






National trends of pre-hypertension and hypertension among Iranian adolescents across urban and rural areas (2007-2011)

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Abstract

BackgroundThe current nationwide study, for the first time, aimed to assess and compare the trend of pre-hypertension and hypertension among urban and rural adolescents in Iran.
MethodsThis study has been conducted in the framework of the National Surveys of Risk Factors for Non-Communicable Diseases. To estimate pre-hypertension and hypertension prevalence among 9715 adolescents, aged 15-19years, data collected in four repeated cross-sectional surveys (2007-2011) has been used. The prevalence trends of pre-hypertension and hypertension were examined across urban and rural areas of Iran. To calculate the adjusted prevalence ratios (PRs) of pre-hypertension and hypertension over cycles across area of residence and genders, a complex sample survey and multinomial logistic analysis were performed.
ResultsUsing the definition of pre-hypertension and hypertension presented by the seventh Joint National Committee (JNC-VII) for adolescents, after adjusting for confounders, the prevalence of pre-hypertension changed in both urban (boys:28.96% to 29.24% and girls:18.33% to 20.06%) and rural (boys 31.58% to 32.05% and girls 22.25% to 24.13%) areas over the study duration. Non-significant rising prevalence of hypertension was also observed in boys and girls of both regions (urban 12.76% to 15.04% and 8.02% to 9.06%; rural 9.95% to 11.79% and 10.35% to 11.60%, for boys and girls respectively). The adjusted prevalence ratios (PRs) of pre-hypertension (2.16; 95% CI 1.68-2.79 and 1.92, 95% CI 1.57-2.34, in urban and rural, respectively) and hypertension (2.40; 95% CI 1.65-3.51 and 1.82, 95% CI 1.36-2.45, in urban and rural, respectively) were higher in boys than girls. Comparing the adjusted PRs of pre-hypertension and hypertension in urban versus rural areas, in both genders, showed higher PRs of pre-hypertension in rural girls (1.33, 95% CI 1.01-1.75).
ConclusionThe current results showed high constant trends of pre-hypertension and hypertension in Iranian boys and girls, residing in both urban and rural areas.

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