

HARGEISA NUTRITION SURVEY REPORT

**UNICEF and the Ministry of Health and Labour in collaboration
with FSAU**

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1 Executive Summary

UNICEF and the MOHL (Ministry of Health and Labour), in collaboration with FSAU conducted a nutrition survey in June 2001 in seven areas of Hargeisa town. The purpose of the study was to determine the nutritional status of children aged 6 – 59 months with a view to establishing baseline data on these populations. Moreover, the study aimed at understanding the factors influencing the nutritional status of children in these areas.

Using a multiple stage cluster sampling methodology, a total of 901 children aged 6 – 59 months were surveyed in seven areas in Hargeisa. Nutritional status assessments were based on weight and height measurements. Moreover, information relating to diarrhoea and ARI incidence two weeks prior to the survey, Vitamin A supplementation and measles vaccination status of the children were also collected. Focus group discussions relating to household food security and childcare practices were also held with a group of mothers in each location to gain a better understanding of factors affecting nutrition in these areas.

Data analysed in EPI Info for nutritional status suggests a global acute malnutrition (<-2 z-scores or oedema) rate of 16.3 per cent and a severe acute malnutrition (<-3 z-scores or oedema) rate of 6.4 per cent.

Information collected on immunization during the survey indicated that about 56 per cent of the children had been immunized against measles, out of which 31 per cent had been vaccinated within the six months prior to the survey and slightly more than 22 before the past six months. More that 46 per cent of the study children were not immunized at all against measles. Close to 75 per cent of the children had been given Vitamin A supplements during the past six months. About 22 per cent of the children had diarrhoea while slightly more than 36.3 per cent suffered from acute respiratory infections during the two weeks prior to the survey.

It appears that of the households interviewed less than 9 per cent are female headed. The majority of these (66 per cent) have been in Hargeisa town between 2-6 years with most originating from refugee camps in Ethiopia (68 per cent). Only 57 per cent of the households that were surveyed owned a toilet. The main source of drinking water for these households was almost universally reported as public tap.

In the qualitative findings, it was identified that most of the households interviewed take two meals a day, mainly consisting of milk and ‘anjero’ (flour-based meal). From the discussions it appears that intake of food with high nutritional value is on the decline. A general economic recession, ensuing from the livestock and construction activities bans is the main reason for the decline in purchasing power.

2 Summary of findings

Indicator	Per centage
Number of boys in the sample	52.3
Number of girls in the sample	47.7
Global acute malnutrition Weight For Height <-2 z-scores or oedema or presence of oedema	16.3
Severe acute malnutrition Weight For Height <-3 z-scores or oedema or presence of oedema	6.4
Proportion of children with diarrhoea in two weeks prior to the survey	22.4
Proportion of children with ARI in two weeks prior to the survey	36.3
Proportion of children supplemented with Vitamin A in six months prior to the survey	74.6
Proportion of children immunised against Measles	53.6
Proportion of female-headed households	8.5
Proportion of households returning from refugee camps in Ethiopia	68.3
Proportion of households with maternal stay in Hargeisa between 1 - 5 years	61.2
Proportion of households with public tap as the main source of drinking water	99.6
Proportion of households owning a toilet	56.8

3 Background Information

The survey was conducted in seven areas within Hargeisa town. The seven areas are Sheikh Nur, Aw Aden, Daami, Mohamed Moge, State House, Stadium and Fadumo Bihi surroundings. Sheikh Nur, Aw Aden and Mohamed Moge are purely resettlement camps, while Daami is the traditional sector of town inhabited by minority groups. The State House area covered by the survey can be classified as an IDP camp. Stadium and Fadumo Bihi are surrounded by clusters of poorer households and the survey looked at these.

3.1 Health context

Generally the health services in the survey areas is poor. Only Sheikh Nur, the largest settlement, has an operating public health facility, which provides services including immunization, under five clinic, antenatal care and delivery. But even here attendance is very poor - less than fifteen people per day. The cost recovery approach adopted by the Ministry of Health and Labour may be one of the reasons why the poorest population groups sometimes cannot utilize the health services as the policy which should provide guidelines on exemption for very poor is not always regularly applied. Moreover, the public health facilities work only in the morning hours while most parents or caretakers are out of the daily bread. No outreach services other than immunization and Vitamin A distribution programmes has ever been developed for Sheikh Nur.

All the other survey areas have no public health service facilities. However, Mohamed Mooge has several private pharmacies. The construction of a health center there has been completed recently, with the assistance of UNHCR, but it is not operational yet due to some managerial and staffing issues. For the Stadium and Fadumo Bihi settlements the nearby Iftin health center is accessible but the MCH hardly ever operates due to staffing issues. The State House and Daami communities are close enough to the Jig-jiga Yar and New Hargeisa health centers respectively.

