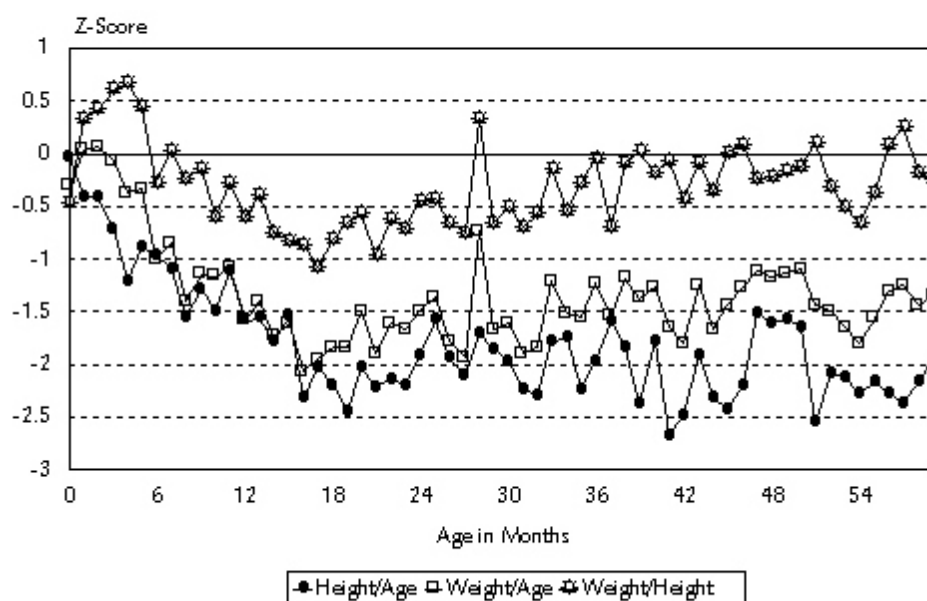
## Trends in Malnutrition in Tanzania

The data collected in the 1999 TDHS to assess nutritional status of children under five years of age are similar to those obtained in the 1991-92 TDHS and the 1996 TDHS, despite the administration of the three surveys in different seasons. The 1991-92 TDHS data collection took place from October 1991 to March 1992, while the 1996 TDHS took place from July to November 1996, and the 1999 TRCHS was conducted from September to mid-November 1999. The difference in timing of the three surveys may affect the results concerning nutritional status of children.

The three surveys show that the prevalence of stunting has remained at around 43-44 percent of children under five (Table 9.6). Although the percentage wasted rose from 6 percent to 7 percent from 1991-92 to 1996, it decreased to 5 percent in 1999. The proportion of children who are underweight has also remained constant at around 29-31 percent.



**Figure 9.1 Nutritional Status of Children Under Five Years, Mean Z-scores by Age in Months**



TRCHS1999

**Table 9.6 Trends in nutritional status of children**

Among children under five years of age, the percentage classified as malnourished according to height-for-age, weight-for-height, and weight-for-age, 1991-92 TDHS, 1996 TDHS, and 1999 TRCHS

Index	1991-92 TDHS	1996 TDHS	1999 TRCHS <sup>a</sup>
<b>Height-for-age</b>			
< -2 SD	42.6	43.4	43.8
< -3 SD	16.7	17.8	17.1
<b>Weight-for-height</b>			
< -2 SD	6.0	7.2	5.4
< -3 SD	1.2	1.3	0.6
<b>Weight-for-age</b>			
< -2 SD	28.8	30.6	29.4
< -3 SD	7.1	7.8	6.5
Number of children	6,097	5,344	2,820

Source: Ngallaba et al., 1992: 108; Bureau of Statistics and Macro International, 1997: 131

<sup>a</sup> Based on children under five in the household

### 9.3 VITAMIN A SUPPLEMENTATION AMONG CHILDREN

Research has shown that adequate stores of vitamin A can have an enormous effect on the ability to fight diseases and maintain good health. In the absence of sufficient intake of foods rich in vitamin A, due to poor soils and/or cultural habits, health programmes often implement mass vitamin A supplementation programmes, especially for children age six months to five years of age.

In order to measure the level of coverage of the vitamin A supplementation programme in Tanzania, women were asked if their children under age five had ever been given a vitamin A supplement and, if so, when they received the most recent dose. In order to minimise confusion with other supplements and vaccines (e.g., polio vaccine, which is usually also given orally), interviewers

were instructed to show the respondent a sample small, reddish vitamin A capsule. Unfortunately, they were not equipped with the blue vitamin A capsule that is distributed as part of the Expanded Programme on Immunisation (EPI). Consequently, the figures given here may underrepresent the level of vitamin A supplementation.

The data in Table 9.7 indicate that only 14 percent of children 6-59 months were reported to have received a vitamin A supplement in the previous six months. Another 6 percent received a supplement but not in the previous six months. Coverage is remarkably higher among children in Unguja than in other parts of the country. It is also higher among children of better-educated mothers.

**Table 9.7 Vitamin A supplementation among children**

Percent distribution of children age 6-59 months by whether they received a high-dose vitamin A supplement in the six months preceding the survey, according to selected background characteristics, Tanzania 1999

Background characteristic	Received vitamin A supplement			Not sure if received vitamin A	Never received vitamin A	Total	Number of children
	Within last 6 months	Prior to last 6 months	Not sure when				
<b>Child's sex</b>							
Male	12.2	6.1	0.2	2.2	79.3	100.0	1,301
Female	15.5	6.6	0.2	1.3	76.4	100.0	1,271
<b>Residence</b>							
Urban	17.8	9.1	0.5	2.2	70.4	100.0	487
Rural	12.9	5.7	0.1	1.7	79.6	100.0	2,085
<b>Mainland/Zanzibar</b>							
Mainland	13.3	6.5	0.2	1.8	78.3	100.0	2,503
Urban	16.1	9.4	0.5	2.1	71.8	100.0	467
Rural	12.6	5.8	0.1	1.7	79.8	100.0	2,036
Zanzibar	33.8	0.7	0.0	3.0	62.5	100.0	69
Pemba	13.1	0.8	0.0	0.7	85.5	100.0	33
Unguja	53.1	0.6	0.0	5.1	41.2	100.0	36
<b>Child's age</b>							
6-11 months	17.0	1.2	0.0	0.5	81.3	100.0	310
12-23 months	20.8	5.2	0.4	1.2	72.4	100.0	593
24-35 months	13.8	10.5	0.0	0.5	75.2	100.0	588
36-47 months	9.7	5.3	0.0	3.1	82.0	100.0	528
48-59 months	8.5	7.0	0.5	3.3	80.7	100.0	554
<b>Education</b>							
No education	6.6	4.1	0.3	2.2	86.8	100.0	705
Primary incomplete	16.5	4.3	0.0	1.0	78.2	100.0	424
Primary complete	15.2	8.0	0.2	1.9	74.8	100.0	1,353
Secondary+	37.2	8.5	0.0	1.5	52.8	100.0	91
<b>Total</b>	<b>13.8</b>	<b>6.3</b>	<b>0.2</b>	<b>1.8</b>	<b>77.9</b>	<b>100.0</b>	<b>2,572</b>