

# Child health: Nutrition

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Section 28(1)(c) of the Constitution of South Africa gives children the right to basic nutrition.<sup>1</sup>

Article 14(1) of the African Charter on the Rights and Welfare of the Child 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...”.<sup>2</sup>

Article 24 of the UN Convention on the Rights of a Child 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...”.<sup>3</sup>

## Children living in households where there is reported child hunger

This indicator 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.

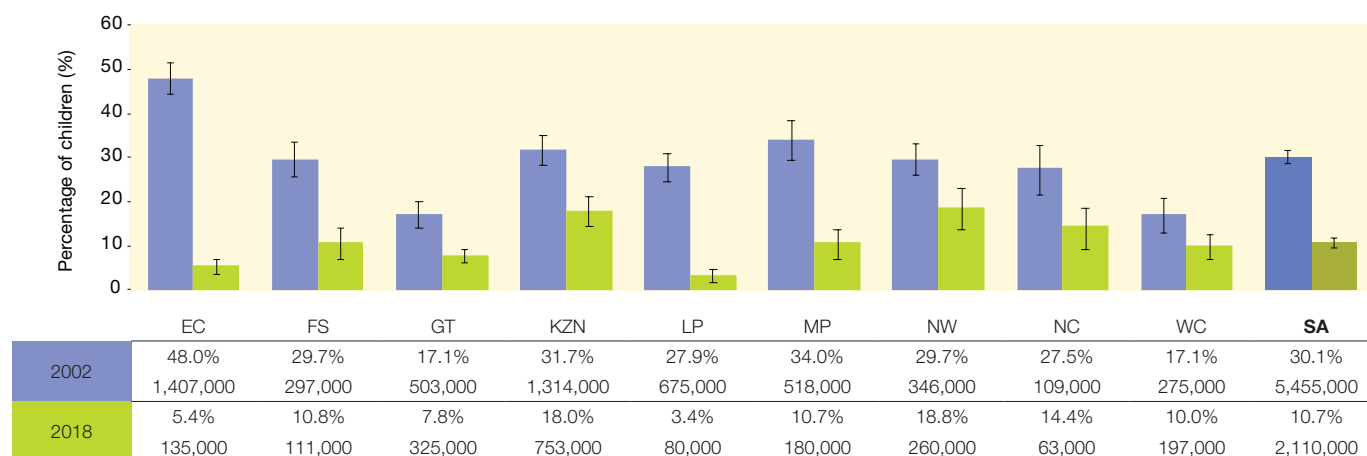
Section 28(1) (c) of the Bill of Rights in the Constitution gives every child the right to basic nutrition. The fulfilment of this right depends on children’s access to sufficient food. There are a number of ways in which access to food can be monitored. At a global level, the Food and Agricultural Association (FAO) regularly publishes estimates of the prevalence of undernourishment, which is defined as the percentage of a population without access to sufficient dietary energy needed for an active and healthy life.<sup>4</sup> South Africa’s average undernourishment rate for the 2016 – 2018 period was 6%, an increase from an average of 4.4% for the 2002 – 2004 period. The relatively low rate of undernourishment in South Africa, compared to other countries in the region which have undernourishment rates above 20% (Botswana, Namibia and Eswatini), suggests that there is enough food to cater for the majority of the country’s population. However, distribution and accessibility constraints, coupled with high rates of poverty and inequality, mean that a substantial proportion of the country’s population is food insecure.

At the household level, one of the main indicators used to monitor food insecurity is reported hunger. Child hunger is emotive and subjective, and this is likely to undermine the reliability of estimates on the extent and frequency of reported hunger, but it is assumed that variation and reporting error will be reasonably consistent so that it is possible to monitor trends from year to year.