3.2 Water and Sanitation characteristics

International organizations such as UNICEF and the Municipality of Hargeisa put a lot of effort in providing safe drinking water to the IDP/returnees settlements, by piping the water and establishing several kiosks. Almost every household in the survey areas has access to safe and clean water. A jerry can of 20 liters is sold at only 200 Somaliland Shillings at the kiosks. On average each household uses around 40 liters of water a day. However, it is believed that contamination of water can easily take place while handling water at household level.

The sanitation situation in most of the settlements is very poor, particularly Sheikh Nur which is located very close to an old garbage dumping site. In the Oromo settlements of Sheikh Nur, one can hardly walk in between the very congested houses without stepping on human waste matter.

The Danish Refugee Council (DRC) supports the settlements in Sheikh Nur and Mohamed Mooge in the construction of latrines. DRC provides two bags of cement, 200 bricks and a slab when the household digs the pit, while UNICEF assisted in the

provision of sanitation tools and establishing sanitation committees in some of the settlements such as Sheikh Nur.

3.3 Food Security characteristics

The population in the resettlement camps of Hargeisa falls within the urban food economy group. They do not own livestock or land under production and are dependent on other food and income sources normally accessed through purchases or equally on community support system. The urban economy group can be divided into various wealth groups based on their daily income or assets ownership. The table below shows a summary of these wealth groups¹

Wealth Group	Daily Earning (SLShs)
Very poor	5 – 13,000
Poor	>13,000 – 25,000
Middle	>25,000 – 35,000
Better off	>35,000

Majority of the population in the resettlement camps falls within the very poor and poor wealth groups. The urban food economy group relies on purchases as a source of food or may have relatives in the rural areas that send them gifts in form of cereals, milk or meat. Other sources of income and food for this group include employment in construction ventures or large/small scale trade, and gifts and remittances from relatives.

The food security situation of the population in the resettlement camps of Hargeisa is greatly affected by issues that either increase the cost of foods or reduce income accessibility. Of importance in the past one year has been the cessation of construction activities in Hargeisa town, devaluation of the Somaliland shilling and impact of the livestock ban imposed by the Gulf countries in September 2000. This led to reduction in foreign income inflow culminating into decreased employment opportunities and low business activities. The resettled population in Hargeisa camps, just like any poor sections of the town have been greatly affected by these mentioned factors and their food security position compromised.

Other factors that have weighed negatively on the welfare of these populations include limited social support networks as even the relatively well-off groups were affected by the livestock ban and the corresponding economic downturn, there by reducing their assets and capacity to support others. Pasture and water availability during the survey period had also been compromised in the some parts of the pastoral areas like Hawd thus further reducing food availability for sharing or selling to the to markets.

Coping is increasingly becoming hard for this group as town life only offers them income dependent opportunities that have been increasingly scarce in the event of economic crunch.

¹ Urban Food Economy. Hargeisa town, Somaliland (including discussion on the impact of the livestock ban), by Mohammed Abdi Musa, FSAU Hargeisa. September, 1998.

4 Survey Objectives

The survey had as its objectives the following:

- To determine the nutritional status of children aged 6–59 months in seven disadvantaged areas of Hargeisa town
- To determine the incidence of diarrhoea, measles and ARI among study children
- To determine factors associated with the nutritional status of children aged less than five in seven disadvantaged areas of Hargeisa
- To measure measles vaccination and vitamin A supplementation coverage in the study areas.

5 Methodology

5.1 Sampling methodology

A multiple stage 30 clusters by 30 children sampling methodology was used. The study area was divided in seven main villages and population estimates for each village were obtained from the NIDs Secretariat in Hargeisa and used for the attribution of clusters (see Annex A). Those clusters were subsequently used to identify households and children to be surveyed. Proportionate numbers of clusters were then drawn from these villages using the following formula:

$$X = \frac{n}{N} \times 30$$

where n = estimated population for the village, N = estimated population for the study area, 30 = total number of clusters to be drawn from the study area.

The basic assumption was that the formula would be more representative for the different villages in the study area depending on the population proportionality. Thereafter, the villages were sub-divided into equal number of sections based on the calculated cluster numbers each representing a cluster within that main village.

The second stage of sampling was conducted by randomly choosing on households through spinning method at the center of each cluster. The first household was randomly selected from the direction of the random spinning with subsequent households chosen on the same direction based on its proximity to the preceding household. A random selection of one child from each household was then taken and surveyed for anthropometry. This process continued till the required numbers of children was obtained.

In cases of absenteeism of household members, the survey team noted the household, and re-visited it later in the day. If two subsequent attempts were fruitless, then the survey team randomly selected an alternative household.

