

Enduring Influence of Neighborhood Disadvantage on the Shape of the Age-Crime Curve

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One of the most consistent findings in violence research is the relationship between age and violence (described as the age-crime curve by Farrington). Violence rapidly increases in early adolescence, peaks in late adolescence, and then decreases more slowly through the 30's. Understanding how neighborhood disadvantage mediates this curve is important in developing prevention programs. We compare age-crime curves of violence between neighborhoods of different disadvantage in 506 boys from the Pittsburgh Youth Study (PYS), a 14-year longitudinal study of the development of delinquency. A neighborhood disadvantage score was constructed with attributes from U.S. census. Neighborhood mediation would be evident in differences in curve parameters between neighborhoods. Graphs demonstrate that individuals in disadvantaged neighborhoods enter the curve at an earlier age, have a higher peak, and exit later. To statistically test for curve parameters differences between neighborhoods, Generalized Estimating Equations were used in modeling the relationship between violence and the linear and quadratic forms of age, neighborhood and their interactions. The parameters for the age/neighborhood and the quadratic form of age/neighborhood interactions were significant ($p < 0.05$) for the 3 least disadvantaged neighborhoods compared to the most disadvantaged. This shows statistically that the rise into the age crime curve is significantly steeper (the age/neighborhood interaction) and the peak significantly higher and flatter (the quadratic age/neighborhood interaction) for those in more disadvantaged neighborhoods. These results suggest that growing up in a disadvantaged neighborhood have an enduring effect of the shape of the age-crime curve throughout an individual's life.