In 2018, 11% of children (2.1 million) lived in households that reported child hunger. More than a third of these children (36%) are from KwaZulu-Natal, while a fifth are from Gauteng. Child hunger rates in 2018 were 19 percentage points lower than they were in 2002 when 30% of children (5.5 million) lived in households that reported child hunger. The largest declines have been in the Eastern Cape, Limpopo and Mpumalanga. One of the main contributors to this decline is the expansion of the Child Support Grant which in 2018 covered over 12 million children.<sup>5</sup> Another is the National School Nutrition Programme, which by 2016/2017 reached over 9 million learners in approximately 20,000 schools<sup>6</sup> (though only during term-time and excluding children who are too young to attend school).

Analysis of child hunger rates within provinces shows that child hunger rates are highest in the North West and KwaZulu-

**Figure 4a: Children living in households with reported child hunger, 2002 & 2018**



Source: Statistics South Africa (2003; 2019) *General Household Survey 2002; General Household Survey 2018*. Pretoria: Stats SA. Analysis by Katharine Hall & Winnie Sambu, Children’s Institute, UCT.

Natal provinces, affecting 19% and 18% of children living there respectively. The lowest hunger rates are in Limpopo and Eastern Cape provinces (3% and 5% respectively). Despite high poverty rates, Limpopo has always reported child hunger rates below the national average, perhaps because of its highly fertile and productive land in rural areas where most of the population lives. However, there is no clear explanation for the dramatic decline in reported hunger in the Eastern Cape. Over the period from 2002 – 2018, reported child hunger rates in that province fell from 48% (higher than any other province) to 5% (the second lowest). This is despite the fact that the Eastern Cape has the highest poverty rates in the country, with 48% of children living below the food poverty line.

There are no differences in reported child hunger across gender or age groups. However, there are significant differences across race; 12% of African children live in households that reported child hunger, compared to 7% of Coloured children and less than 1% of Indian and White children. Differences are even more pronounced across income quintiles. While 18% of

children living in the poorest 20% of households experienced hunger, only one percent of children in quintile 5 (the richest 20%) lived in households that reported child hunger.

Children who suffer from hunger are at risk of various forms of malnutrition, including wasting, stunting, overweight and micronutrient deficiencies. It must be recognised that child hunger is a subjective indicator and does not capture other important aspects of food security such as dietary diversity and consumption of nutrient-dense foods, both of which are important for children’s healthy growth especially in early childhood. Children may live in households that do not report hunger but may still not have access to sufficient nutritious food and are therefore at risk of malnutrition. In 2018, approximately 30% of children who lived in households that did not report child hunger were classified as living below the food poverty line, an indicator that their households lacked the financial resources needed to meet minimum dietary requirements for children and other household members.<sup>7</sup>

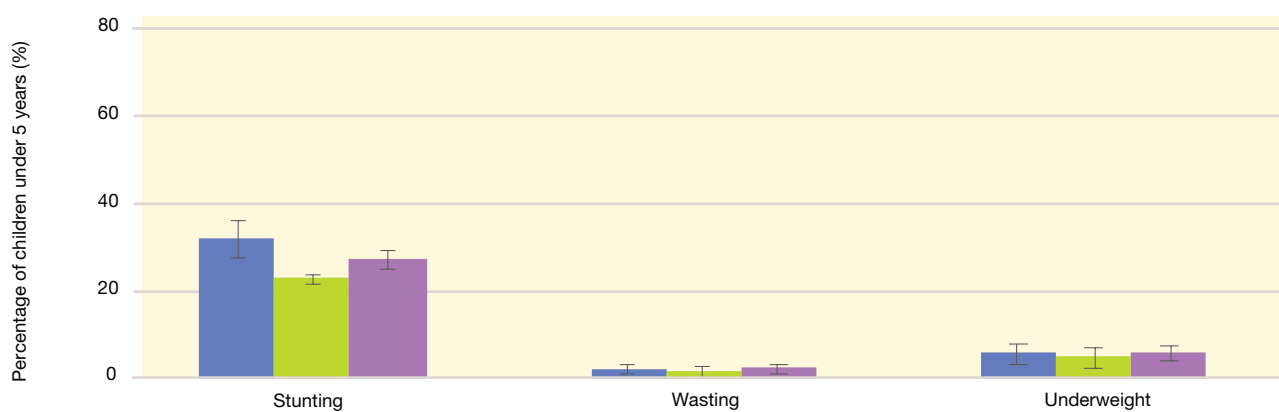
### Undernutrition in children: stunting, wasting and underweight

Children who consume diets that are insufficient in energy and nutrients are at risk of undernutrition, which can manifest in the form of stunting, wasting, or underweight.

