Child health: Nutrition

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Section 28(1)(c) of the Constitution[1] of South Africa gives children the right to basic nutrition.

Article 14(1) of the African Charter on the Rights and Welfare of the Child[2] states that "every child shall have the right to enjoy the best attainable state of physical, mental and spiritual health", and article 14(2)(c) says that State Parties shall take measures "to ensure the provision of adequate nutrition…".

Article 24 of the UN Convention on the Rights of a Child[3] says that State Parties should recognise "the right of the child to the enjoyment of the highest attainable standard of health" and obliges the State to take measures "to combat disease and malnutrition… through, inter alia… the provision of adequate nutritious foods and clean drinking water…".

The number and proportion of children living in households where there is reported child hunger

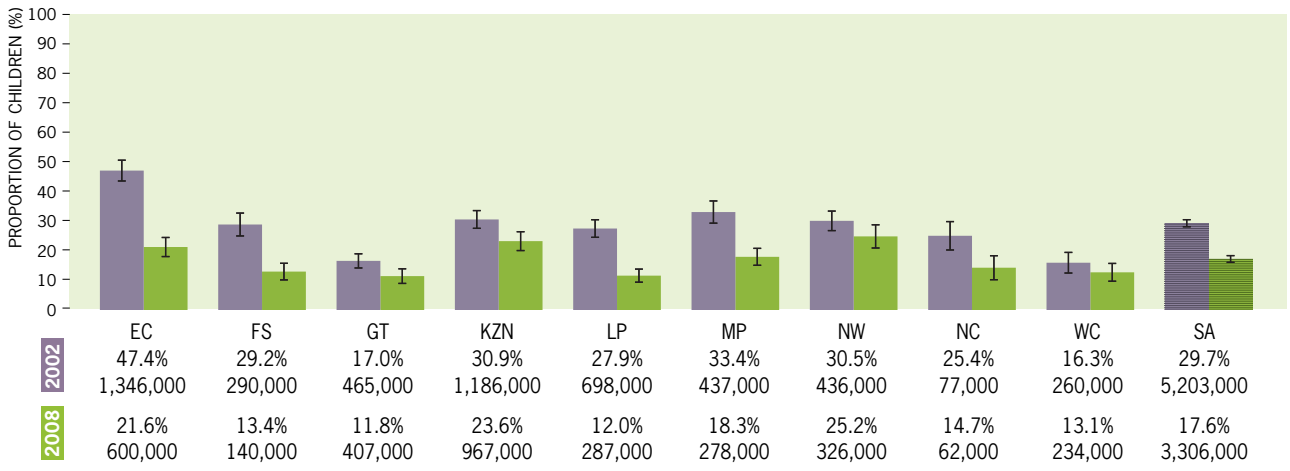
This indicator draws on data from the General Household Survey and shows the number and proportion of children living in households where children are reported to go hungry "sometimes", "often" or "always" because there isn't enough food. Child hunger is emotive and subjective, and this undermines the reliability of estimates on the extent and frequency of hunger, but it is assumed that variation and reporting error will be reasonably consistent so that it is possible to report trends from year to year.

The government has introduced a number of programmes to reduce hunger, malnutrition and food insecurity; yet child hunger continues to be a problem. The 2008 General Household Survey indicated that 3.3 million children (18%) were living in households where child hunger was reported. Overall, there has been a significant drop in reported child hunger from 30% of children in 2002, but a slight increase from 15% of children in 2007.

There are large disparities in reported hunger between provinces and population groups. The provinces with the highest rates of reported child hunger in 2008 were North West (where child hunger rates increased from 18% in 2007 to 25% in 2008) and KwaZulu-Natal (with an increase from 15% in 2007 to 24% in 2008). The Eastern Cape has particularly high rates of child poverty and unemployment, and child hunger rates have remained consistently high from 2007 to 2008 (21% – 22%), despite an overall drop in reported child hunger from 47% in 2002. Limpopo also experiences high rates of unemployment and income poverty; yet, along with Gauteng, it has the lowest proportion of reported child hunger (12%). In Limpopo, this may be related to greater food security in rural households as a result of access to land for subsistence agriculture.

