**ANTHROPOMETRIC MEASURES AS PREDICTORS OF PREHYPERTENSION IN ADOLESCENTS**

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Objective: To evaluate the role of anthropometric measures as predictors of Prehypertension in adolescents.

Design and Method: A prospective randomized study was carried out in 3167 patients (1389 males and 1778 females), aged 12-19 years, mean 15.0±1.73 years. In all patients, anthropometrical data and blood pressure were measured and a questionnaire was applied to adolescents recruited from schools, in Maracaibo, Venezuela, from 2007 to 2009. Prehypertension was diagnosed when blood pressure levels were more or equal to 120/80 mmHg. Correlation analysis and the multiple regression analysis were applied to determine the predictor factors of Prehypertension in adolescents. The following factors were included in these analyses: age, gender, weight, height, body mass index (BMI), hip circumference, waist circumference, hip waist index and height waist index.

Results: In this study 22.3% (95% CI 19.2%–25.4%) of the population had Prehypertension. The prehypertensive group had higher levels of weight, BMI, hip circumference, waist circumference, hip waist index, and height waist index than did the normotensive group (P<0.001). Multivariate logistic regression analysis showed that BMI was the strongest predictor of prehypertension among both males and females (odds ratio, 1.084; 95% CI, 1.053-1.117 and odds ratio, 1.108; 95% CI, 1.077-1.141, respectively, for every 1 kg/m2 increase); but when evaluating general population waist circumference was the best predictor (odds ratio, 1.042; 95% CI, 1.032-1.051).

Conclusion: The index that best predicts prehypertension in both men and women is BMI. Our results indicate the importance of prevention and control of overweight in order to reduce Prehypertension.