

MEDIA RELEASE NO. 2

NUTRITIONAL STATUS OF CHILDREN

Introduction

The **South African National Health And Nutrition Examination Survey (SANHANES-1)** was established by the Human Sciences Research Council (HSRC) as a population health survey that will be repeated regularly to address the changing health needs in the country and to provide a broader and more comprehensive platform to study the health and nutritional status of the nation on a regular basis.

The study, compiled by a research consortium comprising the HSRC and the Medical Research Council (MRC), was financed by the national Department of Health and the UK Department for International Development (DFID) and HSRC.

SANHANES-1 provides critical information to map the emerging epidemic of non-infectious, or non-communicable diseases (NCDs) in South Africa, and to analyse the underlying social, economic, behavioural and environmental factors that contribute to the population's state of health. Data on the magnitude of and trends in NCDs, as well as other existing or emerging health priorities, will be essential in developing national prevention and control programmes, assessing the impact of interventions, and evaluating the health status of the country.

Methodology

SANHANES-1 included individuals of all ages living in South Africa, except those staying in educational institutions, old-age homes, hospitals, homeless people, and uniformed-service barracks. The study was conducted during 2012; 25 532 individuals (92.6% interview response rate) completed a questionnaire-based interview; 12 025 participants had a physical examination completed by a medical doctor, and 8 078 participants provided a blood specimen for biomarker testing. A biomarker is a measurable characteristic that reflects the severity or presence of the state of some disease. This first round of SANHANES will provide baseline data of a representative sample of the population for future analysis over long periods of time (longitudinal surveys).

Key findings

Nutritional status of children

Anthropometry (study of human body measurements)

Among children aged 2-14 years, the prevalence of overweight and obesity was significantly higher in girls (16.5% and 7.1%) than in boys (11.5% and 4.7%). Overweight and obesity prevalence was highest in the 2-5 year age group; the respective percentages were 18.9% and 4.9% for girls and 17.5% and 4.4% for boys.

Among 10-14 year olds, overweight and obesity were again higher in girls (16.7% and 5.6%) than boys (7.5% and 2.7%). While the age groups did not match exactly (SANHANES: 2-5 year olds vs. National Food Consumption Survey (NFCS) 2005, 1-3 and 4-6 year-olds combined), they were close enough to be compared. Over almost a decade, the prevalence (sexes combined) of overweight has increased, from 10.6% to 18.2%, while that of obesity remained unchanged (4.5% and 4.7%).

The youngest boys and girls (0-3 years of age) had the highest prevalence of stunting (26.9% and 25.9%), with the lowest prevalence recorded in the 7-9 year age group (10% and 8.7%, respectively). Undernutrition in children younger than ten years of age has decreased since 2005, with the exception of stunting among the youngest age group (0-3 years).

Iron and vitamin A status

In the under-five year olds, overall, the prevalence of anaemia was 10.7%, mild anaemia 8.6% and moderate anaemia 2.1%. There were no cases of severe anaemia. The prevalence of iron depletion was 8.1% and of iron deficiency anaemia 1.9%.

When the SANHANES -1 findings were compared with those of the 2005 NFCS, the prevalence of anaemia and iron deficiency anaemia decreased by 63% and 83.2%, respectively. At the national level, the prevalence of vitamin A deficiency was 43.6%, which is a decrease from the 2005 reported prevalence (63.6%).

The significant improvements in the iron and vitamin A status in children under five years of age may reflect the beneficial impact of the food fortification intervention programme. Despite the implementation of the food fortification programme, the decrease in Vitamin A status from 63.6% to 43.6% still poses a major public health problem.

Dietary knowledge and behaviour of children (10 – 14 years)

The majority (71.7%) of children had a low score on general nutritional knowledge, 27.3% had a medium, and only 0.9% had a high score. When it came to being able to identify healthy food alternatives, most children (53.2%) had a high score, 38.2% had a medium score and 8.6% had a low score. A similar pattern was observed in the identification of foods containing healthy fats.

