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# Nutritional Status of Children and Youth in Accompanied MEC / SESU Project of UFPE

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### ABSTRACT

To evaluate the nutritional status of children and adolescents monitored in MEC / SESu UFPE project. Cross-sectional descriptive study in Centro de Revitalização e Revalorização da Vida, in the community of Bode, Recife / PE, from August to September 2015. A total of 35 children and adolescents and observed 18 % overweight, being higher in males (22). A high waist circumference was found in 22 % male, 8 % female. For weight / age and height / age was not found deficits nor surpluses in the sample.

**Keywords:** Overweight; Waist circumference; nutritional status

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## INTRODUCTION

The process of nutritional transition in Brazil has been marked by distinct characteristics and phases, in which there is a marked increase in the prevalence of overweight and obesity in the different stages of life without overcoming malnutrition, among other nutritional deficiencies.

According to Scherer (2011), Falcão (2006), this nutritional transition is mainly related to sedentary lifestyle, increase calorie intake, and industrialized or ultra-processed foods<sup>2,3</sup>. These habits often lead to accumulation of body fat and excess weight still in childhood, which contributes to greater episodes of cardiovascular morbidity and mortality in adulthood<sup>4</sup>.

The identification of overweight occurs through the evaluation of nutritional status, which has become an increasingly important aspect in nutritional diagnosis and in the planning of health promotion and disease prevention actions<sup>5</sup>.

As reported by Dias et al. there is a strong association between nutritional status, measured by BMI, and Waist Circumference (WC). The correlation of these anthropometric parameters is important not only for the identification of obesity, since accumulation of abdominal fat may be present in eutrophic patients, predisposing them to risk of cardiovascular diseases<sup>6</sup>.

Nutritional status is important to monitor the growth and health of child and adolescent in the early detection of nutritional disorders, which will help to prevent nutritional problems, deficiencies or excess food. Therefore, the present study aims to evaluate the nutritional status of children and adolescents monitored in MEC / SESu project of UFPE.

## METHOD

This study is a cross-sectional study carried out in Centro de Revitalização e Revalorização da Vida in the community of Bode, Recife / PE, in the period of August and September 2015.

The study population was composed of children and adolescents participating in the project MEC / SESu of UFPE, who during the collection period frequented the space and agreed to participate in the study, a total of 35 individuals from 7 to 17 years. The project is part of socio-Environmental Health and Education Program - strategy for citizenship, linked to the Ministry of Education and Culture and Information and Project Management System.

Participants were gathered in the place on Saturday mornings, in which necessary informations for the production of this article were collected. The anthropometric measures were collected through Frisancho's recommendations<sup>7</sup>.

The current weight was verified at the time of the interview, where a portable electronic scale (Wiso brand w939) with 180 kg capacity and 100 g subdivisions was used. The children remained barefoot during measurements and with minimal clothes to obtain weight, in the orthostatic position and in the center of the base of the scale. The height was obtained in a portable stadiometer (WISO), built in anodized aluminum, with platform, 216 cm in height and sensitivity to 1 mm. The BMI was then calculated and the categorization followed WHO recommendations<sup>8</sup>.

To measure the waist circumference, it was measured with the participant in an orthostatic position, placing on a skin an inelastic tape graduated in millimeters, in space corresponding to the smallest circumference between iliac crest and the costal border at the moment of minimum expiration. They were considered with central obesity, children whose CC values, according to sex and age, were equal to or greater than 80 percentile<sup>9</sup>.

Data were typed in double entry using the software Epi Info 2000 software version 3.51 and analyzed using Statistical Package for Social Sciences (SPSS) version 12. Descriptive analyzes of data were performed.

The study was approved by the Human Research Ethics Committee of the Health Sciences Center of the Federal University of Pernambuco, in accordance with the guidelines of Resolution No. 466/12 of the National Health Council.

## RESULTADOS

The sample consisted of 35 with mean age of 140 months, being 65.7 % (23) males and 34.3 % (12) females. The media values for variables as weight, height, BMI and waist circumference for the sexes are described in table <sup>1</sup>.

In graph 1 it is observed that overweight was found in 18 % of the sample. When stratified between the sexes, the male presented a percentage of 22 % and 8 % female.

