

Summary of P01 HD065704

Project: “Human Capital Interventions across Childhood and Adolescence”
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Addressing a key purpose of NICHD program projects—to encourage multidisciplinary approaches to the investigation of complex problems relevant to NICHD’s mission—our program project’s principal goal was to understand why education programs and policies, directed at children in the preschool, middle childhood and adolescent stages of development, have the effects, noneffects and, in some cases, perverse effects that they do.

These were some of our main findings:

- State standards and laws regarding instruction about alcohol, tobacco, and other drugs reduced youth substance use. These results are highly significant in current debates in states about whether education requirements are a possible way to combat opioid misuse.
- The timing of high-quality care between birth and school-entry matters. Specifically, cognitive, language, and preacademic skills at the point of school entry were highest among children who experienced high-quality care in both the infant–toddler and preschool periods and lowest among children who experienced low-quality care during both periods.
- In the case of the Head Start program, beneficial impacts accrue mostly to children with the lowest levels of academic skills.
- When we compared the effectiveness of Head Start at ages 3 and 4 versus Head Start at age 3 followed by state pre-k at age 4, we found that children attending Head Start at age 3 develop stronger pre-reading skills in a high quality pre-k at age 4 compared with attending Head Start at age 4. This suggests that the sequencing of more academic programming may be related to preschool effectiveness, and may indicate that children are not receiving differentiated instruction when they remain in Head Start for two years.
- Using data collected on elementary school children, we find that Teach For America (TFA) teachers are more successful at boosting math skills than non-TFA teachers, but do not do as well as non-TFA teachers in promoting literacy skills among struggling readers.
- High levels of reading and, especially, math achievement across elementary school show strong positive associations with later high school completion and college entry. But we also find that antisocial behavior across middle childhood is just as predictive of completed school as achievement.
- Attempts to boost academic skills around the point of school entry often succeed in the short run but rarely generate impacts that are sustained for more than two or

three years. We have developed a framework for understanding patterns of persistence and fadeout as well as an agenda for future research on this important topic.

In addition, the project has produced:

- Publicly available data on state standards and laws regarding instruction about alcohol, tobacco, and other drugs, which is enabling far more research on the impacts of these policies that project researchers were able to conduct.
- Promoted the use of distributional methods among education policy researchers in various ways, including conducting short courses at professional meetings, creating new software applications, and posting web tutorials to the network website.