Two-thirds of children ate breakfast before going to school, and 86.1% believed it was important to do so. More than half of the children (51.1%) did not take a lunch box to school, with more than a third (37.2%) indicating that *the food at school was enough for the whole day* and under a third (29.8%) indicating that *there was nothing at home to put in the lunch box*.

Body image and weight management (10-14 years)

Happiness with current weight

The majority of children (82.2% males and 78.3% females) indicated that they were happy with their weight at the time of the survey.

Perceived body image (how children saw their body image)

Only about one out of three children (36.4%) thought they had a 'normal' body image, nearly two thirds (61.6%) thought they had a 'fat' body image, and only 2% thought they had a 'very thin' body image, based on identifying an appropriate body silhouette from a range of silhouettes.

Perceived BMI compared to measured BMI

More children thought their BMI was higher than their measured BMI (males 12.7% and females 16.2%) compared to 3.9% of males and 5.1% of females who thought their BMI equalled their measured BMI, and 0.2% of males and 0.6% of females who thought their BMI was lower than their measured BMI.

Correct identification of body image from body image silhouettes

Overall, 98.1% and 99.6% of children were able to correctly identify a 'very thin' and a 'fat' body image, respectively, from body image silhouettes. However, only 18.2% of children were able to correctly identify a 'normal' body image.

Attempted to lose or gain weight in the last 12 months

Overall, few children (14.9% males and 13.5% females) attempted to lose or gain weight. A significantly higher number of females (16.7%) attempted to lose weight when compared with males (10.3%). No sex differences were observed in children who attempted to gain weight.

Notes:

Regional and international comparisons show that South Africa's preschool-aged children have a major problem of overweight and obesity (combined). Morocco, Swaziland, Botswana, and Nigeria have a prevalence of about 11%, which is about half of South Africa's prevalence of 22.9%. By further comparison, 12% of children aged 2-5 years were overweight and obese in the United States. The current prevalence in South Africa is where the USA was in 1999-2000, viz. 20.5% for 2-5-year-olds. Albania, Libya, Egypt, and Georgia reported overweight and obesity (combined) prevalence of 23, 22, 21, and 20%, respectively.

Compared to the previous national survey in 2005, there has been a slight increase in stunting, but a clear decrease in wasting and underweight among children under five years in South Africa. In the global context, the prevalence level may be classified as of medium severity for stunting, and low for wasting and underweight.

Nutrition-specific and nutrition-sensitive interventions are needed to address the dual problems of chronic undernutrition (stunting) and the rapidly rising trend of overweight and obesity among children in South Africa. Attention should be given to care during and even before pregnancy, as well as during the important 'window of opportunity' up to around two years of age. The government's National Development Plan proposes to introduce a nutrition programme for pregnant women and young children, which the findings of the SANHANES-1 clearly support (National Planning Commission 2012).

Comparison with global and regional figures for anaemia shows that South African children fare much better than the rest of Africa but not necessarily as well as the developed countries. For example, in 2013, the worldwide anaemia prevalence was 43%; 11% for high-income regions, 46% for southern Africa; 71% for Central and West Africa, 23% for southern and tropical Latin America.

Although there has been a decrease in vitamin A deficiency (VAD) among children under five years of age (from 63.6% in 2005 to 43.6% in SANHANES -1), VAD is still a severe public health problem. It is apparent that South Africa has some way to go yet in improving the vitamin A status of its children. In India, a VAD

prevalence of 56.7% among 1 - 6-year-old children was found, while in Vietnam it was 10.1%, 59.2% in Malawi, and 54.1% in Zambia.

While iron deficiency is frequently the primary factor contributing to anaemia, it is important to recognise that the management of anaemia requires a multi-sectoral approach which, through integrated interventions, addresses the various factors (e.g. malaria, helminth or parasite infections, other chronic infections, particularly HIV/AIDS and tuberculosis) that play a significant role in causing anaemia in a given community.

It should be remembered that optimal breast feeding of infants and young children and consumption of an adequate and varied diet with vitamin A-rich foods by both women and children, combined with other health improvement measures such as control of infectious diseases, are the best strategies for avoiding vitamin A deficiency. Furthermore, the current policy on food fortification should continue.

