

**Philippine Nutritional Facts & Figures
Supplement 1:**

***2001 Update of the Nutritional Status
of 0-10 Year-Old Filipino Children***



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FOREWORD

The Food and Nutrition Research Institute of the Department of Science and Technology (FNRI-DOST), as the primary R&D institution of government that is mandated to define and update the Philippine food and nutrition situation, published a Handbook on Philippine Nutrition Facts and Figures in 2001. This was well-received by and proved to be useful to various organizations and institutions engaged in nutrition and nutrition-related policy and program development, instruction and research, nutrition promotion, and food processing, among others.

In 2001, after the completion of another round of Anthropometric Survey that sought to update, every two to three years, the nutritional status of 0-10 years-old Filipino children in all the provinces of the country, the FNRI-DOST once again deemed it useful to release a Supplement to the first Handbook on Philippine Nutrition Facts and Figures.

Because the 2001 Updating Survey was done at the start of the new millennium, the collected data provide the necessary benchmarks by which to gauge the country's and the provinces' progress towards achieving the Millennium Development Goals, which include, among others, the eradication of undernutrition among our children. The children's growth data therefore provide policymakers with the important basis by which to assess the effect of policies and programs on human development at mid-implementation of long and medium-term development plans, for more effective governance.

We hope that the 2001 Philippines Nutrition Facts and Figures Supplement will be extensively by the targeted audiences, to inform, provoke action and contribute to the ultimate objective of improving the quality of life of every Filipino, especially the children, the country's future.

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THE 2001 UPDATE OF THE NUTRITIONAL STATUS OF 0-10 YEAR-OLD FILIPINO CHILDREN

From 1978 to 2001, there have been five National Nutrition Surveys (NNS) and four Updating of the Nutritional Status of Children. The Updating of the Nutritional Status of Children, focusing on the anthropometric indices, is conducted every two to three years to provide data that are timely, considering the dynamics that affect the nutritional status of children.

The 2001 Update covered all the 16 regions of the country, 599 barangays and 12,425 children, ages 0-10 years. Ten thousand six hundred thirty-four (10,634) of these children were of preschool-age (0-5 years old) and the rest (1,791) were of primary school-aged (6-10 years old). National, regional, and provincial estimates (for 19 selected provinces, for being considered as high risk areas in the 1998 Anthropometric Survey) were generated for the data on preschool-age children; while only national estimates could be generated for the data on school-age children.

The children's weight and standing height or recumbent length (for children, less than 2 years old) measurements were taken and subsequently assessed against the International Reference Standards for Growth (NCHS/WHO, 1983) to determine nutritional status based on weight-for-age, weight-for-height and height-for age (Table 1).

**Table 1. Cut-off points used in classifying the children
based on NCHS/WHO Reference Standards for Growth**

Classification	Cut-off Points
<ul style="list-style-type: none"> • Weight-for-age Underweight Normal Overweight 	<p><-2SD -2SD to +2SD > +2SD</p>
<ul style="list-style-type: none"> • Height-for-Age Short or Underheight Normal Above Average/Tall 	<p><-2SD -2SD to + 2SD > +2SD</p>
<ul style="list-style-type: none"> • Weight-for-Height Thin Normal Overweight NEC (<i>not Elsewhere Classified</i>) – <i>those whose heights are beyond the limits of the weight-for -height tables</i> 	<p><-2SD -2SD to +2SD > +2SD</p>

What is the nutritional status of Filipino children in 2001? Has it become better or worse-off than the previous years?

1. At the National Level

1.1 Among preschool-age children,

- 68 out of every 100 children have normal weight-for-age, 31 are underweight and 1 is overweight.
- 68 out of every 100 children have normal height-for age, 31 are short or underheight. Five out of a thousand are tall for their age.
- 92 out of every 100 have normal weight-for-height, 6 are thin, and 1 is overweight.

Table 2. Percentage distribution of 0-5 year-old children, by NCHS/WHO classification

Classification	% Distribution
<u>Weight-for-age</u>	
Underweight	30.6
Normal	68.4
Overweight	1.0
<u>Height-for-age</u>	
Short or Underheight	31.4
Normal	68.0
Above Average/Tall	0.5
<u>Weight-for-Height</u>	
Thin	6.3
Normal	92.1
Overweight	1.4
NEC	0.1

Using the project 12 million children, 0-5 year old, based on the 1995 NSO Census, there are an estimated 3.67 million underweight, 3.77 short or underheight, and 0.76 million thin preschool-age children.