- **Stunting** occurs when a child’s height-for-age is low compared to healthy children in the same reference population. Stunting is a chronic form of malnutrition that manifests over a relatively long period of time compared to other forms of malnutrition.
- **Wasting** is an acute form of malnutrition and is present when the child’s weight-for-height is below the World Health Organization (WHO) reference point.
- **Underweight** is defined as low weight-for-age and occurs when child’s weight-for-age is below the WHO reference point.

A child is classified as stunted, wasted or underweight if their height-for-age, weight-for-height, or weight-for-age scores respectively are more than two standard deviations below the globally accepted reference cut-off point as defined by WHO. Analysis of the 2016 South Africa Demographic and Health Survey (SADHS) shows that stunting is the most common manifestation of malnutrition in South Africa and affects 27% of children under five years old. Wasting and underweight rates for children under five are substantially lower, at 2.5% and 5.9% respectively. The prevalence of stunting is higher among young boys (30%) than girls (25%). Rural areas have significantly higher stunting rates (29%) than urban areas (26%). Provincial estimates

**Figure 4b: Stunting, wasting and underweight in children under five years, 2016**



Source: Department of Health, Statistics South Africa, South African Medical Research Council and ICF (2017) *South Africa Demographic and Health Survey 2016: Key Indicators*. Pretoria and Rockville, Maryland: DOH, Stats SA, SAMRC & ICF. Analysis by Winnie Sambu.

show that stunting is highest in the Free State and Gauteng (both at 34%), and lowest in Mpumalanga and Northern Cape provinces (both at 21%). However, it must be noted that the South Africa Demographic and Health Survey sample size is small and therefore the confidence intervals are wide when the data is disaggregated to lower levels, especially in provinces with small populations, like Northern Cape.

Maternal health is one of the most important predictors of child nutritional outcomes. Pregnant women who are undernourished are more likely to deliver babies with low birthweight who are in turn at risk of being stunted.<sup>8</sup> Other maternal factors, such as education, can also affect a child's nutritional status in that mothers with higher education levels are more likely than those without to make informed decisions around feeding and may make more regular visits to health care facilities during and after pregnancy.<sup>9</sup> While 33% of children whose mothers do not have matric are stunted, the percentage among those whose mothers have at least a matric qualification is 17%.<sup>10</sup>

An important driver of stunting and other forms of malnutrition is the consumption of inadequate diets that are not sufficient in quantity and quality. In South Africa, only 23% of children aged 6 – 23 months were reported to have been fed a minimum acceptable diet that had minimum dietary diversity, meal frequency and appropriate milk feeds.<sup>11</sup>

Poverty is the main underlying cause of undernutrition, leading to more direct causes of poor nutritional status. Hunger and low dietary diversity are more prevalent in poor households. Similarly, inadequate living conditions such as inadequate water and sanitation, are more common among poor households. These conditions can cause children to suffer from infections like diarrhoea and pneumonia, increasing the risk of them becoming wasted. If these infections occur frequently or become severe,

