BHPSA

BETTER HEALTH PROGRAMME
SOUTH AFRICA

COMMENTARY

SEPTEMBER 2021

GENDER AND OBESITY IN SOUTH AFRICA

What is the relationship between gender and obesity in South Africa and how is this changing over time? This rapid BHPSA report delves into a range of recent research reports and older national surveys to try and shed some light on this serious and growing problem.

MEN AND WOMEN

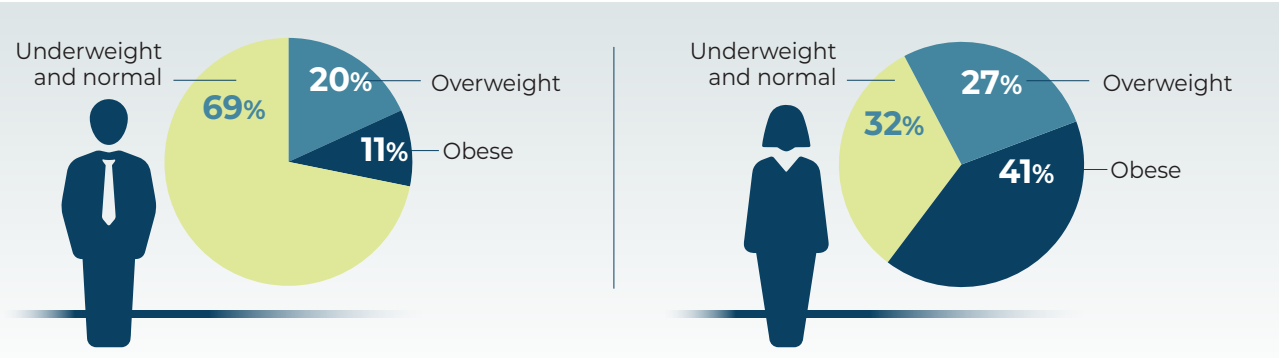

Figure 1: Prevalence of obesity and overweight in adult South Africans, 2016

The most recent national survey, the SA Demographic Health Survey (SADHS) of 2016 shows that more than two thirds of South African (SA) women have serious problems with their weight.[1] This alarming fraction can be broken

1 National Department of Health (NDoH), Statistics South Africa (Stats SA), South African Medical Research Council (SAMRC), and ICF. (2019) *SA Demographic Health Survey, 2016.* 9. Pretoria, South Africa, and Rockville, Maryland, USA.

down into the 27% who are overweight and the 41% who are obese (one fifth of those, seriously so).[2] These figures are very similar to those from another national survey of 2012, which shows that one quarter of SA women are overweight and 40.1% were obese.[3]

Both the above surveys found that overweight and obesity among women was around double that of men. For example, in the SADHS only 32% of women had normal weight or were underweight in comparison with 69% of men.

Many other smaller, but more recent, studies show the same gender disparity. For example, a 2021 article looking at noncommunicable diseases (NCDs) and HIV among adults attending a clinic in urban Soweto found that 46.8% of women were overweight or obese in comparison with 19.7% of men.[4] Another study in rural KwaZulu-Natal found that 60% of the female participants were obese compared with 19% of the men.[5]

INCREASING PREVALENCE

The female obesity crisis has been gathering pace for decades. The SADHS shows that the prevalence of overweight or obesity increased from 56% in 1998 to 68% in 2016.[6] Figure 2 shows the findings of the 2020 Global Nutrition Report, which used modelling and a range of sources to chart the increase in obesity and overweight among SA adults, male and females between 2005 and 2020.[7]

GIRLS AND BOYS

In South Africa gender disparities in overweight are present from childhood. The 2012 SANHANES 1 study found that the prevalence of overweight was significantly higher in girls aged 2 to 14 years than in boys (16.5% and 11.5% respectively), as was obesity, which affected 7.1% of girls and 4.7% of boys.[8]

A cross sectional study among school learners (aged 7 to 18 years) in the Western Cape found that 19.7% of girls were overweight in comparison with 9.4% of boys, while 9.1% of girls and 4.5% of boys were obese.[9] The same pattern is also seen in a rural municipality in Limpopo province where girls were nearly three times more likely to be overweight or obese than boys.[10]

WHY THE "TWO O's" MATTER

Many people who are overweight or obese are also fit and healthy, but they are predisposed to serious NCDs such as heart problems, high blood pressure and diabetes. In South Africa these diseases account for over half of all premature deaths each year.[11] For this reason, the "two O's" are seen as a major public health challenge.