Hunger, like poverty and unemployment, is most likely to be found among African children. In 2008, some 3.1 million African children lived in households that reported child hunger. This equates to nearly 20% of the total African child population, while relatively few Coloured (10%), White (2%) and Asian (1%) children lived in households where child hunger was reported.

Table 5a: Number and proportion of children living in households where there is reported child hunger, 2002 & 2008



	EC	FS	GT	KZN	LP	MP	NW	NC	WC	SA
2002	47.4%	29.2%	17.0%	30.9%	27.9%	33.4%	30.5%	25.4%	16.3%	29.7%
	1,346,000	290,000	465,000	1,186,000	698,000	437,000	436,000	77,000	260,000	5,203,000
2008	21.6%	13.4%	11.8%	23.6%	12.0%	18.3%	25.2%	14.7%	13.1%	17.6%
	600,000	140,000	407,000	967,000	287,000	278,000	326,000	62,000	234,000	3,306,000

Sources: Statistics South Africa (2003; 2009) *General Household Survey 2002; General Household Survey 2008*. Pretoria: Stats SA.
Analysis by Katharine Hall and Double-Hugh Marera, Children's Institute, UCT.

Notes: ① Children are defined as people aged 0 – 17 years. ② Population numbers are rounded off to the nearest thousand. ③ Strengths and limitations of the data are described on pp. 132 – 134. ④ See www.childrencount.ci.org.za for more information.

Proportion of children affected by stunting, wasting and underweight

Dietary intake and the prevalence of infectious diseases affect children's nutritional status,[4] and adequate nutrition is vital for building children's immune systems and for their physical growth and motor and cognitive development.[5] Severe forms of malnutrition could lead to death. In 2000 malnutrition was ranked as the fifth leading cause of death among children younger than five years of age in South Africa.[6] Stunting, wasting and underweight are specific measures or thresholds that are internationally recognised standards for measuring children's nutritional status. The analyses use the most recent data from the National Food Consumption Survey 2005 (NFCS).[7]

Stunting A healthy child grows by 5 – 7 cm each year. Stunting is present when a child's height-for-age measurement is less than two standard deviations from the globally accepted reference cut-off point. A child whose height-for-age score is less than three standard deviations is severely stunted. Stunting in children is considered a consequence of chronic poor nutrition. It is associated with developmental delay and impaired cognitive function and is considered the strongest predictor of child mortality in children younger than five years.[8]

Stunting remains the most common nutritional disorder affecting children in South Africa, and the NFCS found that 18% of children aged 1 – 9 years were affected in 2005. Stunting prevalence rates had decreased since 1999, with the greatest improvement in rural areas. Nevertheless, the NFCS found that children living in formal rural areas (commercial farms) remained worst off, with one in four children stunted. One in five children living in "tribal" areas was stunted. Children in informal urban areas were slightly more likely to be affected (19%) than those in formal urban areas (16%). The provinces with the highest stunting rates were the Free State (28%), Northern Cape (28%), and Limpopo (24%). According to World Health Organisation criteria, these rates indicate a medium prevalence of stunting.[9]

Nationally, 5% of children showed signs of severe stunting, which is much more serious. Children living in "tribal" areas were most affected. Nearly a quarter of children in the 1 – 3-year age group (23%) were affected by stunting, and 6% were severely stunted. High rates of severe stunting (7% or more) are of concern in the Northern Cape, Limpopo and Free State provinces.

Wasting A healthy child gains approximately 2 – 3 kg of body weight each year. Wasting is present when the child's weight-for-height measurement is less than two standard deviations from the globally accepted reference cut-off point. A child whose weight-for-height or length score is less than three standard deviations is severely wasted. Children who are affected by wasting generally lack essential nutrients in their diet. The prevalence of wasting in South Africa is an indication of acute malnutrition or loss of weight, and of children's poor access to sufficient nutritious food.

In 2005, nearly one in every 20 children (5%) aged 1 – 9 years was wasted, while 1% of children in this age group were severely wasted. Equal proportions (5%) of 1 – 3-year-old and 4 – 6-year-old children were wasted. The Northern Cape (19%) had the highest proportions of children who were wasted, followed by the Western Cape (12%). Again, children living in formal rural areas (commercial farms) were more likely to be wasted than those in cities or rural areas under traditional authority.