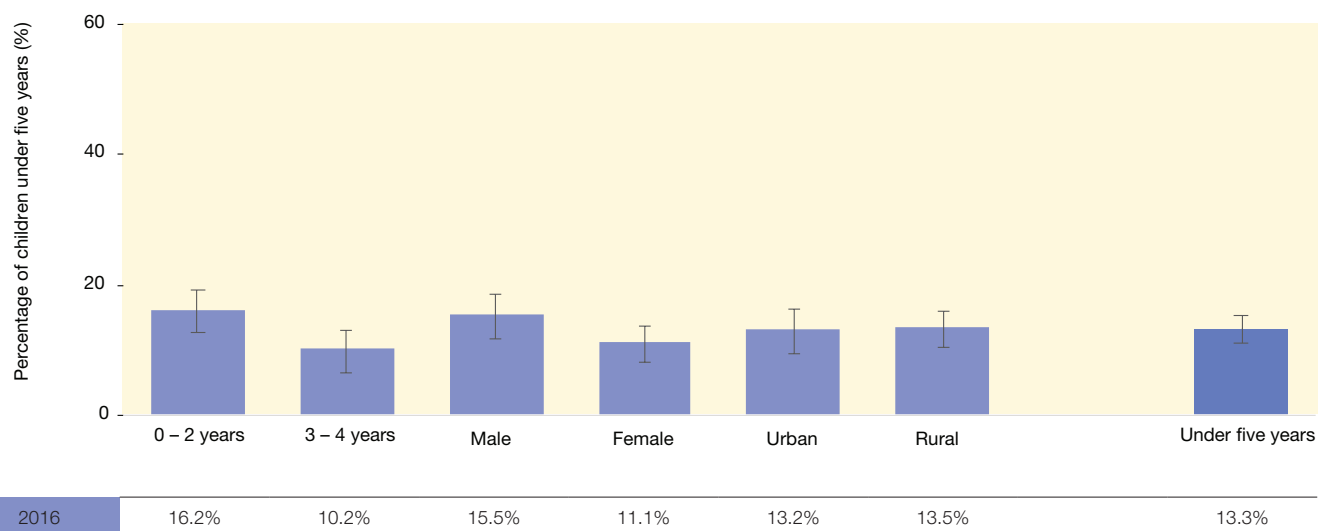
they can result in more chronic forms of malnutrition.<sup>12</sup> Under-five stunting rates are highest in the poorest wealth quintile (36%), and lowest in the richest quintile (13%).<sup>13</sup>

Undernutrition rates are higher among young children, particularly those in the first 1,000 days of life. This is mainly because early childhood is a period of rapid growth and development and inadequate dietary intake can easily compromise this process. During this stage, children are also prone to illness due to poor feeding or exposure to poor living conditions in the home and environment. A third of children aged 0 – 2 years are stunted, compared to nearly a quarter for children aged 3 – 4 years.

Undernutrition increases the risk of infection in early childhood, which in turn compromises the child's health and increases health-care costs for the child's household and government. Undernutrition is an underlying cause of mortality in children. An audit of hospital child deaths in South Africa found that 30% of infants (28 days – 1 year) and 42% of 1 – 5-year-olds who died in 2012/13 were severely malnourished (suffering from Kwashiorkor, Marasmus, or Marasmic Kwashiorkor).<sup>14</sup> Of those who died from diarrhoeal causes, almost 40% were severely malnourished.<sup>15</sup>

Older children who are undernourished are more likely to be absent from school, and this compromises their learning. In addition, malnutrition is a risk factor for poor child development, with various studies showing associations between stunting and poor motor and cognitive development.<sup>16</sup> The effects of malnutrition also extend to adulthood, where productivity has been shown to be significantly affected.<sup>17</sup> It can be difficult for children who are stunted to recover, and for those who do, the negative effects experienced while stunted (such as poor cognitive development), may be irreversible.<sup>18</sup>

**Figure 4c: Children under five years who are overweight or obese, 2016**



Source: National Department of Health, Statistics South Africa, South African Medical Research Council and ICF (2017) *South Africa Demographic and Health Survey 2016: Key Indicators*. Pretoria and Rockville, Maryland: NDOH, Stats SA, SAMRC & ICF. Analysis by Winnie Sambu.

## Overnutrition in children: Overweight and obesity

Overnutrition occurs when there is an excessive intake of dietary energy. It manifests in two main forms: overweight and obesity. Children under five years old are defined as overweight when their weight-for-height is greater than two standard deviations above the WHO reference cut-off point. They are defined as obese when their weight-for-height is more than three standard deviations above the WHO Child Growth Standards. Among children older than five years, body mass index (BMI) is used to classify children into five categories: normal weight, thin, severely thin, overweight, and obese.