One recent study tracked healthy overweight/obese individuals in Southern Africa over ten years and found that at least half of them developed metabolic syndrome. Metabolic syndrome is a cluster of

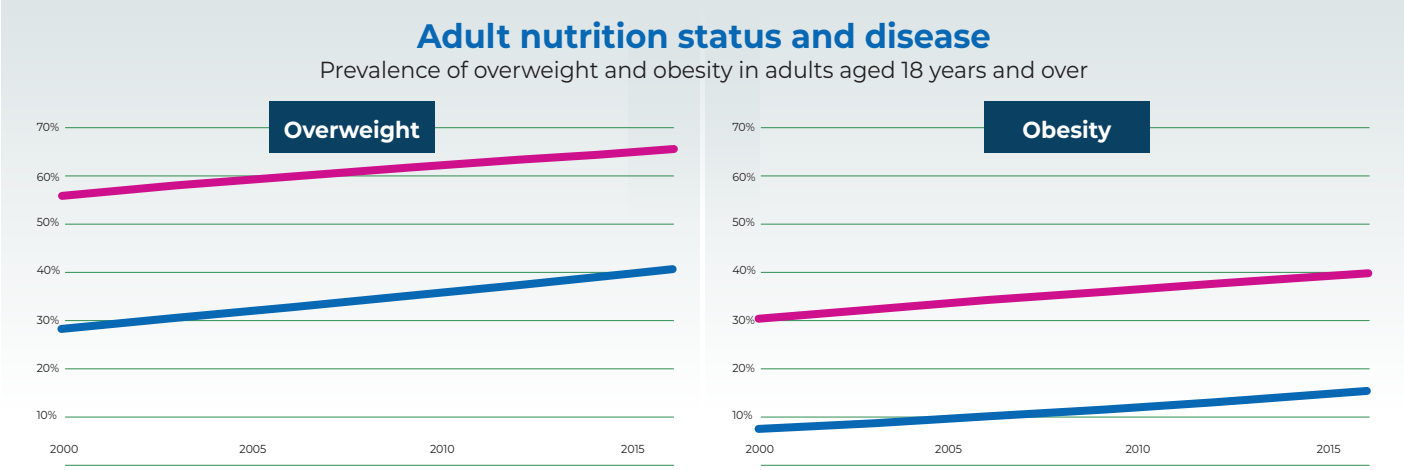

Figure 2: Increase in prevalence of overweight and obesity among SA adults

2 Overweight is described as weight for height or Body Mass Index (BMI). Overweight is defined as a BMI of 25-29.9, obese is BMI 30 and above, severely obese is BMI 35.

3 Shisana, O., Labadarios, D., Rehle, T. et al. (2014) *The South African National Health and Nutrition Examination Survey, 2012: SANHANES-1: the health and nutritional status of the nation*. 2014 (ed). Cape Town: HSRC Press.

4 Hopkins, K., Hlongwane , K., Otwombe et al. (2021) The substantial burden of non-communicable diseases and HIV-comorbidity amongst adults: Screening results from an integrated HIV testing services clinic for adults in Soweto, South Africa. *The Lancet* DOI: https://doi.org/10.1016/j.eclinm.2021.101015

5 Kushitor, B., Sanuade, O., and PhD; L Baatiema, L et al. (2021) Non-communicable disease comorbidities in KwaZulu-Natal Province, South Africa. *S Afr Med J* 2021;111(2):149-158. https://doi.org/10.7196/SAMJ.2021.v111i2.14744

6 NDoH 2019, op. cit.

7 Global Nutrition Report 2020. https://globalnutritionreport.org/resources/nutrition-profiles/africa/southern-africa/south-africa/

8 Shisana et al, 2014, Op cit.

9 Negash, S., Agyemang, C., Matsha, T.E. et al. (2017) Differential prevalence and associations of overweight and obesity by gender and population group among school learners in South Africa: a cross-sectional study. *BMC Obes* 4, 29. https://doi.org/10.1186/s40608-017-0165-1

10 Debeila S, Modjadji P, Madiba S. High prevalence of overall overweight/obesity and abdominal obesity amongst adolescents: An emerging nutritional problem in rural high schools in Limpopo Province, South Africa. *Afr J Prm Health Care Fam Med*. 2021;13(1), a2596. https://doi.org/10.4102/ phcfm.v13i1.2596