By single-age groups,

- The children in the 1-and 2-year age groups have the highest rates of underweight (35.6% and 35.2%, respectively). About 1 child in every 100 in a single-age category is overweight.
- The children in the 3-, 4- and 5-year age groups have the highest rates of underheight (37.2%, 39.6% and 40.0% respectively).
- The children in the 1-year age group have the highest rate of thinness (14.3%). This is followed by children, less than 1 year old (6.3%) and children, 2 years of age (5.9%).

Table 3. Percentage distribution of 0-5 year-old children, by single age and by NCHS/WHO classification

Age (in years)	% Distribution by Weight-for-Age		
	Underweight	Normal	Overweight-for-age
0	11.9	87.1	1.0
1	35.6	63.7	0.7
2	35.2	63.5	1.3
3	32.4	66.2	1.4
4	33.7	65.4	1.0
5	31.9	67.2	1.0
All	30.6	68.3	1.0
	% Distribution by Height-for-Age		
	Short or Underheight	Normal	Tall
0	7.9	91.6	0.6
1	29.5	69.9	0.7
2	29.8	69.3	1.0
3	37.2	62.3	0.5
4	39.6	60.3	0.1
5	40.0	59.6	0.3
All	31.4	68.0	0.5
	% Distribution by Weight-for-Height		
	Thin	Normal	Overweight-for-the Height
0	6.3	90.6	2.4
1	14.3	84.6	1.2
2	5.9	92.7	1.4
3	3.5	94.5	1.9
4	3.5	95.5	1.0
5	5.3	93.8	0.9
All	6.3	92.1	1.4

The high rates of underweight or thinness for children from the less than 1- to the 2-year age groups are associated with poor infant feeding practices (e.g. early termination of breastfeeding) and infections (e.g. early introduction of complementary foods in unhygienic conditions). The higher rates of shortness or underheight in the older single age-groups are associated with long-term dietary inadequacy and/or repeated infections.

1.2 Among primary school-age children,

- 66 out of every 100 have normal weight-for-age, 33 are underweight, and 1 is overweight.
- 59 out of every 100 have normal height-for-age, and the rest are short or underheight.

Table 4. Percentage distribution of 6-10 year-old children by NCHS/WHO classification

Classification	% Distribution
Weight-for-Age	
Underweight	32.9
Normal	66.2
Overweight	0.8
Height-for-Age	
Short or Underheight	41.1
Normal	58.7
Above Average/Tall	0.2

The high rates among school children of shortness or underheight, which is an indicator of long-standing poor nutritional status, are a manifestation of increasing undernutrition with age, from school entry.

1.3 Comparison of the nutritional status of children in 1998 and 2001

1.3.1 Among preschool-age children,

- There was a reduction of 1.4 and 2.6 percentages points in the prevalence of underweight and underheight, respectively, from 1998 to 2001.
- The proportion of 0-5 year-old children with normal weight-for-age increased with less than 1 percentage point; those with normal height-for-age increased with 2.3 percentage points.
- There was an increase of less than 1.0 percentage point in the prevalence of thinness, and overweight.

1.3.2 Among primary school-age children,

- Underweight prevalence increased by 2.7 percentage points from 1998 to 2001; underheight prevalence also increased, with 0.3 percentage point.
- There was an increase of 0.8 percentage point in the proportion of overweight 6-10 years old children.

Table 5. Percentage distribution of 0-5 and 6-10 year-old children by nutritional status classification, 1998 and 2001

Age Group (years) and Nutritional Status	% Distribution	
	1998	2001
<u>0-5 Years Old</u>		
Weight-for-age		
Underweight	32.0	30.6
Normal	67.6	68.4
Overweight	0.4	1.0
Height-for-Age		
Short or Underheight	34.0	31.4
Normal	65.7	68.0
Tall	0.4	0.5
Weight-for-Height		
Thin	6.0	6.3
Normal	93.0	92.1
Overweight-for-Height	0.9	1.4
NEC (Not Elsewhere Classified)	0.1	0.1
<u>6-10 Years Old</u>		
Weight-for-Age		
Underweight	30.2	32.9
Normal	69.8	66.2
Overweight	negligible	0.8
Height-for-Age		
Short or Underheight	40.8	41.1
Normal	59.2	58.7
Tall	negligible	0.2