Overweight and obesity in early childhood increases the risk for adult obesity, as well as associated conditions like high cholesterol, diabetes and high blood pressure.<sup>19</sup> All of these are conditions with rising prevalence in South Africa.

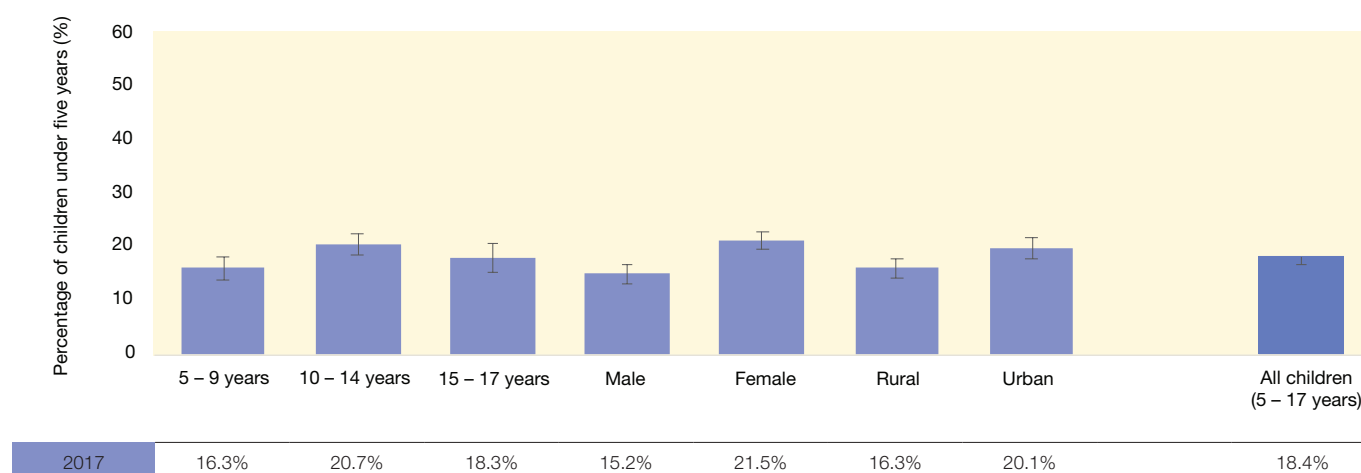
Consumption of high-calorie diets, including those that are rich in salt, sugar and fats, is a main cause of overweight and obesity among children and adults. This is in turn influenced by other factors such as household poverty coupled with the high cost of healthy foods. Another contributing factor is an increasingly sedentary lifestyle. Maternal feeding practices and cultural beliefs about ideal child weight have also been linked to

overnutrition. In addition, the consumption of infant formula milk has been associated with childhood obesity because protein and energy intake are higher among infants who are formula-fed.<sup>20</sup> Therefore, exclusive breastfeeding for the first six months of a baby's life is important as it protects against overweight and obesity in childhood, in addition to numerous other positive effects.<sup>21</sup>

Approximately 13% of South Africa's children under five years are overweight. Overnutrition rates are higher among young boys than girls (15% vs 11%). There are no significant differences in overnutrition rates across urban and rural areas. Compared to estimates from the 2008 National Income Dynamics Study (NIDS),<sup>22</sup> overweight rates have remained fairly stable, at 13%.

Overweight and obesity rates are significantly higher among older children. Data from the most recent wave of NIDS (2017) show 16% of children aged 5 – 9 and 22% of those aged 10 – 14 are classified as overweight or obese. Overall, 18% of children aged 15 – 17 years were found to be overweight or obese. The rate was significantly higher for girls (22%) than boys (15%), and for children living in urban areas (20%) compared to rural areas (16%).

**Figure 4d: Children over five years who are overweight or obese, 2017**



Source: Southern Africa Labour and Development Research Unit (2018) *National Income Dynamics Study 2017, Wave 5 [dataset]*. Version 1.0.0. Cape Town: SALDRU, UCT [producer]. Cape Town: DataFirst [distributor]. Analysis by Winnie Sambu.

