



Multiple long-term studies have confirmed the lasting benefits of preschool programs. Although specific findings vary by the type of program and the quality of its implementation, benefits are consistently shown in four main categories:

- School Readiness
- Criminal Arrests and Costs
- Social Health
- Economic Improvement

Attending a high-quality preschool improves children's cognitive outcomes and prepares them to succeed in school, beginning in elementary school and continuing through college, in a self-reinforcing "snowball" effect of cumulative gains. And not only do effective state-sponsored programs pay for themselves through reduced state expenditures across many domains – these programs also earn states millions of dollars in revenue by creating an intelligent, successful workforce. Current research on preschool programs points to one conclusion: preschool improves outcomes not just for children, but for everyone.

Overview

State-sponsored preschool programs benefit both their participants and the public. The advantages gained by implementing such programs are conferred upon children and adults alike, both immediately and in the long term. These effects increase for the highest-risk demographic: low-income children living in urban environments (Palfrey et al., 2005). By supporting cognitive development and eliminating the achievement gap typically seen between children of different economic brackets as early as kindergarten, preschool programs build a strong foundation for later learning.

Preschool proves to be one case in which a relatively small early investment can save time, money, and social distress throughout a child's life. The value of the returns gained from implementing preschool interventions far surpasses the costs incurred, and also surpasses returns gained from later interventions such as special education, employment training, or rehabilitation programs (Heckman, 2000). It is crucial for both policy-makers and the general public to understand the far-reaching societal effects of early intervention, as well as the cumulative nature of the benefits that accrue as a result of children's enrollment in preschool programs.

School Readiness

"...Poverty has a powerful influence on graduation rates. The combined effect of reading poorly and living in poverty puts these children in double jeopardy."

- Donald J. Hernandez, Professor of Sociology, Hunter College

Children who attend preschool programs that support early math skills are also more likely to display higher math achievement in later grades. Conversely, children who are born into high-risk environments and who also do not attend preschool run the risk of falling ever farther behind more advantaged classmates. The Committee for Economic Development (2006) found a 15% disparity in math achievement between six-year-olds in the top quartile of family income versus six-year-olds in the bottom quartile. Six years later, this disparity had increased to 25%. However, the achievement gap can be closed. A study of over 5,000 children in five separate states showed that children who attended state-sponsored preschool programs showed 44% more improvement in math skills over the school year than children who did not attend (Barnett, Lamy, & Jung, 2005). Preschoolers' mathematics skills consistently predict later math achievement, and can even predict later reading skills (Clements & Sarama, 2011). These early interventions produce significant, long-lasting benefits for

children's overall academic achievement.

Preschool can dramatically increase the likelihood that a child will graduate from high school, simply by increasing print awareness and vocabulary at an early age. In the same five-state study of preschool programs, children who attended preschool showed 31% more vocabulary growth over the school year than children who did not attend (Barnett, Lamy, & Jung, 2005). These children also showed 85% more understanding of print and literacy concepts. Preschool attendees are likely to become better readers than their non-preschool peers once they enter elementary school. In the Salinas City School District in California, 24% of poverty-level second-graders who had attended preschool scored "proficient" or better in English/ Language Arts, as compared to 9% of the poverty-level second-graders who had not gone to preschool (Slaby, Loucks, & Stelwagon, 2005). Early print awareness and higher receptive vocabulary reliably predict more advanced reading skills in elementary school (Snow, Burns, & Griffin, 1998), and as a vivid example of the cumulative effects of early childhood education, children who read proficiently in 3rd grade are 4 times more likely to graduate from high school than children who do not read proficiently (Hernandez, 2012).

Children who attend preschool are less likely than demographically similar peers to require special education classes or repeat a grade, and are more likely to graduate, both from high school and from college. When graduates of the Abbott Preschool Program¹ were in 5th grade, they were 31% less likely to need special education classes and 40% less likely to experience grade retention than their peers who did not attend preschool (Barnett, Jung, Youn, & Frede, 2013). A follow-up study of children in the Abecedarian Project² found that at age 30, these children were 4.6 times more likely than their matched peers to have earned college degrees (Campbell et al., 2012). The long-term positive effects of preschool on overall educational attainment are found consistently across preschool locations and programs; these effects are especially important for at-risk children, who without early intervention will often struggle to overcome an achievement gap that grows with every academic year.