Analysis was done using the EPIINFO version6 software and the corresponding nutrition status indicators generated from the EPINUT

5.2 Sample size

The target population was children 6-59 months (or heights between 65 – 110 cm) as children in this age group are considered to be particularly vulnerable to malnutrition. In order to provide valid estimates of the prevalence of malnutrition in children with a 95% confidence, a minimum of 900 children were to be examined 30 children to be randomly selected from each of 30 clusters.

5.3 Training of Enumerators and Pre-testing

Enumerators were trained for two days on objectives of the survey; study population, sampling procedure, accurate ways of collecting anthropometric data and interviewing procedures. Pre-testing of twenty-four study questionnaires was also carried out in Beerta Horriyada to test the clarity of the study tool and corrections made accordingly.

5.4 Data Collection and analysis

The trained enumerators administered the questionnaire to mothers or primary caregivers of selected households. If a mother or caregiver was absent an appointment was made and the household revisited until the interview was completed.

Six teams were used to collect the data. Each team consisted of two enumerators and every three teams had one supervisor. Data collection lasted six days. During the data collection phase, each questionnaire was thoroughly checked by the field supervisors for omissions and inappropriate responses. UNICEF and FSAU survey coordinators filled in the z-scores at the end of each day. Supplemental information was obtained through focus group discussions with a group of mothers in each of the seven study areas.

Data entry and analysis was preliminarily done in Microsoft Excel and later in EPI INFO. The planning committee comprising MOHL Nutrition Department, UNICEF and FSAU discussed the preliminary results.

6 Presentation of the Survey Results

6.1 Demographic Characteristics of Study Households

The demographic characteristics of the households that were surveyed is provided in the table below. Of the total households surveyed slightly more than 8 are female headed. More than 66 per cent of the sample have stayed in Hargeisa between 2 – 6 years with most of them (68 per cent) originating from refugee camps in Ethiopia. The majority of households (88 per cent) reported having only one income source. Casual employment (masonry, carpentry, metal work, househelp, etc) was the most frequently cited source at 31 per cent with small scale trade (donkey carts, taxis, brick making, tailoring, shoemaking, wheelbarrow shops, etc.) closely following at about

30 per cent. Slightly more than 97 per cent of the households reported purchasing as their only food source. Less than 57 per cent of the households that were surveyed reported having a toilet. The main source of drinking water reported was public tap (more than 99 per cent).

Demographic characteristic	%
Household Head's Sex	
➤ Female	8.5
➤ Male	91.5
Period of maternal stay in Hargeisa	
➤ 0 - 1 Year	10.8
➤ 2 – 6 Years	66.5
➤ > 7 Years	22.8
Place of Origin before coming to Hargeisa	
➤ Refugee camps in Ethiopia	68.3
➤ Other locations in Ethiopia	9.5
➤ Other locations in Somaliland	15.2
➤ South/Central Somalia	3.1
➤ Others	3.6
Number of Income sources	
➤ One Source	88.0
➤ Two Sources	12.0
Income Sources	
➤ Small scale trade	29.9
➤ Market activities	26.6
➤ Casual employment	31.1
➤ Livestock	3.4
➤ Remittances	6.0
➤ Permanent employment	11.2
➤ Salaried employed	1.1
➤ Begging	1.7
➤ Gifts	1.6
Number of food sources	
➤ One source	92.2
➤ Two sources	7.8
Food sources	
➤ Animal production	0.2
➤ Own production	0.6
➤ Purchase	97.4
➤ Begging	1.7
➤ Gifts	1.6
Own Toilet	56.8
Does not own a toilet	43.2
Main source of drinking water:	
➤ Public Tap	99.6
➤ Piped into Yard	0.3

6.2 Distribution of children by age and sex

The analysis shows that 467 (slightly more than 52 per cent) of the study children were boys and 426 (slightly less 47) were girls. There is a slight difference but it is almost insignificant.

Age in months	Girls		Boys		Total	
	n	%	n	%	n	%
6 – 11	49	49.5	50	50.5	99	11.1
12 – 23	108	47.8	118	52.2	226	25.3
24 – 35	100	45.9	118	54.1	218	24.4
36 – 47	94	46.1	110	53.9	204	22.8
48 – 59	75	51.4	71	48.6	146	16.3
Total	426	47.7	467	52.3	893	100

6.3 Distribution according to age and weight/height index in z-score or oedema

Age in months	<-3 Z-Scores		\geq -3 and < -2		\geq -2 Z-Scores		Oedema	
	n	%	n	%	n	%	n	%
6 – 11	4	3.9	5	4.9	92	90.2	1	1.0
12 – 23	18	7.9	31	13.7	175	77.4	2	0.9
24 – 35	7	3.2	29	13.3	175	80.3	7	3.2
36 – 47	5	2.5	12	5.9	187	91.7	0	0.0
48 – 59	13	8.6	12	7.9	125	82.8	1	0.7
Total	47	5.2	89	9.9	754	83.7	11	1.2

