

Nutritional status survey of under five children In Baghdad – Iraq

29 April – 3 May 2003



Introduction:

Iraqis have faced difficult living conditions since the outbreak of war on 20 March 2003. Basic services such as power and water have been disrupted, and a rise in food prices has affected food security at the household level. This survey was undertaken to understand the consequences of this period on vulnerable groups of children, and to determine the prevalence of malnutrition, diarrhoea and dehydration. Staff from the Nutrition Research Institute with UNICEF support conducted it.

Objectives of the Survey:

1. To determine the prevalence of the various type of malnutrition among U5 children.
2. To determine the diarrhoeal, dehydration and nutritional edema incidence rate among U5 children.
3. To establish a starting point to address malnutrition, and for other programmatic responses.

Targeted Age Group:

Children under five years of age were targeted, using the following indicators:

- Weight for Height indicator; wasting
- Weight for Age indicator; underweight
- Height for Age indicator; stunting

[It was deemed essential to include the prevalence of nutritional edema, episodes of diarrhoea and dehydration in the targeted family during the emergency period before the survey.]

Planning stage:

With UNICEF support the NRI collected and reviewed the available information on Baghdad City based on previous surveys conducted at the household level, socio-economic conditions, available demographic data and the previous known nutritional status of U5s. Training courses were conducted to re-train supervisors and surveyors (most of whom had participated in previous surveys) for the collection of data, and to contribute to the capacity building of staff.

Eight field teams were identified, and each team of (5) surveyors, was equipped with:

- (2) UNISCALES
- Height/length measuring boards
- Questionnaire/ survey forms
- Survey Guidelines

A team of specialists from the NRI supervised the fieldwork; checked the questionnaire forms after data collection; supervised data entry, data cleaning, and analysis; and participated in the final report writing.

Identification and selection of the Sample Size:

The targeted population selected for assessment is quite large and is spread widely within Baghdad City, rural and urban areas. The cluster sample method was used in previous surveys conducted by NRI and FAO in the years 1993, 1995, 1997, and 2000. Accordingly (36) clusters were selected from the same area/ cluster that had been identified in earlier surveys. Each cluster included 15 households and around 30 children. The planning was for 900 under 5 children from 30 clusters, but during the preparation for the field work it was decided to add 6 clusters in case the desired target of 30 under 5 children per cluster was not achieved.

Upon reaching the identified cluster, the first household was selected using the “rolling the pen” method. Thereafter the closest household was chosen, and so on until (30) children had been surveyed. All children within the targeted age group (as per ID cards registered birth date) in each household was surveyed.

A sample size of 960 U5 children were surveyed, with a confidence interval of 95%. The design factor was 2.

To obtain reliable results, it was necessary to survey at least 30 clusters for a total number of not less than 900 children, for which Baghdad was divided into equal sectors of at least 300 people each, taking into consideration the geographic and administrative borders.

The fieldwork:

Data was collected from 29 April to 3 May 2003.

Data Analyses

After collecting the required data from the identified clusters by the field teams, the questionnaire forms were reviewed by a special committee from NRI. If information was missing the field teams were asked to return back to the field to complete the missing information.

FoxPro database programme for data entry and EPI-Info Version 6 statistical package for data analyses were used.

Results and Discussion

Results of the rapid assessment survey showed the following:

1. Number of children surveyed was (960) with 493 (51.4%) for boys and 467 (48.6%) for girls as shown **table No. (1) below:**

Gender	No. of Children	%
Male	493	51.4
Female	467	48.6
TOTAL	960	100

2. Age distribution of the surveyed children is shown in **table No. (2) below:**

Age group/month	No.	%
0 – 5	199	20.8
6 – 11	177	18.6
12 – 17	120	12.6
18 – 23	100	10.5
24 – 35	134	14
35 – 47	138	14.5
48 – 59	86	9
Total	954	100

Flagged (abnormal) figures were reported in 6 cases; hence not listed in the analyses.

3. Malnutrition rate / sex of the children is shown below **table No. (3)**:

Malnutrition Type	Indicator	Boys		Girls	
		-2 SD to -3SD	Below -3 SD	-2 SD to -3SD	Below -3 SD
Underweight	weight/age	11.5	2.9	10.5	1.5
Stunting	height/age	13	4	11.3	3.3
Wasting*	weight/height	6.1	2.3	5.8	1.1

* Oedema is included in wasting

CI of 95%

4. Malnutrition rate in total is shown in **table No. (4)**:

Malnutrition type	Indicator	-2 SD to -3 SD	Below -3 SD	TOTAL
Underweight	weight/age	11.0	2.2	13.2
Stunting	height/age	12.2	3.7	15.9
Wasting*	weight/height	6.0	1.7	7.7

* Oedema is included in wasting

CI of 95%

5. The prevalence of diarrhea among the surveyed children was 72% for the period from 20/3 until the interview was conducted.

No. of diarrhea episodes/month	%
1	18.9
2	14.4
3	9.3
4	5.4
5	5.0
6	2.1
7-8	3.2
9 and more (chronic)	13.5

6. The dehydration prevalence (moderate dehydration) in the surveyed children during the time of the interview (confirmed clinically by skin pinch) was 10.2%.

7. The rate of nutritional edema was 0.4%.

Discussion

Survey showed no significant difference between male and female rates (51.4% and 48.6%) respectively (table-1).

Table 6 shows rates of malnutrition over the years, using the results of an FAO assessment in Baghdad while Table 7 includes the results of the MICS 2000 (South/Center) and the Nutrition Status Household Survey (South/Center) conducted jointly with UNICEF in 2002:

Table No. 6: Malnutrition indicators; comparison with earlier household surveys conducted in Baghdad governorate with FAO support *.

Year	CI	Malnutrition Indicator		
		Weight/age % (Underweight)	Height/age % (Chronic)	Weight/height % (Acute)
1995*	95%	29.0	28.0	12.0
1997*	95%	24.7	27.5	8.9
1999*	95%	21.3	20.4	9.0
2000*	95%	--	12.0	10.5

Table No. 7: Malnutrition indicators; comparison of national household figures with the rapid assessment household survey (conducted with UNICEF support)

Year	Malnutrition Indicator		
	Weight/age % (Underweight)	Height/age % (Chronic)	Weight/height % (Acute)
MICS 1996	23.4	32.0	11.0
MICS 2000	15.9	22.1	6.0
Nutrition status household survey 2002	9.4	23.1	4.0

The results of the above-mentioned FAO supported surveys suggests an improvement in the nutritional status (underweight) has taken place during the years 1995 – 2002.

Here are key conclusions drawn from the present survey:

1. The above-mentioned results - 7.7% acute malnutrition – indicates a significant public health concern in Iraq.
2. Seven out of 10 children reported had suffered from diarrhoea at some time during the previous 5 weeks. Diarrhoea is likely a major factor in the rise in malnutrition since the war, linked mainly to the poor quality and low quantity of water, poor sanitation, large amounts of uncollected garbage and frequent electricity cuts.

Limitation of the survey:

For security reasons, UNICEF and the NRI agreed to limit this survey to the Baghdad governorate alone.

Recommendations:

After reviewing the results of this latest nutrition survey, as well as previous surveys, there is an urgent need for the following:

1. To expedite the provision of basic infrastructure and services, particularly potable water, sewage disposal and the provision of electricity and fuel.
2. To intensify efforts to prevent diarrhoea and to improve case management of diarrhoea.
3. To conduct frequent surveys and studies to assess and monitor the trends of malnutrition in children and the humanitarian status countrywide, and to upgrade nutrition and micronutrients databases.