Associazione Nazionale Medici Cardiologi Ospedalieri

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CONGRESS ABSTRACT

ASSESSMENT OF CARDIOVASCULAR SYSTEM FUNCTIONAL STATE IN RELATION TO PSYCHOLOGICAL STRESS IN ADOLESCENTS.

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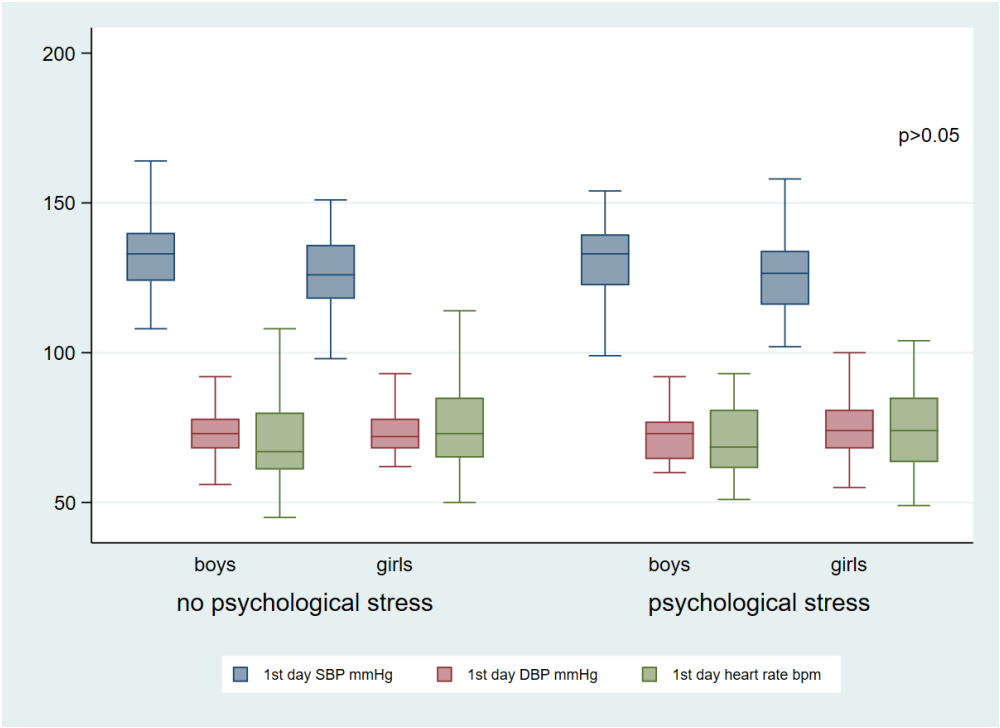
PREVENZIONE CV (https://abstract.anmco.it/tag/prevenzione-cv/), PREVENZIONE PRIMARIA (https://abstract.anmco.it/tag/prevenzione-primaria/)

A collaborative project between the ABC Study on Heart Disease Foundation and Liceo Guglielmo Marconi. Introduction: Psychological stress is a well-documented risk factor for cardiovascular diseases. Adolescents, undergoing rapid physical and emotional development, are particularly susceptible to stress, making the assessment of its impact on their cardiovascular system crucial. Aim: This cross-sectional study aims to explore the relationship between psychological stress and cardiovascular function in adolescents. Methods: A total of 250 high school students from an educational institute in Conegliano (TV) (Liceo Guglielmo Marconi) were enrolled and divided into 2 groups according to the presence or absence of stress symptoms based on a self-assessment psycho-emotion questionnaire designed to evaluate psychological stress levels. Resting systolic (SBP), diastolic (DBP) blood pressure, heart rate (HR), and electrocardiographic (ECG) parameters were evaluated in 2 different settings and compared between both groups. The data were analysed using linear regression models adjusted for age and gender. Results: Students' mean age was 17 ± 1 years, and 53% were females. One student was diabetic ant two were hypertensive. All students exhibited a sinus rhythm, with a mean HR of 73 ± 15 bpm and BP of 129±13/73±8 mmHg. Stress symptoms were reported in 116 (46%) students. Apart from being more frequently females (62%), students who reported stress symptoms shared most demographic and clinical characteristics with those who did not. We observed no difference in SBP, DBP, or ECG parameters between both groups. Stress symptoms were not associated with SBP (β = -2.1±1.7, $p > 0.05$), DPB (β = 0.4±1.1, $p > 0.05$), HR (β = 1.2±1.9, $p > 0.05$), PR interval (β = -5.2±2.9, $p > 0.05$), QRS duration (β = -1.9±1.4, $p > 0.05$), or corrected QT interval (β = 1.3±3.3, $p > 0.05$) in the whole study groups. Results kept the same for boys and for girls. Moreover, results were smellier even with repeated parameters measurements. Conclusions: We found no significant associations of psychological stress and cardiovascular system functions in adolescents. These observations suggest that the association between mental and cardiac health problems develop in later life. Figure 1: Resting blood pressure and heart rate values in students with and without stress symptoms.


200
150
100
50
p>0.05
boys
girls
boys
girls
no psychological stress
psychological stress
1st day SBP mmHg
1st day DBP mmHg
1st day heart rate bpm

Indietro