

BIOPHYSICAL PROFILE OF BLOOD PRESSURE IN URBAN SCHOOL CHILDREN OF SOUTH INDIA

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Introduction: Hypertension is associated with high morbidity and mortality. 75% cases of Hypertension and 90% cases of Pre-hypertension in children and adolescents are undiagnosed. The Children in the upper percentile of Blood Pressure levels are more likely to become hypertensive in adulthood.

Objectives: To Study the prevalence of Pre-hypertension & hypertension and the relationship of Blood Pressure with variables like Age, Sex, Weight, Height, Body Mass Index (BMI), Socioeconomic status and Family history in Urban school children.

Methods: The present study is a Cross - sectional study, conducted on 2500 children in the age group of 5 - 14 years from 20 randomly selected (using systemic sampling technique) schools of Hyderabad city during March 2008 - June 2009.

Results: The Prevalence of Hypertension among children between 5 - 14 years was 7.2 % (6.6 % in Boys & 7.9 % in girls). The Prevalence of Pre-hypertension was 4.7 % (Boys (6.2 %) Girls (3 %)). Multiple regression analysis showed Positive and significant correlation of age, weight, height, BMI, Socioeconomic status & Family history with each SBP and DBP. The mean SBP and DBP in obesity group & overweight group were significantly higher than normal weight group ($P < 0.0001$). Family history of hypertension in one or both parents was present in 16.8 % children with high blood pressure compared to 6 % in normotensive parents.

Conclusions: Regular Blood pressure measurement of children is mandatory for early detection of Pre hypertension & Hypertension. High Body mass index & Positive Family history of Hypertension forms an important indicator of childhood hypertension.