

Evolution of the double burden of malnutrition during 15 years in the Cuban adult population

Background. Globally, the trend of overweight and obesity continues to rise, which causes significant consequences for the health and the economy of the countries, because this increases the risk of other non-communicable diseases in the adult population, also coexisting with a weight deficit, which is representative in the poorest countries. This problem is promoter of a double burden of malnutrition in low and middle income countries, its reduction depends on different factors including the elimination of poverty, improvement of the quality of food, increasing the physical activity and sustainable food systems, among others. In Cuba, the deficit of weight does not constitute a public health problem, while the excess of weight is in ascending progression.

The purpose was to analyze in Cuba the changes in the prevalence of overweight, obesity and chronic energy deficiency (CED) in a period of 15 years, between 1995 and 2010, defined by the three national surveys of risk factors, carried out as independent epidemiological studies.

Methods. The sample in each study was obtained from a complex, stratified, multi-stage cluster sampling design, based on the households survey system in the Cuban population over 15 years of age. Measurements of weight, height, waist and hip circumferences were made. CED, overweight and obesity were defined and evaluated using Body Mass Index (BMI) and WHO cutoff points (CED <18.4 kg/m²; overweight 25–29.9 kg/m²; obesity ≥ 30 kg/m²). Regional distribution of adipose tissue was determined by waist-to-hip ratio and risk levels for chronic disease (men: ≥ 1.00 ; women: ≥ 0.85). For the present analysis, individuals ≥ 20 years were taken who were part of the self-weighted samples obtained in each of the studies, as follows: for the I and II surveys performed in urban areas in the years 1995 and 2001, with national representation, the sample sizes were N=14203 and N=228514, respectively. For the III survey of 2010 with national and urban/rural residence area representation, the number of subjects was N=7928 individuals. Pregnant women were excluded of analyses. Prevalence was estimated, with confidence intervals at 95% of CED, overweight, obesity and central adiposity by sex and age intervals for comparative purposes.

Results. The results point towards an evolutionary increase of overweight and obesity in the Cuban population, in 6% and 5.9% percentage points respectively in 15 years. The obesity was more marked between the years 2001–2010 (Figure 1), with predominance in females and in ages up to 59 years; although the increase in overweight was slight in the last decade, the prevalence of obesity was higher, with a central predisposition, which is an important independent factor that increases comorbidity due to chronic non-communicable diseases. The CED has been reduced in the country, in men the prevalence has dropped to 4.9% and in women it is 6.7%.

Conclusion. The trend in Cuba between 1995 and 2010 has shown a reduction in weight deficiency and a significant increase in excess weight and abdominal adiposity.

Country

CUBA

Institution

National Institute of Hygiene, Epidemiology and Microbiology, Havana, Cuba

Author: Dr DIAZ, Maria Elena (Nutrition Center of National Institute of Hygiene, Epidemiology and Microbiology)

Co-authors: Dr GARCÍA ROCHE, René (National Institute of Hygiene, Epidemiology and Microbiology); Dr JIMÉNEZ, Santa (National Institute of Hygiene, Epidemiology and Microbiology)

Presenter: Dr DIAZ, Maria Elena (Nutrition Center of National Institute of Hygiene, Epidemiology and Microbiology)

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