

Factors Associated with Arterial Hypertension in Children and Adolescents in Schools in Luanda

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Introduction: Arterial hypertension (AH) is a complex, multifactorial disease, as it depends on several elements ranging from genetic predisposition to lifestyle-related factors.

Objective: To describe the factors associated with arterial hypertension in children and adolescents in schools in Luanda.

Material and Methods: An analytical cross-sectional study was conducted with 616 children and adolescents aged 6 to 16 years, in six schools in the Maianga District, Luanda Province, from October 2023 to September 2024. After parental consent and adolescent assent, participants underwent anthropometric measurements, blood pressure measurement using the auscultatory method, and blood sampling for lipid and uric acid analysis. Blood pressure was measured weekly, three times on the same day, separated by 2–3 minutes, over a 3-week period. Hypertension was classified according to height, age, and sex percentiles, following the 2017 American Academy of Pediatrics guideline.

Results: Of the 616 participants, 62.2% were female. The mean age was 13.25 (± 0.098) years. The prevalence of arterial hypertension was 26%. Adjusted logistic regression analysis revealed that the factors significantly associated with the development of AH were: family history of hypertension, female sex, and attendance at non-public schools (OR 3.892; 95% CI, 2.439–6.213; $p=0.000$), (OR 1.602; 95% CI, 1.032–2.487; $p=0.036$), and (OR 1.735; 95% CI, 1.107–2.721; $p=0.016$), respectively. In stratified analysis by type of school, an association was observed with elevated uric acid levels (OR 2.32; 95% CI, 1.1–4.9; $p=0.026$) and physical inactivity (OR 3.35; 95% CI, 1.3–7.4; $p=0.009$) in non-public schools. Other factors showed no association with AH.

Conclusion: The factors significantly associated with the development of AH were a positive family history of hypertension, female sex (non-modifiable factors), and attendance at non-public schools, a factor that requires particular attention from public health policies to prevent future and potentially irreversible consequences.

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