

Large-scale early education linked to higher living standards and crime prevention 25 years later

June 9 2011

High-quality early education has a strong, positive impact well into adulthood, according to research led by Arthur Reynolds, co-director of the Human Capital Research Collaborative and professor of child development, and Judy Temple, a professor in the Humphrey School of Public Affairs at the University of Minnesota. The study is the longest follow-up ever of an established large-scale early childhood program.

In "School-based [Early Childhood Education](#) and Age 28 Well-Being: Effects by Timing, Dosage, and Subgroups," published today in the journal *Science*, Reynolds and Temple (with co-authors Suh-Ruu Ou, Irma Arteaga, and Barry White) report on more than 1,400 individuals whose well-being has been tracked for as much as 25 years. Those who had participated in an [early childhood](#) program beginning at age 3 showed higher levels of [educational attainment](#), [socioeconomic status](#), job skills, and [health insurance coverage](#) as well as lower rates of substance abuse, felony arrest, and incarceration than those who received the usual early childhood services.

The research focused on participants in the Child-Parent Center Education Program (CPCEP), a publicly funded early childhood development program that begins in preschool and provides up to six years of service in the Chicago public schools. Through the Chicago [Longitudinal Study](#) (CLS), Reynolds and colleagues have studied the educational and social development of a same-age cohort of low-income,

[minority children](#) (93 percent African American) who participated in this program. The CLS is one of the most extensive and comprehensive studies ever undertaken of young children's learning. Reynolds and colleagues have reported on the Chicago individuals starting in preschool, then annually through the school-age years, and periodically through [early adulthood](#).

The new paper reports on the sample participants at age 28, when they found the most positive outcomes among the 957 individuals who began services in preschool -- especially males and children of high school drop outs. Positive effects also were found for the duration of services, those participating for 4 to 6 years from preschool to third grade. The control group of 529 included individuals of the same age who participated in alternative early childhood programs in randomly selected schools and who matched the program group on socioeconomic status. Among the major findings (preschool group compared to the control group, adjusted for sample attrition):

- 9 percent more completed high school; 19 percent more males
- 20 percent more achieved moderate or higher level of socioeconomic status
- 19 percent more carried some level of health insurance coverage
- 28 percent fewer abused drugs and alcohol; 21 percent fewer males alone
- 22 percent fewer had a felony arrest; the difference was 45 percent for children of high school dropouts
- 28 percent fewer had experienced incarceration or jail

Participants who participated in CPCEP for four to six years (preschool to third grade) compared to the control group receiving less than four years:

- 18 percent more achieved moderate or higher level of socioeconomic status
- 23 percent more had some level of private health insurance coverage
- 55 percent more achieved on-time high school graduation
- 36 percent fewer had been arrested for violence

"When you follow people for more than two decades, an understanding of how early experiences shape later development can be achieved," Reynolds notes. "A chain of positive influences initiated by large advantages in school readiness and parent involvement leads to better school performance and enrollment in higher quality schools, and ultimately to higher educational attainment and socioeconomic status."

Findings demonstrate that effects of sustained school-based early education can endure through the third decade of life. Previously, Reynolds and colleagues documented the cost benefits of early education, demonstrating an 18 percent annual return on investment for society. However, policy has yet to support the kind of early interventions needed to solve persistent societal issues.

"Unfortunately, we still spend very little on prevention," says Reynolds. "Only 3 percent of the \$14 billion dollars allocated to school districts to serve low-income children under Title I of the Elementary and Secondary Education Act [No Child Left Behind] goes to preschool. Yet

preschool programs are one of the most cost-effective of all social programs."

He explains that since about half of the achievement gap between children from higher and lower economic statuses at age 10 already exists at age 5, education interventions need to start even earlier. "State and federal policies don't reflect the knowledge of how much earlier these gaps appear, and therefore the need to start as early as possible," he says.

Based on this and earlier studies, Reynolds and Temple say the key to CPC's success lies in both the quality of the program and its teachers, the opportunity for more than one year of participation, small classes, comprehensive family services, structured activity-based curricula focusing on language and literacy, and attention to continuity of learning from preschool to the early school grades.

Provided by University of Minnesota

Citation: Large-scale early education linked to higher living standards and crime prevention 25 years later (2011, June 9) retrieved 17 April 2024 from <https://phys.org/news/2011-06-large-scale-early-linked-higher-standards.html>

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