



National Science Foundation  
WHERE DISCOVERIES BEGIN

SEARCH

NSF Web Site

[HOME](#) | [FUNDING](#) | [AWARDS](#) | [DISCOVERIES](#) | [NEWS](#) | [PUBLICATIONS](#) | [STATISTICS](#) | [ABOUT](#)

Press Release 07-175

## Children's Bad Behavior Gives Insights to Academic Achievement and Later Career Success

Early behavior problems don't impede children's school achievement, but persistent problems may impede educational and occupational outcomes.



Early childhood behavior problems may not predict learning ability, but may predict career success.

[Credit and Larger Version](#)

**November 26, 2007**

New research suggests that children entering school with behavior problems, as a rule, can keep pace with classroom learning, but persistent behavior problems can be a strong indicator of how well these students adapt to the work world.

Two studies entirely funded by the National Science Foundation's (NSF) Developmental and Learning Sciences program uncovered these results. Researchers working through the Center for the Analyses of Pathways from Childhood to Adulthood (CAPCA) at the University of Michigan, Ann Arbor, Mich., conducted both studies.

The findings may help parents, teachers and social and behavioral scientists improve educational and occupational outcomes for disruptive students.

"Every student deserves a good education and an opportunity to have a fulfilling work life," said NSF Developmental and Learning Sciences Program Director Amy Sussman. "These findings can help us understand how to make that goal a reality for even the most difficult-to-reach students."

One study examined data from six large-scale studies of almost 36,000 preschoolers in which the same subjects were observed repeatedly over time. The research included two national studies of U.S. children, two multi-site studies of U.S. children, one study of children from Great Britain and one study of children from Canada.

Using various statistical methods to synthesize research results, Greg Duncan, human development and social policy professor at Northwestern University, along with the study's 11 co-authors, found that, surprisingly, difficulty getting along with classmates, aggressive or disruptive behaviors, and sad or withdrawn behaviors in kindergarten did not detract from academic achievement in childhood and early adolescence.

The study's researchers examined several indicators, including picking fights, interrupting the teacher and defying instructions. They found that kindergartners who did these things performed surprisingly well in reading and math when

they reached the fifth grade, keeping pace with well-behaved children of the same abilities.

Although Duncan's study found no predictive power in early behavior problems for later learning, another CAPCA study, which examined older children, found such a connection. According to CAPCA investigator Rowell Huesmann, persistent behavior problems in eight-year-olds are a powerful predictor of educational attainment and of how well people will do in middle age.

If behavior problems of the kind seen in younger children continue until age eight, they can create other challenges, said Huesmann. He noted that while a small group of children fall into this category, their behavior has the potential to lead them to lower occupational and academic achievement than that of their better behaved counterparts.

Huesmann based his conclusion on a prior research study and a recent analysis by CAPCA researchers Eric Dubow, Paul Boxer, Lea Pulkkinen and Katja Kokko. That team studied two longitudinal data sets from the United States and Finland.

Analysis of data from 856 U.S. children and 369 Finnish children showed that children who engaged in more frequent aggressive behaviors as eight-year-olds had significantly lower educational success by their 30s and significantly lower status occupations by their mid-40s. The results were published in *Developmental Psychology*.

"It makes perfectly good sense that persistent behavior problems would have a substantial impact on later success," said Sussman. "When interviewing for jobs and progressing through one's career trajectory, personality and other characteristics that are not measured by tests certainly come into play."

There's a good chance that personality traits also come into play in the classroom. Huesmann and his colleagues hypothesize that children with persistent behavior problems lasting into the third grade are those who cannot be easily socialized to behave well and who therefore are more likely to experience a "hostile learning environment."

They speculate that teachers and peers likely "punish" these children, reducing or eliminating positive support for learning. But researchers note that if a child's aggression is short-lived, it is unlikely to have the same long-term consequences.

"Socialization of disruptive preschoolers by teachers and peers may ensure that a child's behavioral problems do not affect his or her educational achievement," Huesmann said. "Attending class, spending time with classmates, observing the rewards of proper behavior, and being told, 'No,' to correct disruptive behavior can benefit unruly children."

Researchers also noted that popularity and positive social behavior in childhood and adolescence predicted higher levels of educational attainment in early adulthood. They said it is possible that children with stable positive social skills experience supportive and conducive learning environment.

Duncan's study of kindergartners did not address what types of preschool curricula might be most effective in reducing aggression or promoting school readiness. But researchers pointed out that play-based activities, as opposed to "drill- and practice-based" activities, foster academic and attention skills in ways that are engaging and fun.

-NSF-

---

#### Media Contacts

Bobbie Mixon, NSF (703) 292-8485 [bmixon@nsf.gov](mailto:bmixon@nsf.gov)

#### Program Contacts

Amy Sussman, NSF (703) 292-7307 [asussman@nsf.gov](mailto:asussman@nsf.gov)

#### Principal Investigators

Greg Duncan, Northwestern University (847) 467-1503 [greg-duncan@northwestern.edu](mailto:greg-duncan@northwestern.edu)

L Rowell Huesmann, University of Michigan (734) 764-8385 [huesmann@umich.edu](mailto:huesmann@umich.edu)

---

*The National Science Foundation (NSF) is an independent federal agency that supports fundamental research and education across all fields of science and engineering, with an annual budget of \$5.92 billion. NSF funds reach all 50 states through grants to over 1,700 universities and institutions. Each year, NSF receives about 42,000 competitive requests for funding and makes over 10,000 new funding awards. The NSF also awards over \$400 million in professional and service contracts yearly.*

*Receive official NSF news electronically through the e-mail delivery and notification system, MyNSF (formerly the Custom News Service). To subscribe, visit [www.nsf.gov/mynsf/](http://www.nsf.gov/mynsf/) and fill in the information under "new users".*

#### Useful NSF Web Sites:

NSF Home Page: <http://www.nsf.gov>

NSF News: <http://www.nsf.gov/news/>

For the News Media: <http://www.nsf.gov/news/newsroom.jsp>

Science and Engineering Statistics: <http://www.nsf.gov/statistics/>

Awards Searches: <http://www.nsf.gov/awardsearch/>