

Enhanced early childhood education pays long-term dividends in better health

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Intensive early education programs for low-income children have been shown to yield numerous educational benefits, but few studies have looked more broadly at their impact on health and health behaviors. A new study conducted by researchers at Columbia University's Mailman School of Public Health examines this issue, using data from a the well-known Carolina Abecedarian Project (ABC), a randomized control study that enrolled 111 infants in the 1970s and continued to follow them through age 21. Researchers found that individuals who had received the intensive education intervention starting in infancy had significantly better health and better health behaviors as young adults.

The study is only the second to explore the relationship of [early childhood education](#) and adult health benefits. The first study, based on the Perry Preschool Program, also was conducted by Columbia professors Peter Muennig, MD, and Matthew Neidell, PhD, on a similarly small cohort of children, and found behavioral benefits, but no overall health benefits. The current study is the first randomized control study to definitively show the health benefit of education. Findings are online in the [American Journal of Public Health](#).

The original study enrolled infants from 1972 to 1977 at the Frank Porter Graham Child Development Institute in Chapel Hill, NC, where they received an age-appropriate curriculum designed to enhance cognition and language development starting in infancy. Researchers had found that infants enrolled in the program had higher IQ by age three and higher reading and [math achievement](#) by 15 years of age, lower rates

of teen depression and greater likelihood of college enrollment compared with a control group.

The current study expands on the original study to examine the impact of ABC on three health measures and 11 measures of behavioral risk factors. The health measures were the number of self-reported health problems since 15 years of age, a depression index score, and the number of hospitalizations in the past year. Behavioral risk factors concerned traffic safety, drug use, and access to primary care. Researchers found that participants had significantly better health and [health behaviors](#) and that these findings were independent of IQ, educational attainment or health insurance status.

The original study was small, but it had a very strong effect on education. Until it came along, the benefit of education had never been proven using the gold standard in research methods-the randomized controlled trial. What we have found is that this educational intervention also reduced health risks like smoking and improved health outcomes as early as age 21," said Dr. Muennig, assistant professor of Health Policy and Management at Columbia's Mailman School and principal investigator of the new study. "The health benefits were quite dramatic."

"While much remains to be learned about both the pathways linking education to health and the overall effect sizes of education on health, our study provides causal evidence in support of the hypothesis that early education enhancements may improve income, reduce crime, and even enhance the global competitiveness of the American workforce," suggests Dr. Muennig. "These interventions may be more cost effective than many traditional medical and public health approaches to improving population health.

Provided by Columbia University

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