

## Troubled children hurt peers' test scores, behavior

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Troubled children hurt their classmates' math and reading scores and worsen their behavior, according to new research by economists at the University of California, Davis, and University of Pittsburgh.

The study, "Externalities in the Classroom: How Children Exposed to Domestic Violence Affect Everyone's Kids," was published this month by the National Bureau of Economic Research and is available online at <a href="http://papers.nber.org/papers/w14246">http://papers.nber.org/papers/w14246</a>.

Scott Carrell, an assistant professor of economics at UC Davis, and coauthor Mark Hoekstra, an assistant professor of economics at the University of Pittsburgh, cross-referenced standardized test results and school disciplinary records with court restraining order petitions filed in domestic violence cases for more than 40,000 students enrolled in public elementary schools in Florida's Alachua County for the years 1995 through 2003.

The researchers linked domestic violence cases to 4.6 percent of the elementary school students in their sample. These children scored nearly 4 percentile points lower on standardized reading and math scores than their peers whose parents were not involved in domestic violence cases. (A percentile score reflects the percentage of scores that fall below it; a student who scores in the 51st percentile on a test, for example, has scored higher than 51 percent of all students who took that test.) In addition, the children from households linked to domestic violence were 44 percent more likely to have been suspended from school and 28



percent more likely to have been disciplined for bad behavior. The impact was seen across genders, races and income levels.

Not only did children from troubled homes suffer, however: Test scores fell and behavior problems increased for their classmates as well.

Troubled boys caused the bulk of the disruption, and the largest effects were on other boys. Indeed, Carrell and Hoekstra estimate that adding just one troubled boy to a class of 20 children reduces the standardized reading and math scores of other boys in the room by nearly two percentile points. And adding just one troubled boy to a class of 20 students increases the likelihood that another boy in the class will commit a disciplinary infraction by 17 percent.

Troubled girls, in contrast, had only a small and statistically insignificant impact on the test scores or behavior of their classmates. The study did not investigate the reasons for the gender differences.

Across all students, having a troubled student in a class reduced classmates' combined test scores by nearly 1 percentile point and increased their likelihood of getting into disciplinary trouble at school by 6 percent.

The researchers conducted sophisticated statistical tests to ensure that they were observing only the impacts of a troubled child on classrooms, not the impact of broader socioeconomic issues in the community. They compared classes from the same grade in the same school over time; some years the classes had troubled students, some years they did not. They also compared how siblings performed when one student was in a class with troubled classmates and another student from the same family was in a class with fewer troubled students.

"Our findings have important implications for both education and social



policy," Carrell and Hoekstra write. "First, they suggest that policies that change a child's exposure to classmates from troubled families will have important consequences for his or her education outcomes. In addition, the results also help provide a more complete measure of the social costs of family conflict."

The research does not suggest that all disruptive schoolchildren come from families that experience domestic violence, nor are all children from domestic violence disruptive, Carrell emphasized.

"There are many reasons for disruptive classroom behavior; domestic violence is one particularly good indicator of a troubled child," Carrell said.

Source: University of California - Davis

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