The change in the nutritional status of children from 1998 to 2001 was slow-paced (i.e. averaging less than 1 percentage point reduction per year). It is noted that the Philippine Plan of Action for Nutrition, 1999-2004, targets a reduction of PEM among preschool and school children by 20%. This may be translated to a reduction from 32.0% (using the 1998 estimate) to 25.6% underweight prevalence, or an average of 1.2 percentage point reduction per year. At the most, there was a reduction of 0.87 percentage point per year in the prevalence of underheight among preschool-age children, and there was even an increase of about the same magnitude (0.9 percentage point per year) in the prevalence of underweight among primary school-age children.

1.4 Trends in the nutritional status of children, 1989 to 2001

1.4.1 Among preschool-age children,

- In the 11-year period, there was a reduction of 3.9 and 8.5 percentage points in the prevalence of underweight and underheight, respectively, between 1989-90 and 2001. This translates to average reductions of 0.35 and 0.77 percentage point per year for underweight and underheight, respectively.
- The prevalence of thinness and overweight increased with 1.3 and 0.4 percentage points during the 11-year period.

1.4.2 Among primary school-age children,

- The prevalence of underweight and underheight decreased by 1.3 and 3.7 percentage points, respectively, between 1989-90 and 2001. Per year, figures average to 0.12 and 0.34 percentage point-reductions, respectively.
- The prevalence in overweight-for-age increased by 0.7 percentage point during the period.

Table 6. Trends in the prevalence of underweight, underheight, thinness, and overweight among 0-5 and 6-10 year-old children, 1989-90 to 2001

Age Group (years) and Nutritional Status	% Prevalence					
	1989-90	1992	1993	1996	1998	2001
0-5 Years Old						
Underweight	34.5	34.0	29.9	30.8	32.0	30.6
Underheight	39.9	36.8	34.3	34.5	34.0	31.4
Thin	5.0	6.6	6.7	5.2	6.0	6.3
Overweight	0.6	0.7	0.4	0.5	0.4	1.0
6-10 Years Old						
Underweight	34.2	32.5	30.5	28.3	30.2	32.9
Underheight	44.8	42.8	42.2	39.1	40.8	41.1
Overweight	0.1	0.2	0.6	0.4	n	0.8

Significant improvements in the nutritional status of preschool and school children were recorded from 1989-90 up to 1993, which was also a period of economic improvements. The nutritional gains were however unsustainable during the periods of economic ups and downs after 1993.

2. At the Regional Level

2.1 Among preschool-age children,

- More than three-fourths (77.2%) of the children in the NCR have normal weight-for-age, followed by CAR (74.3%), Central Luzon (73.0%) Central Visayas and ARMM (70.7%) and Southern Tagalog (70.2%).
- The prevalence of underweight in Bicol is 37.8% followed by Western Visayas, 35.2%, Northern Mindanao, 34.1% and CARAGA, 33.5%.
- Two percent or more of the children in the NCR (2.5%), CAR (2.2%), and Southern Tagalog (2.0%) are overweight for their age.

Table 7. Percentage distribution of 0-5 year-old children, by NCHS/WHO weight-for-age classification and by region

Region		Underweight	Normal	Overweight
Philippines		30.6	68.4	1.0
NCR		20.3	77.2	2.5
I.	Ilocos	31.5	67.8	0.7
	CAR	23.4	74.3	2.2
II.	Cagayan Valley	31.2	67.5	1.3
III.	Central Luzon	25.9	73.0	1.2
IV.	Southern Tagalog	27.8	70.2	2.0
V.	Bicol	37.8	61.7	0.4
VI.	Western Visayas	35.2	63.6	1.2
VII.	Central Visayas	28.3	70.7	1.0
VIII.	Eastern Visayas	32.0	67.7	0.2
IX.	Western Mindanao	31.8	67.9	0.3
X.	Northern Mindanao	34.1	65.6	0.3
XI.	Southern Mindanao	32.3	67.6	0.1
XII.	Central Mindanao	30.2	68.8	1.0
XIII.	CARAGA	33.5	66.4	0.1
	ARMM	27.9	70.7	1.4

- Four-fifths (79.8%) of the children in the NCR have normal height-for-age, followed by Central Luzon (78.4%), Cagayan Valley (74.3%), Ilocos (73.2%), Southern Tagalog (72.2%) and Central Mindanao (70.7%)
- The prevalence of underheight in the ARMM is 42.0%, followed by Bicol (39.3%), Western Visayas (38.5%), and Northern Mindanao (36.9%).

