



Predictive factors of arterial blood pressure in young university students, Córdoba, Argentina

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Background and Objectives:

It is known that the majority of deaths worldwide are caused by cardiovascular diseases (CVD) and various risk factors may influence the development of this type of pathology. These factors can be observed in various populations, including university students.

The university stage could be the first moment to take decisions about health. Beside, an increased risk of CVD has been detected in youth and adolescents, and this risk is different to adults.

The purpose of this study was to examine risk and protective CV factors related to arterial blood pressure (BP) among university students in Córdoba, Argentina, 2012.

Methods:

An aleatory sample based on the clinical records from university students attendees to Health Direction (Student Department, Universidad Nacional de Córdoba) was developed during 2012.

Data about Body Mass Index (BMI), BP, alcohol and tobacco consumption, age, sex, school and college, family history of CV diseases, and physical activity were analyzed. BMI was classified according to OMS and BP by ESC.

Chi2 test was employed to analyze differences between variables, and a multivariate logistic regression analyses was performed. Stata version 11.0 was used for all analyses.

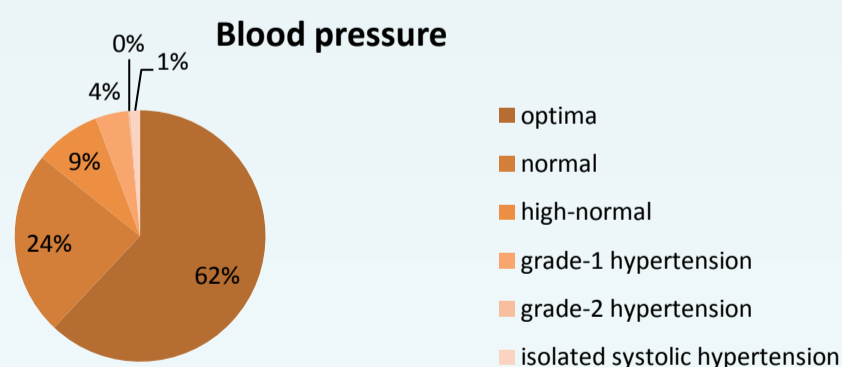
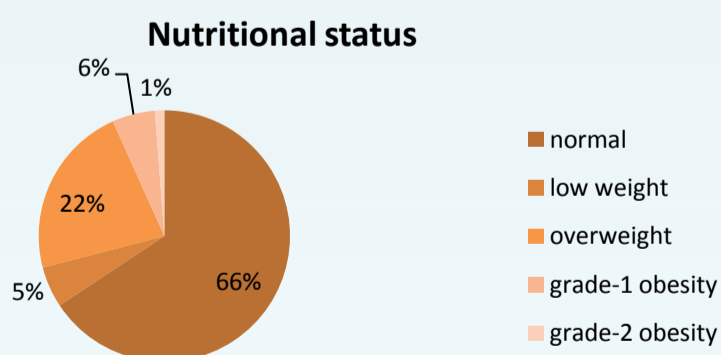
Results:

•**Nutritional status:** from 401 students (38% male, 62% female), 65.66% were normal, 5.26% low weight, 22.31% overweight, 5.51% grade-1 obesity and 1.21% were grade-2 obese.

•**BP values:** the population under study showed the distribution: 61.85% optima, 23.69% normal, 8.48% high-normal, 4.24% grade-1 hypertension, 0.25% grade-2 hypertension, and 1.25%, isolated systolic hypertension.

•**BMI:** a higher proportion of women had normal BMI in relationship to men ($p < 0.05$). Also, women had higher proportion on normal BP compared to men ($p < 0.001$).

Logistic regression showed a strong correlation between normal BP and normal BMI (OR 3.07, IC 95% 1.55-6.08, $p < 0.001$), adjusted by sex, age, family history of CV diseases, tobacco, alcohol, and physical activity. Female sex had a strong association with normal BP (OR 2.4, IC 95% 1.02-4.07, $p < 0.05$).



Conclusions:

Normal BMI and female sex can predict normal BP in young university students.

The findings suggest the need for awareness programs for students, regarding the risk factors to which they are exposed during the graduation.

Keywords:

Blood pressure; protective factors; youth.