11 WHO, Factsheet. South Africa. https://www.who.int/nmh/countries/zaf_en.pdf

diseases, including obesity, high blood pressure, high blood cholesterol and insulin resistance (a precursor to diabetes). At baseline more than a quarter of women and around 10% of men were healthily overweight or obese, but after ten years 12.3% of the healthy women and 4.7% of the men had developed metabolic syndrome.[12]

For many affected people, obesity and overweight are linked to NCDs from the start. In the KwaZulu-Natal study above, a higher proportion of people who were overweight and obese had hypertension (30% and 45%, respectively) compared with those who were of normal weight (12%). Approximately 14% of those who were obese were living with diabetes and of these, only around 84% of the women were on treatment, compared with 100% of the men.[13]

Research shows that the Type 2 Diabetes (T2DM) epidemic in South Africa mirrors the gendered pattern of rising obesity.[14] A recent systematic review of the prevalence of T2DM in South Africa pooled the data from 11 population-based studies and concluded that T2DM prevalence was consistently higher in females compared to males, and attributed this to higher rates of obesity and insulin resistance in women compared to men.[15]

Childhood obesity is a strong risk factor for adult obesity and other NCDs and is therefore of great concern. In the study of Western Cape learners above, the cardio-metabolic diseases of hypertension and high blood cholesterol were already prevalent in the affected schoolchildren.[16]

INTERNATIONAL COMPARISONS

So how are we doing as a country? Is the female obesity crisis as severe in other parts of the world?

The short answer is 'no'.

One study comparing prevalence of BMI and obesity in 16 African countries in the SADC region found that in 2019 South Africa had the highest prevalence of obesity, with an average in adult females of 44.7%. Neighbouring countries of Swaziland and Lesotho ranked second and third with 33.9% and 31.6% respectively. The least affected countries, the DRC and Madagascar, had adult female obesity prevalence of 5.6% and 7.0% respectively. This study also showed that the percent of overweight South African women increased between 1990 and 2019 from 57% to 71.3% (a 15.3% increase) in comparison with the SADC average, which increased from 31.4% to 39.7% (an 8.3% increase).[17]

This gendered pattern of obesity and overweight is common in Africa and the Middle East.[18] However, it is not a biological inevitability. In most high income and upper middle-income countries, the pattern is reversed in both adults and children. The 2019 Childhood Atlas of Obesity shows that, among children 5-9 years old, the prevalence of obesity was higher in boys than girls in 188 high income and upper middle-income countries. In half of these countries the prevalence in males was almost double female prevalence.[19]

12 Kruger, H., Ricci, C., Pieters, M., et al. (2021) Lifestyle factors associated with the transition from healthy to unhealthy adiposity among black South African adults over 10 years. *Nutrition, Metabolism and Cardiovascular Diseases*, Volume 31, Issue 7, 2021, Pages 2023-2032, ISSN 0939-4753, https://doi.org/10.1016/j.numecd.2021.03.017.

13 Kushitor et al, 2021, op. cit.

14 Averetta S., Stacey B., and Wanga, Y. (2014) Decomposing race and gender differences in underweight and obesity in South Africa. *Economics & Human Biology*. V15. December 2014, Pages 23-40. https://doi.org/10.1016/j.ehb.2014.05.003

15 Pheiffer, C., Pillay-van Wyk, V., Turawa E., et al. (2021) Prevalence of Type 2 Diabetes in South Africa: A Systematic Review and Meta-Analysis. *Int. J. Environ. Res. Public Health* 2021, 18(11), 5868; https://doi.org/10.3390/ijerph18115868

16 Negash et al, 2017, op cit.

17 Gona, P., Kimokoti R., Gona C,. et al. (2021) Changes in body mass index, obesity, and overweight in Southern Africa development countries, 1990 to 2019: Findings from the *Global Burden of Disease, Injuries, and Risk Factors Study*. First published: 07 May 2021. https://doi.org/10.1002/osp4.519

18 Kanter, R. and Caballero, B. (2012) Global Gender Disparities in Obesity: A Review. *Adv Nutr*. 2012 Jul; 3(4): 491–498. Published online 2012 Jul 6. doi: 10.3945/an.112.002063

19 Shah B, Tombeau, K,. Fuller A, et al. (2020) Sex and gender differences in childhood obesity: contributing to the research agenda. BMJ Nutrition, Prevention & Health 2020;3:e000074. doi:10.1136/bmjnph-2020-000074

The Better Health Programme, South Africa (BHPSA) is a health system strengthening programme funded by the UK government through the British High Commission in Pretoria and managed by Mott MacDonald.