The high waist circumference was found in 22 % of males, 8 % females and 17 % of the sample, the same percentage was found by BMI as observed in figure 2.

For the weight/age and height/age, neither deficits nor excesses were found in the sample studied.

## DISCUSSION

With the results found, it can be observed that the percentage of children and adolescents with excess weight, according to the adopted parameters of BMI, is elevated, regardless of sex, and that the values for the cut-off point of high waist circumference indicated the same percentages, showing that there is an imminent risk for the onset of other comorbidities.

This finding corroborates with prevalence findings of overweight and obesity in contemporary society, where both developing and developed countries have high rates of overweight in childhood<sup>10</sup>.

Recent American data indicate prevalence of overweight among children and adolescents of 22.0 %, they use the same definition of overweight adopted by us<sup>11</sup>. In Brazil, over the last 30 years, this problem has increased in all

regions and social classes<sup>12</sup> and according to a secular trend study of overweight, it was observed that about 20 % in overweight and obesity, occurrences varying from 5.5 % to 12, 2 % in the last period evaluated (2009 to 2011), representing an average prevalence of overweight of 27.6 % in males and 33.8 % in females<sup>13</sup>.

Overweight / Obesity is a gateway to nutritional disorders, because it increases the risk to health; for biological, psychological or behavioral reasons,

Some individuals seem destined to face a "battle" to lose weight. This process of "fighting" can produce excessive concern about diet, weight, self-condemnation, and depression, as well as repeated cycles of weight loss and recovery<sup>14</sup>.

The nutritional status classification only by the calculation of BMI suffers some contradictions on the part of some authors, since it is not possible to quantify lean mass and adiposity and differences between the sexes. Some recommend a parameter application associated with others such as waist circumference. Therefore, the measurement of waist circumference has been widely used in recent years as an additional anthropometric measure and also as an isolated indicator of cardiovascular risk, including in children and adolescents. This measure was found to be high in 17 % of the sample, being 22 % male and 7 % female, which necessitates a nutritional intervention as a preventive measure for these human persons<sup>15,16</sup>.

In a study carried out in Fortaleza in public schools with 727 students aged 6 to 11 years, in order to establish a correlation between BMI and CC, it was found in the abdominal circumference, according to reference values for sex and age, most of children (72.8 %) had normal CC and that in 27.2 % of the sample, central obesity was present. Regarding gender, the prevalence of central obesity was 27.6 % and 26.8 % among females and males, respectively<sup>17</sup>.

Tabela 1 – Média dos valores de idade, peso, altura, IMC e CC das crianças e adolescentes acompanhados no MEC/SESu da UFPE, RECIFE-2015.

VARIÁVEL	TOTAL n=35	MENINOS n= 23	MENINAS n=12
IDADE	140 ± 33,1	146,8 ± 32,9	129,4 ± 31,6
PESO	39,9 ± 14,5	44,5 ± 15,5	36,3 ± 11,0
ALTURA	150,0 ± 15,6	151,7 ± 16,4	144,2 ± 13,2
IMC	18,3 ± 4,2	19,0 ± 4,7	17,1 ± 2,7
CC	64,0 ± 9,2	66,7 ± 9,4	60,2 ± 7,4

