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Screening for total and abdominal obesity among University of Venda students

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Abstract

BACKGROUND AND AIM

The importance of total body fat and distribution has been stressed as a major risk factor for both adults and children. Whilst there are studies that have investigated total and abdominal obesity in many parts of South Africa, most of these studies are confined to children, adolescents and other populations groups. As such, there is paucity of information concerning total and abdominal obesity among university students in South African, a dynamic population group supposedly to be future managers in the various sectors of the economy. The purpose of this study was to screen for total and abdominal obesity among university of Venda health sciences students, using the proxy measures of body mass index (BMI) and WSR indices.

METHODOLOGY

A stratified random sampling of 389 (199 males and 199 females) university students aged 19-24 years, participated in the study. Stature, weight, waist and hip circumferences were measured using standard techniques (Marfell-Jones et al., 2006). Body mass index was calculated by dividing body mass by stature in meters squared. The WHO criteria determined BMI categories, while waist-to-stature (WSR) was calculated by dividing waist circumference (in cm) by stature (in cm). A WSR ≤ 0.50 was used to determine abdominal obesity. Results were analyzed using student t-test and Chi-squared statistics, with a p-value of < 0.05.

RESULTS

The mean age, BMI and WSR of the participants was 20.8±2.1, 23.8±4.6 and 0.54±0.1, respectively. Overall, 7.5%, 21.4% and 11.1% students were underweight, overweight and obese, respectively. The percentage of students who were overweight was higher in females (11.7%) than males (9.7%), whereas obesity occurred more among the males (6.2%) compared with the females (4.9%). Underweight was 4.4% and 3.1% for females and males, respectively.
A total of 102 students (19.2%) had central obesity as measured by WSR. The proportion of males with a WSR ≥ 0.5 was 59 (11.1%), while females were 43 (8.1%).

CONCLUSION

Notwithstanding the methodological limitations of BMI and WSR in assessing adiposity, this study indicates that total and abdominal obesity is high among the university of Venda students. This is worrisome, given the health consequences of excessive body fatness. Intervention measures should be instituted to address the rising trend of overweight and obesity in students as that would stem the rising prevalence of the associated disorders.

KEYWORDS: Total obesity, abdominal obesity, body mass index, waist-to-stature ratio, university students.