

ADOLESCENT NEIGHBORHOOD ENVIRONMENT AND HYPERTENSION IN YOUNG ADULTHOOD

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Background and Aims: Associations between features of the built environment and hypertension have been noted among adult populations. However the relationship between neighborhood built environment in adolescence and hypertension in young adulthood has not been studied.

Methods: We examined the relationship between adolescent neighborhood environment (landscape diversity, street connectivity and access to pay and public recreational facilities) and elevated blood pressure in young adulthood, and whether gender modified this association in the National Longitudinal Study of Adolescent Health. Neighborhood environment during adolescence (Wave 1 1995-1996, mean age 15.5, n=12627) and young adulthood (Wave 3 2001-2002) was assessed using a geographic information system. The presence/absence of having received a diagnosis of elevated blood pressure was assessed by self-report (Wave 3). Generalized estimating equation models were adjusted for individual level sociodemographic factors and neighborhood level median household income.

Results: An interquartile range increase in landscape diversity was associated with lower odds of reporting a diagnosis of elevated blood pressure (OR 0.92 95%CI 0.8, 1.0). This association did not vary significantly by gender, though there was evidence that an increase in access to public facilities was associated with lower odds of reporting a diagnosis of elevated blood pressure among females.

Conclusions: Our findings suggest that adolescent neighborhood environment may affect the development of hypertension. Further studies should examine the potential mechanisms through which the built environment could affect the development of hypertension.