## Micronutrient deficiencies

Early childhood is a period of rapid growth with a high demand for micronutrients (vitamins and minerals) such as zinc, iron and vitamin A. Inadequate nutrient intake causes micronutrient deficiency, which has negative effects for children given that micronutrients are crucial for healthy growth and development. For example, zinc plays an important role in brain functioning, and inadequate intake can cause poor cognitive development. Iron deficiency affects motor and cognitive development in children younger than four years.<sup>23</sup> Vitamin A deficiency causes illness, can cause visual impairment and increases the risk for mortality.<sup>24</sup>

In South Africa, the main forms of micronutrient deficiencies that affect children are vitamin A, iron and zinc deficiencies. However, because data on the prevalence of micronutrient

deficiencies are not regularly collected at national and regional levels, it is difficult to monitor prevalence and trends. A national survey conducted in 2012, the South Africa Health and Nutrition Examination Survey, has estimated vitamin A deficiency among children under five years at 44%, with the deficiency rates higher among boys (49%) than girls (39%).<sup>25</sup>

A global analysis of vitamin A deficiency in 138 low- and middle-income countries estimated that 1.7% of deaths among children under five years in 2013 could be attributed to vitamin A deficiency.<sup>26</sup> To prevent micronutrient deficiencies, South Africa introduced a national food fortification programme in 2003 which requires all maize and wheat products to be fortified with vitamins and minerals. The government has also been running

a national vitamin A supplementation programme, since 2002, to combat vitamin A deficiency and reduce the mortality risk in young children.<sup>27</sup> In 2017/18, 54% of children aged 12 – 59 months received vitamin A supplementation.<sup>28</sup>

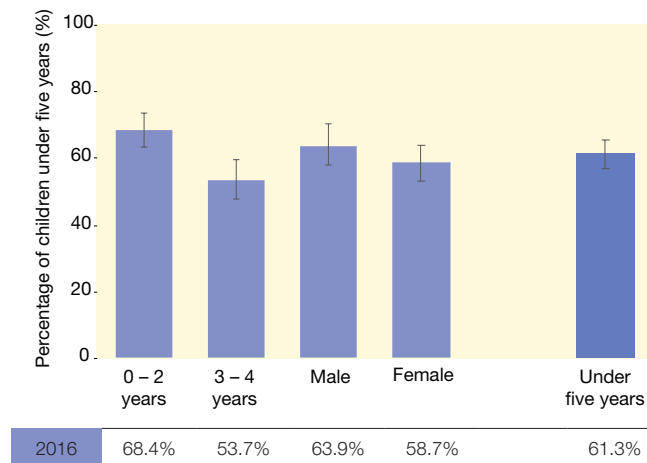
The prevalence of anaemia among young children is also high. The 2016 South Africa Demographic and Health Survey classified 61% of children under five years as anaemic. A quarter (24%) suffer from mild anaemia while 35% are moderately anaemic and 2% are severely anaemic. Anaemia rates are higher among poor children; 35% of those in the poorest wealth quintile were moderately anaemic, compared to 18% in the top quintile. The anaemia estimates reported here are significantly higher than those reported in previous national surveys. There is no clear reason for this and so these estimates must be treated with caution.<sup>29</sup>

There are no recent national level estimates on zinc deficiency. The 2005 National Food Fortification Baseline Survey found that 44% of children aged 1 – 9 years had inadequate zinc status and were therefore at risk of zinc deficiency.<sup>30</sup> Some recent studies, although with small sample sizes, have found a high prevalence of zinc deficiency. One such study, involving 349 children from a rural area of Limpopo province, found that 43% of the children were found to be zinc deficient.<sup>31</sup>

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Figure 4e: Anaemia in children under five years, 2016



Source: Department of Health, Statistics South Africa, South African Medical Research Council & ICF (2017) *South Africa Demographic and Health Survey 2016: Key indicators*. Pretoria and Rockville, Maryland: DoH, Stats SA, SAMRC & ICF. Analysis by Winnie Sambu.

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