The prevalence of children affected by wasting seems to have decreased in rural areas since 1999. However, it is of concern that the prevalence of wasting and severe wasting for children in urban areas was higher in 2005 than in 1999.

The 2005 NFCS report recommends that nutrition and health-related interventions accompany an increase in employment levels – and therefore household income – to ensure improvements in children's nutritional status in the long term.

Underweight Underweight below acceptable standards suggests undernutrition. A child is underweight if the child's weight-for-age measurement is less than two standard deviations from the globally accepted reference cut-off point. A child whose weight-for-age score is less than three standard deviations is severely underweight. The proportion of children in South Africa who are underweight is a good indication of whether all children are able to access sufficient nutritious food to enable them to grow and develop to their full potential.

Nationally, nearly one in 10 children aged 1 – 9 years (9.3%) was underweight in 2005. Although the national prevalence rate is considered low according to global standards, the rates for children living in formal rural areas (13%), and for children aged 1 – 3 years (11%) indicate that these children are particularly at risk. The prevalence rate for the Northern Cape province is particularly high (38%), followed by the Free State (14%), North West (12%) and Limpopo (12%). Overall, 1% of children aged 1 – 9 years were severely underweight.

Although the average prevalence rates are not extreme, underweight remains a grave concern, particularly for very young children and those living on commercial farms. Child nutrition should continue to be a national priority and the improvements in the nutritional status, and of health care services for young children, must be sustained.

Table 5b: Proportion of children affected by stunting, wasting and underweight, 2005

Province	Stunting %	Wasting %	Underweight %
Eastern Cape	18.0	4.1	7.8
Free State	28.2	2.8	14.1
Gauteng	16.8	3.3	6.4
KwaZulu-Natal	15.1	1.3	5.0
Limpopo	23.8	4.4	12.3
Mpumalanga	17.8	7.5	10.9
North West	15.1	3.2	12.4
Northern Cape	27.7	19.1	38.3
Western Cape	12.0	11.5	8.2
South Africa	**18.0**	**4.5**	**9.3**

Sources: Labadarios D (ed) (2007) *The National Food Consumption Survey – Fortification Baseline (NFCS-FB): The knowledge, attitude, behaviour and procurement regarding fortified foods, a measure of hunger and the anthropometric and selected micronutrient status of children aged 1 – 9 years and women of child bearing age: South Africa, 2005*. Pretoria: Directorate: Nutrition, Department of Health.

Notes: ① Stunting, wasting and underweight refer to children aged 1 – 9 years only. ② Strengths and limitations of the data are described on pp. 132 – 134. ③ See www.childrencount.ci.org.za for more information.

Proportion of children affected by micronutrient deficiency

Adequate nutrition is essential for optimal growth and development in children, and micronutrient deficiencies can lead to physical impairment, infections and even death. The following discussion focuses on selected micronutrient deficiencies: vitamin A deficiency, iron deficiency and iron deficiency anaemia, drawing on data from the 2005 NFCS. The implementation of promotive and preventive programmes that address these deficiencies and that target pregnant and breastfeeding mothers and young children is critical. The 2005 NFCS report emphasises the need for supplementation programmes and interventions to support and educate caregivers on the consumption of nutritious and fortified foods and appropriate breastfeeding practices. Equally important are efforts to alleviate household poverty and food insecurity.

Vitamin A deficiency This indicator refers to the percentage of children aged 1 – 9 years with a low serum retinol level (<20ug/dL), meaning that these children have marginal or inadequate levels of vitamin A. Children suffer from severe vitamin A deficiency if their serum retinol levels are significantly low (<10ug/dL).