Overall, it seems as if South African children aged 10-14 years were happy about their body image when asked. However, when investigating their level of happiness using scientific methods (i.e. comparing perceived versus ideal body image or comparing their actual (measured) to their perceived body image, the survey's findings indicate that they were not so happy about their body image. This is a major concern, judging from the fact that 61.6% of children surveyed thought they are fat, whereas in reality, less than 25% of these children were either overweight or obese. This indicates that South African children have a distorted body image, with the problem worse in girls than boys. This problem may be exacerbated by the fact that a higher percentage of South African girls surveyed were overweight and obese (22.3%) when compared to boys (10.2%).

It is clear that South Africa is heading for a disaster, judging from the high percentage of people living with chronic diseases of lifestyle in the country, with overweight and obesity being strong risk factors for these diseases.

While it is encouraging that the majority of children (86.1%) believed it is important to have breakfast, almost a third (29.8%) indicated that they did not have food at home to put in their lunch boxes. Measures to improve food security in vulnerable communities are imperative.

It is clear that extensive health and nutrition education has to be seriously considered to improve the health and nutrition knowledge of South African children. Moreover, the focus should be on educating them about healthy (normal) body size status, as well as healthier ways of achieving it.

Recommendations

On the basis of these findings, we recommend that the Department of Health should implement the following in relation to the documented slight increase in stunting in the very young children:

- Strengthen current efforts within the Integrated Nutrition Programme; focus on the first 1 000 days of a child's life and provide the necessary additional resources to promote child growth such as community-based growth monitoring and promotion
- Stunting should be diagnosed early in a child's life in order to prevent it; as such, the current approach to growth monitoring should be adapted to include the measurement of height/length regularly and the appropriate personnel should be enabled to take such measurements accurately

- Stunted children should be identified as a high risk population and intensive assessment of nutritional and environmental determinants should be addressed by appropriate nutritional and medical interventions
- Due consideration should be given to accelerating the creation of crèche (child care) facilities within the community and at the work place, especially in localities with a high prevalence of stunting and/or identified disadvantaged communities. Additionally, serious consideration should be given to creating both community and health facility-based rehabilitation centres with a view to accelerating intensive treatment, supervision and follow-up of severely malnourished children. Treatment protocols should be carefully developed, taking cognizance of the risks for overweight
- The approach to the management of underweight pregnant women and women with poor weight gain should be reappraised to include, apart from the current folic acid and iron supplements, determinant-related (food and environment) interventions and more intensive monitoring

In relation to micronutrient status:

- The food fortification intervention programme should be retained but reappraised, in conjunction with the salt iodation programme, not only in terms of compliance but also in terms of the currently legislated fortificants, and levels thereof, particularly iron and zinc.
- The micronutrient supplementation programme for children and women of reproductive age should be revisited and reformulated to include regular monitoring of its impact.

In relation to weight management:

- The increasing trend of overweight and obesity should be addressed collectively at the home, school and community level with the aim of increasing awareness, promoting healthy food choices and practices, and increasing physical activity
- At the home level, parental support in ensuring the consumption of healthier foods and in limiting inactivity, as well as increasing awareness of not doing so, should be essential components of any policy

At the school level:

- Curricula that address the importance of healthy eating, physical activity and body image perceptions should be implemented or introduced within school
- The Integrated School Health Programme should be strengthened and adequately financed
- An enabling environment in which children can make healthy food choices by implementing added measures of control of food vendors at school is in need of urgent implementation
- The type of foods and the amounts they are provided at school as part of the School Nutrition Intervention Programme should be evaluated and adapted as necessary
- At the community level, increased awareness, as well as a safe and enabling environment conducive to physical activity, should be implemented with the necessary participation of parents and community leaders

The approach to implementing any of the proposed recommendations should engage all other relevant government departments and the community at large.

The HSRC remains available to support the Department of Health in the implementation of these recommendations.

For interviews or further information, contact:

Julian Jacobs, Tel: 021 466 8042 // cell : 082 454 4902 // e-mail: jjacobs@hsrc.ac.za

Ina van der Linde, Tel: 012 302 2024 // cell: 082 331 0614 // e-mail: ivdlinde@hsrc.ac.za