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BOOK OF ABSTRACTS

6TH MEETING
OF YOUNG RESEARCHERS OF UNIVERSITY OF PORTO

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CREDITS

Livro de Resumos IJUP'13

6º Encontro
de Investigação
Jovem da U.Porto

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Design
Ana Fernandes & Daniel Martins
Rui Mendonça

Impressão e acabamentos
Invulgar – artes gráficas

Tiragem
1000 **exemplares**

Depósito Legal
340336/12

ISBN
978-989-746-006-7

Anthropometric evaluation of primary school children from Póvoa de Lanhoso: comparison of two methods

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Introduction: It is now recognized the importance of the accumulation of abdominal fat in the development of cardiometabolic diseases. It is extremely important to develop screening tools that are reliable and low cost. The ratio between waist circumference and height (WHRt) has been suggested as an important tool in the assessment of cardiometabolic risk.

Objectives: To investigate whether the WHRt is dependent on the sex and age, to describe and compare the prevalence of risk associated with the values of WHRt and BMI.

Methodology: The sample consisted of students attending the 3rd and 4th years of two schools from Póvoa de Lanhoso. Data were collected during the months of May and June 2012. The children were measured (weight, height and waist circumference) according to standard procedures. The WHRt was calculated and the children categorized as "at-risk (≥ 0.5)" and "out of risk (<0.5)." BMI was calculated and the classification made by the respective percentiles according to the CDC criteria. The agreement between the WHRt and BMI was calculated using Cohen's kappa.

Results: The study comprised 166 children, 56% were female and 44% male, aged between 8 and 10 years. There were no statistically significant differences between the WHRt and sex ($p=0.404$) or age ($p=0.661$). The proportion of children considered at risk was lower when measured by the WHRt (20.5%) than according to the percentiles of BMI (33.1%). The agreement between these two methods was moderate ($k=0.594$, $p<0.001$), and there have been a greater level of agreement among females ($k=0.740$, $p <0.001$) than in males ($k=0.405$, $p< 0.001$).

Conclusions: In this study, the WHRt was independent of sex and age, indicating that this may be an easy tool to use in children. There was a strong correlation between BMI and RPCA and there was a moderate agreement between these two methods.