Vitamin A is needed for a range of bodily functions and for protection from severe infections and resultant death. Deficiency usually occurs where diets contain insufficient amounts of vitamin A. Children with vitamin A deficiency have increased risk of infection and are more prone to diseases. Improvement of vitamin A status is considered one of the most cost-effective health and nutrition interventions for child survival.[10]

The 2005 NFCS found that nearly two-thirds (64%) of children aged 1 – 9 years had a marginal or inadequate vitamin A status, and about one in seven children (14%) was severely vitamin A deficient. Children living in "tribal" areas were most affected – 17% were severely vitamin A deficient. KwaZulu-Natal had the highest proportion (89%) of children with an inadequate vitamin A status, with nearly half of the 1 – 9-year-old population severely deficient. Similarly, large proportions of children in the Limpopo (76%), Gauteng (65%) and Eastern Cape (64%) provinces had inadequate vitamin A status.

A marked increase in the prevalence of inadequate vitamin A status in children aged 1 – 5 years is evident: The national rate has nearly doubled between 1994 (33%) and 2005 (65%). Children aged 3 – 5 years are most affected. The NFCS reports that, according to internationally accepted criteria, these high rates indicate that vitamin A deficiency is a serious public health problem in South Africa.

Iron deficiency and iron deficiency anaemia
Insufficient iron intake in children can lead to iron deficiency anaemia, which can inhibit children's cognitive development and increase their vulnerability to infections and cardiac failure.[11] This indicator reflects the percentage of children aged 1 – 9 years who are iron deficient or who suffer from anaemia due to iron deficiency. (Children with a serum ferritin level less than 12 ug/dL are iron deficient. Children with a serum ferritin level less than 12 ug/dL and a haemoglobin level less than 11 g/dL for children aged 1 – 5 years (or 11.5 g/dL for older children) suffer from iron deficiency anaemia.)

The 2005 NFCS found 6% of children aged 1 – 9 years to be iron deficient. Children who lived in formal rural areas (13%) were worse off. The Free State province (19%) had the highest proportion of children with iron deficiency. Iron deficiency levels were highest for children aged 1 – 3 years. Overall, the iron status of children aged 1 – 5 years appears to have deteriorated since 1994.

The national prevalence rate of 8% for iron deficiency anaemia in children aged 1 – 9 years is considerably low according to international standards.[12] However, a prevalence rate of 17% in the 1 – 3 years age group – more than double the overall rate for children aged 1 – 9 years – is concerning. The Limpopo and Free State provinces share the highest prevalence rate for children aged 1 – 9 years, at 12%. Children living in formal urban areas (9%) were most affected by iron deficiency anaemia.

The causes of iron deficiency and iron deficiency anaemia are multi-faceted, and are described in the NFCS report. For example, worm infestations are known to cause blood loss. Infants are prone to iron deficiency because their iron requirements often outweigh their iron intake. As children younger than four years are most at risk, it is crucial to target interventions to this age group.

Table 5c: Proportion of children affected by vitamin A deficiency, iron deficiency and iron deficiency anaemia, 2005

Province	Inadequate vitamin A status %	Vitamin A deficiency %	Iron deficiency %	Iron deficiency anaemia %
Eastern Cape	64.2	8.2	1.2	4.8
Free State	61.7	11.3	18.9	11.6
Gauteng	65.2	11.2	4.8	7.1
KwaZulu-Natal	88.9	44.7	3.6	5.9
Limpopo	75.7	12.5	5.3	11.8
Mpumalanga	52.1	4.2	4.5	7.9
North West	49.6	5.8	6.9	5.2
Northern Cape	23.0	3.8	5.6	–
Western Cape	43.5	2.3	7.5	9.4
South Africa	**63.6**	**13.7**	**5.7**	**7.6**

Sources: Labadarios D (ed) (2007) *The National Food Consumption Survey – Fortification Baseline (NFCS-FB): The knowledge, attitude, behaviour and procurement regarding fortified foods, a measure of hunger and the anthropometric and selected micronutrient status of children aged 1 – 9 years and women of child bearing age: South Africa, 2005*. Pretoria: Directorate: Nutrition, Department of Health.

Notes: ① Micronutrient deficiency indicators refer to children aged 1 – 9 years only. ② Provinces where no data is available are indicated with a dash (–). ③ Strengths and limitations of the data are described on pp. 132 – 134. ④ See www.childrencount.ci.org.za for more information.

References

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12 See no. 4 above.