6.4 Distribution of study children by nutritional status

Nutritional status	n	%
Oedema	1.2	11
<-3 Z-scores	5.2	47
\geq -3 and < -2	9.9	89
\geq -2 z-scores	83.7	754

6.5 Indicators

	Proportion (%)	95% Confidence Interval (%)
Oedema	1.2	
Global acute malnutrition (<-2 z-scores or oedema)	16.3	12.9 – 19.7
Severe acute malnutrition (<-3 z-scores or oedema)	6.4	4.2 – 8.6

6.6 Interpretive analysis

Distribution according to age and nutritional status

Global acute malnutrition

Age in months	Proportion (%)	95% Confidence Interval (%)
6-23 months (<2 yrs)	17.8	13.9-22.5
24-59 months (\geq 2 yrs)	15.1	12.3-18.4

Severe acute malnutrition

Age in months	Proportion (%)	95% Confidence Interval (%)
6-23 months (<2 yrs)	6.8	4.4-10.2
24-59 months (\geq 2 yrs)	5.8	4.1-8.1

6.6 Analysis of Risk factors

Morbidity prevalence and measles vaccination and Vitamin A coverage rates

Diseases	n	%
Diarrhoea (n=901)	202	22.4
ARI (n=901)	327	36.3
Measles (n=910)	483	53.6
Vitamin A (n=898)	670	74.6

The overall incidence of diarrhoea among the study children was less than 23 per cent. Slightly higher than one third of the study children (more than 36 per cent) were also suffering from acute respiratory infections during the two weeks preceding the survey. Measles vaccination coverage was reported at about 54 per cent, while 670 of the children (slightly more than 74 per cent) received Vitamin A supplementation.

7 Analysis of findings

Currently, no nutrition survey data for the normal population of Hargeisa is available to compare with the data obtained from this survey. Therefore it is difficult to make any comparisons between the targeted population *vis-à-vis* other groups in the town.

An increase in malnutrition cases in some of the areas surveyed was first noticed from the MCH reports of Sheikh Nur and New Hargeisa. Starting from March 2001 the monthly reports from the two MCHs showed high prevalence of severe malnutrition (<-3 z-scores or oedema) in the areas of Daami and Sheikh Nur.

The main concern arising from the results is the high rate of severely malnourished children (slightly more than 6 per cent). This is the highest rate reported in the Somaliland for the past ten years. The majority of the malnourished children identified in the survey had either suffered from a disease such as diarrhea and acute

respiratory infections or not received the measles immunization. Whether or not the child had suffered from measles disease in the recent past has not been asked during the survey. But there were reports of measles cases inside Hargeisa town during the first quarter of 2001. Without proper care and treatment the sick child can easily develop malnutrition. These could have been one of the major contributors to the higher rate of malnutrition. In fact qualitative data generated suggests that in Sheikh Nur alone, four out of every ten households (40 per cent) are supported primarily by women, and of those four, two are supported wholly by women.

The major source of drinking water for the surveyed households was public tap but still the prevalence of diarrhea was reported to be high (22 per cent). This could mean that there is contamination of water at household level.

In the qualitative findings, it was identified that most children take hardly two meals a day, mainly consisting of milk and 'anjero' (four-based meal). From the discussions it came out that intake of food with high nutritional value is on the decline. A general economic recession, ensuing from both the livestock and construction activities bans is the main reason for the decline in purchasing power.

8 Recommendations

- To establish immediately a task force to coordinate interventions and closely monitor the situation in the study areas headed by MOHL and composed by the different partners.
- Improving access to food at community and household level by setting up a supplementary feeding program for the most affected children and other vulnerable groups such pregnant and lactating mothers.
- Improving the provision of health services in the area by undertaking regular home visits and other outreach activities and waiving health center fees for the affected populations by looking at the cost recovery approach guidelines.
- Advocating for credit programs with agencies involved in such programs with a view to creating income opportunities for these populations, particularly for women heading households.
- Improve the access to the health services by the affected population by reviewing the working hours schedule of the public health facilities.
- Strengthen and/or implement information, education and communication initiatives to raise awareness in order to avoid water contamination and improve the environmental sanitation at household level.

ANNEX 1: POPULATION ESTIMATES FOR THE AREAS SURVEYED

Areas	Estimated population	No. of clusters
1. Sheikh Nur	9,000	9
2. Aw Adan	2,500	2
3. Dami	3,000	3
4. State house	3,000	3
5. Fatuma Bixi	3,000	3
6 Stadium	3,000	3
7. Mahamed Moge	7,000	7
	30,500	30