Research in Chicago shows that children who are exposed to a recent homicide in their community perform worse on assessments of cognitive skills and display impaired attention and impulse control when compared with other children living in the same communities but assessed at different times. Given the prevalence of homicides in Chicago’s most violent neighbourhoods, the consequences for children’s ability to learn and perform well in the classroom are potentially severe.

How can we measure the effect that community violence has on children? We can’t simply compare children who live in violent communities with those who live in non-violent ones, because families do not randomly select into violent and non-violent environments. For a wide variety of reasons, some families are more likely than others to live in violent communities. That means we couldn’t be sure whether any differences we found among children were being caused by community violence, or by those other factors that lead families to live in violent communities.

In a set of recent studies I have developed a different approach to identifying the effect of community violence by looking at children in the same community, but at different points in time. This research involves merging together data from different sources: data that have been collected from young people in Chicago neighbourhoods and data on the location and timing of incidents of violent crime in the city. From the first source of data it is possible to analyse the performance of children on a set of assessments designed to measure cognitive skills and self-regulatory behaviour, and to identify where children live and when they were assessed. From the second source it is possible to see where and when incidents of extreme violence, like homicides, occurred. Merging these sources of data by location and timing, it is possible to assess whether recent local homicides had any effect on children’s scores from the various assessments.

In the first article, published in the Proceedings of the National Academy of Sciences in 2010 (Sharkey, 2010), I used data from a survey of children and families in Chicago conducted between 1994 and 2002, the Project on Human Development in Chicago Neighborhoods (PHDCN). The assessments measured children’s vocabulary and reading skills, and have been shown by other research to capture dimensions of cognitive skills that are strongly predictive of later educational attainment, labour market success, health, and criminal behaviour.

The interviews for the PHDCN were conducted over a period that spanned several months, creating a natural experiment – some of those children were assessed when there had recently been a homicide in the neighbourhood, while other children in the same neighbourhood were assessed when there had been no recent violence. This enabled me to ask if children performed less well on cognitive performance tests when there had been a recent local homicide. I found that they did. If African American children were assessed at a time when there had been a homicide in the neighbourhood within the previous week, their scores on tests of cognitive skills were substantially lower than other African American children in the same neighbourhood who were assessed at a different time.

What the research tells us – and what it doesn’t
It’s important to stress some of the things this research doesn’t tell us. It doesn’t shed light on the mechanisms through which community violence translates into children’s lower levels of cognitive performance. There is a large literature demonstrating that children exposed to violence show elevated rates of symptoms related to acute or post-traumatic stress disorder, including disrupted sleep, anxiety, reduced awareness, and difficulty with concentration. All of these are potential mechanisms that might explain the impaired performance on assessments of cognitive skills, but the data are not equipped to test for any of these mechanisms.

The research also doesn’t tell us anything about permanent impacts on cognitive development. Still, simply by looking at the number of homicides in the city’s most violent neighbourhoods, it is possible to make
some inferences. If we simplify the study’s findings somewhat and assume that a homicide within a child’s census tract impairs cognitive functioning for roughly one week, this means that children in the city’s most violent neighbourhoods spend about one-quarter of the year functioning at a lower level in their home and school environments, due purely to the stress arising from local violence. If the effects of local violence compromise students’ ability to learn, to maintain attention, and to perform well in the classroom, the long-term consequences for children’s educational trajectories may be severe.

Finally, the research leaves open an unresolved question – these effects were observed in African American children, but not in Hispanic children. (Children from other racial groups were not exposed to local violence in sufficient numbers to be included in the analysis.) One possible explanation is that the victims of homicides are disproportionately African American, and the homicides may thus feel less salient or less threatening in the lives of Hispanics. However, the data are not sufficiently detailed to test this hypothesis, which would require additional research.
What the research does reveal very clearly is that local violence weighs on the minds of children. It suggests that we shouldn’t merely design interventions to provide treatment or counselling for children directly exposed to violence – rather, we should recognise more broadly the impact that violence can have on children throughout the community, regardless of whether or not they witnessed the violence directly or were personally victimised by it.

**Effects on preschoolers’ self-regulation**

A second study, shortly to be published with several collaborators in the *American Journal of Public Health* (Sharkey *et al.*, 2012, in press), used data from interview assessments conducted as part of the Chicago School Readiness Project (csp), a randomised controlled trial of Chicago preschoolers in Head Start programmes from 2004 to 2006. Data from the csp, an intervention conducted by developmental psychologist Cybele Raver, included measures of children’s self-regulation, such as attention and impulse control, as well as pre-academic skills such as vocabulary and early math skills.

Using a similar design to that of the initial study, we found that local homicides within the past week had strong effects on students’ attention and impulse control. These effects were stronger the closer the homicide had occurred to where the children lived, with effects approximately doubling for homicides within 1000 feet (300 m) of the home compared to 2500 feet (750 m). Looking at pre-academic cognitive skills, we also found statistically significant effects for homicides occurring within 1500 feet (450 m) of the child’s home.

The data available from the csp allowed for additional analysis of the effects of local homicides on parents’ self-reported mental health, which appeared quite strong. This finding provides a hint that parents’ psychological distress could be one mechanism through which exposure to community violence affects young children’s behavioural and cognitive outcomes.

In summary, our research to date supports the idea that exposure to community violence may significantly compromise poor children’s cognitive functioning and self-regulatory behaviour, with consequences that have the potential to alter educational trajectories and a range of subsequent health and social outcomes. The next empirical step will be to better understand and test the multiple direct and indirect potential pathways of influence linking exposure to local violence and early learning.

**References**


**Note**

1 For more information on this project, visit: http://www.icpsr.umich.edu/PHDCN