Table 8. Percentage distribution of 0-5 year-old children, by NCHS/WHO height-for-age classification and by region

Region		Short or Underheight	Normal	Tall
Philippines		31.4	68.0	0.5
	NCR	20.0	79.8	0.2
I.	Ilocos	26.6	73.2	0.2
	CAR	35.9	62.9	1.2
II.	Cagayan Valley	24.4	74.3	1.3
III.	Central Luzon	21.2	78.4	0.4
IV.	Southern Tagalog	27.5	72.2	0.3
V.	Bicol	39.3	60.1	0.6
VI.	Western Visayas	38.5	61.5	n
VII.	Central Visayas	30.2	68.4	1.3
VIII.	Eastern Visayas	35.0	64.8	0.2
IX.	Western Mindanao	35.5	64.5	0.0
X.	Northern Mindanao	36.9	63.0	0.1
XI.	Southern Mindanao	35.4	64.6	0.0
XII.	Central Mindanao	29.0	70.7	0.3
XIII.	CARAGA	36.0	63.4	0.6
	ARMM	42.0	55.3	2.7

- Nine out of ten children in all regions have normal weight-for-height.
- The prevalence of thinness in Cagayan Valley is 10.4%, followed by Central Mindanao (8.8%), Western Mindanao (8.4%), Central Luzon (7.9%) and CARAGA (7.7%).
- The prevalence of overweight in the ARMM is 3.6%; CAR, NCR and Southern Tagalog each has two overweight children in every 100.

Table 9. Percentage distribution of 0-5 year-old children, by NCHS/WHO weight-for-height classification and by region

Region		Thin	Normal	Overweight	NEC
Philippines		6.3	92.1	1.4	0.1
	NCR	5.2	92.6	2.2	0.0
XIV.	Ilocos	5.7	92.6	1.7	0.0
	CAR	4.0	93.0	2.8	0.1
XV.	Cagayan Valley	10.4	87.6	1.7	0.2
XVI.	Central Luzon	7.9	90.7	1.5	0.0
XVII.	Southern Tagalog	5.5	92.3	2.1	0.2
XVIII.	Bicol	6.9	91.8	0.7	0.5
XIX.	Western Visayas	5.8	92.8	1.3	0.1
XX.	Central Visayas	5.8	93.1	1.2	0.0
XXI.	Eastern Visayas	5.2	93.8	0.9	0.1
XXII.	Western Mindanao	8.4	90.5	1.0	0.1
XXIII.	Northern Mindanao	5.7	93.4	0.6	0.3
XXIV.	Southern Mindanao	4.3	95.3	0.4	0.0
XXV.	Central Mindanao	8.8	89.3	1.8	0.0
XXVI.	CARAGA	7.7	91.9	0.4	0.0
	ARMM	6.1	90.3	3.6	0.0

3. At the Provincial Level

- Southern Leyte, Surigao del Norte, Iloilo and Kalinga have the most number of children with normal weight-for-age (70-72 out of every 100 children).
- Biliran, Masbate, Northern Samar, Negros Occidental, Antique and Sorsogon are most at-risk to underweight, with 4 out of every 10 preschool-age children being afflicted with the condition.
- 3 out of every 100 children in Antique are overweight, followed by 2 in Iloilo and 1 in Cagayan. Some provinces appear to have no overweight children, e.g. Kalinga, Tarlac, Camarines Norte and Western Samar.