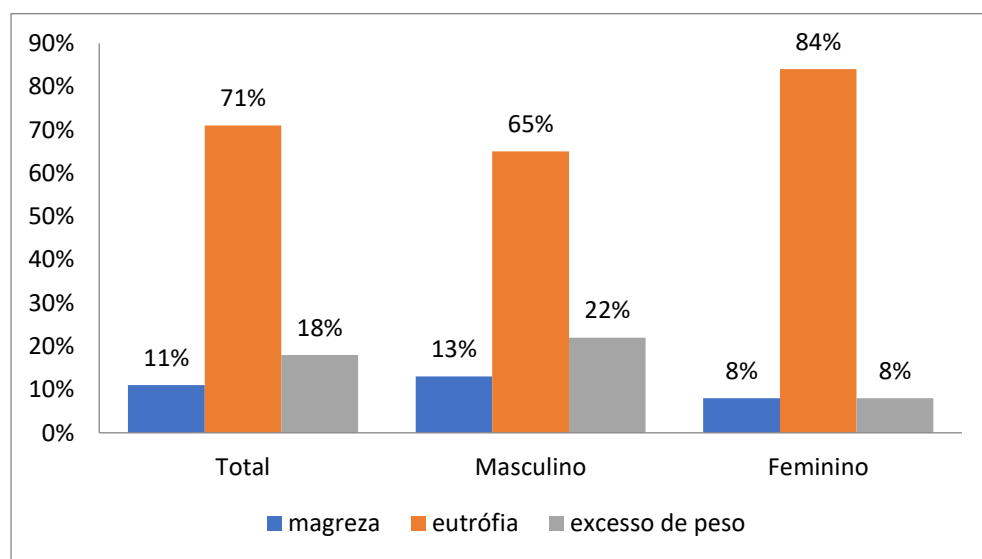


Figure 1-Classificação do IMC de crianças e adolescentes acompanhados no MEC/SESu da UFPE, Recife-PE.

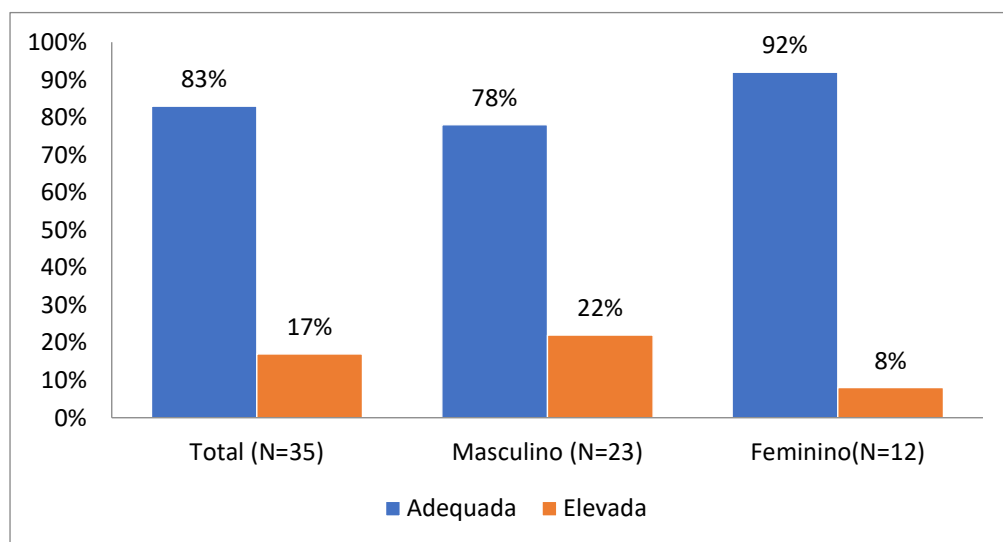


Figure 2 – Classificação da circunferência da cintura de crianças e adolescentes acompanhados no MEC/SESu da UFPE, Recife-PE.

Sedentary lifestyle, increased consumption of high-energy foods high in fat and sugar are likely to contribute to this increase<sup>2</sup>. Although not the main objective of this study, in discussing with children and adolescents are observed that the responsible had low economic level and as a consequence, consumed many industrialized products, strengthening the idea that food intake with high energetic content influences directly in overweight of the individuals; as for sedentarism, this is little present in the routine of the constituents of the sample.

The lack of unanimity in definition of childhood obesity result in difficulties in comparing the prevalences found in several studies. Different indexes have been used, as well as different cut off points of discussion and reference populations<sup>18</sup>.

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## CONCLUSION

The study analyzed the nutritional status of children and adolescents of both sexes in a poor community with emphasis on body mass index (BMI) and waist circumference (WC) and found high rates of excess weight and high waist circumference values.

With progressive growth of overweight in children and adolescents, the nutritional assessment becomes important in the analysis of health conditions, as its use can prevent and identify risk factors such as cardiovascular diseases in adult life. Poor eating habits, especially those that lead to childhood obesity, produce immediate health problems, it can be avoided through nutritional guidelines and preventive nutritional assessment.

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