Table 10. Percentage distribution of 0-5 year-old children, by NCHS/WHO weight-for age classification and by selected province

Province	Underheight	Normal	Overweight
Philippines	32.9	66.2	0.8
La Union	34.3	65.2	0.5
Pangasinan	31.9	67.3	0.8
Cagayan	31.0	67.8	1.1
Kalinga	29.9	70.1	0.0
Tarlac	35.5	64.5	0.0
Aurora	33.2	66.1	0.7
Camarines Norte	34.6	65.4	0.0
Masbate	43.8	55.5	0.7
Sorsogon	40.6	58.9	0.5
Antique	42.5	54.8	2.7
Guimaras	31.6	67.6	0.7
Iloilo	28.0	70.2	1.7
Negros Occidental	42.6	57.2	0.3
Biliran	44.0	55.4	0.6
Northern Samar	43.4	56.4	0.2
Southern Leyte	27.5	71.6	0.9
Western Samar	34.4	65.6	0.0
South Cotabato	29.7	69.9	0.4
Surigao del Norte	28.8	70.9	0.3

- The prevalence rates of underheight in Masbate, Negros Occidental, Northern Samar are alarmingly high with 5 out of every 10 children being short for their age. Biliran, Kalinga, Antique, Western Samar and Camarines Norte each has 4 short children out of every 10.
- Sorsogon has 2 tall children out of every 100 preschool-age children, a rate that is almost four times higher than the national average of 0.5%.

Table 11. Percentage distribution of 0-5 year-old children, by NCHS/WHO height-for-age classification and by selected province

Province	Short	Normal	Tall
Philippines	31.4	68.0	0.5
La Union	21.0	78.7	0.2
Pangasinan	28.7	71.3	0.0
Cagayan	30.5	68.9	0.6
Kalinga	42.6	57.4	0.0
Tarlac	25.6	74.0	0.4
Aurora	31.1	68.9	0.0
Camarines Norte	39.0	61.0	0.0
Masbate	49.0	50.5	0.6
Sorsogon	35.4	62.8	1.8
Antique	39.6	60.0	0.3
Guimaras	31.6	68.3	0.2
Iloilo	33.9	66.1	0.0
Negros Occidental	46.6	53.4	0.0
Biliran	43.8	55.6	0.6
Northern Samar	45.5	53.9	0.6
Southern Leyte	28.4	71.0	0.6
Western Samar	39.6	60.4	0.0
South Cotabato	31.3	68.7	0.0
Surigao del Norte	35.1	64.9	0.0

- Masbate has the most number of thin children, with 9 out of every 100, followed by Biliran and La Union with 8 children each. Antique, Aurora, Sorsogon and Northern Samar has 7 each.
- 3 out of every 100 children in Masbate and Antique are overweight for their height. Pangasinan, Cagayan, and Guimaras follow after these provinces, with 2 children each.

Table 12. Percentage distribution of 0-5 year-old children, by NCHS/WHO weight-for-height classification and by selected province

Province	Thin	Normal	Overweight	NEC*
Philippines	6.3	92.1	1.4	0.1
La Union	7.5	91.5	1.0	0.0
Pangasinan	4.8	93.3	2.0	0.0
Cagayan	5.7	91.8	2.0	0.5
Kalinga	6.2	92.0	1.6	0.2
Tarlac	6.4	93.2	0.4	0.0
Aurora	7.3	92.6	0.7	0.0
Camarines Norte	4.7	95.3	0.0	0.0
Masbate	8.6	88.4	2.7	0.3
Sorsogon	6.9	92.6	0.6	0.0
Antique	7.4	89.8	2.7	0.0
Guimaras	4.3	93.6	2.0	0.0
Iloilo	5.3	93.3	1.2	0.1
Negros Occidental	6.4	93.0	0.5	0.0
Biliran	7.7	91.2	1.1	0.0
Northern Samar	6.9	92.9	0.2	0.0
Southern Leyte	3.4	95.0	1.6	0.0
Western Samar	6.4	93.3	0.3	0.0
South Cotabato	6.2	92.8	1.0	0.0
Surigao del Norte	6.2	93.5	0.3	0.0

*not elsewhere classified

CONCLUSION

The 2001 updates on the Filipino children's nutritional status show the need for more vigorous implementation and targeting of nutrition interventions, than earlier made, to reduce undernutrition particularly PEM, to desired levels by 2004 as set in the Philippine Plan of Action for Nutrition, as well as by 2015 as set in the Millennium Development Goals, especially amidst the challenges of economic ups and downs that the country may continue to face. While significant improvements in the nutritional status of children was evident from 1989-90 up to 1993, a period of improved economy as well, the gains were unsustainable and interrupted during the period of fluctuating economic situation thereafter-underscoring the need to be able to sustain nutritional gains through, among others, efficient targeting of interventions to the groups that are vulnerable to economic disruptions.

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