Criminal Arrests and Costs

"Keeping kids waiting in line for preschool multiplies the likelihood that I will see them in a police line-up later in life."

- Leroy Baca, Los Angeles County Sheriff

By providing children with a solid educational foundation, preschool programs increase their chances of success in multiple domains throughout childhood and adolescence, and prevent them from entering the criminal justice system. By participating in a preschool program, children gain strong academic backgrounds and social-emotional skills, both of which may explain the sharp reduction in crime observed as these children grow older. In the Chicago Longitudinal Study³, children who attended preschool were less likely to have juvenile delinquency violations by age 18, and when violations did occur, they were less frequent and less severe (Mann & Reynolds, 2006). The Syracuse Preschool Program⁴ found up to a 70% reduction in juvenile criminal offenses when its alumni were surveyed at 15 years old (Heckman, 2000). Similarly, children who attended preschool in the Perry Preschool Study⁵ were 75% less likely to have been arrested 5 or more times by early adulthood (Schweinhart et al., 2005).

An analysis by the Committee for Economic Development in Washington, DC found that for every dollar spent on preschool, states are expected to save between 50 and 85 cents in reduced crime costs (2006). Alumni of the Chicago Longitudinal Study demonstrated less criminal behavior in their late 20s as compared to their peers

¹ Abbott is a universal preschool and wrap-around care program for New Jersey children living in low-income communities.

² A controlled trial, beginning in 1972 in North Carolina; at-risk children were randomly assigned to attend a child care program from infancy to kindergarten, or assigned to a control condition.

³ The CLS provided quasi-experimental preschool/ kindergarten intervention for at-risk children, emphasizing parent involvement.

⁴ The Syracuse program provided family and developmental support for disadvantaged children, from prenatal care through age five.

⁵ In the Perry Preschool Study, low-income Michigan children either attended half-day preschool or were placed in a control group.

(Campbell et al., 2012), and the same was found for alumni of the Perry Preschool Study (Heckman, 2000). By age 40, Perry Preschool graduates were half as likely to have served jail time compared to their peers. Specifically, they had significantly fewer arrests for property misdemeanors, violent misdemeanors, property felonies, and drug felonies.

Of course, these statistics not only represent a decrease in time served and an improvement in lifelong outcomes for individual preschool children; they also represent a broad reduction in property and violent crimes, which could be transformative for the preschool's surrounding community.

Social Health

Children who participate in a preschool program, compared to demographically matched peers who do not participate, are less likely to abuse alcohol and drugs as they grow older. Men who had participated in the Perry Preschool as children were significantly less likely than their peers to use drugs at age 40. This included use of sedatives/ tranquilizers (17% of preschool graduates vs. 43% of peers reported use), marijuana/ hashish (48% vs. 71%), and heroin (0% vs. 9%) (Schweinhart et al., 2005). And at age 40, graduates of the Perry Preschool were four times less likely to have been arrested for drug felonies than their peers who did not participate in the program. Reduced drug use contributes to improved physical and mental health, and increases the likelihood that participants will be able to complete their education and find stable, higher-paying employment.

Especially for higher-risk children, preschool programs and their long-term educational and social benefits may be associated with better mental health in adulthood. Psychological effects vary by program, and may depend on the specific services offered by the program or on the duration of additional family interventions. However, the Brookline Early Educational Project (BEEP)⁶ found that the high-risk children who had participated reported less depression and more perceived competence at age 25 than their demographically matched peers (Palfrey et al., 2005). The Perry Preschool Study also found benefits of preschool attendance (Schweinhart et al., 2005); by age 27, preschool attendees were significantly less likely to have received social services in the previous ten years.

Economic Improvement

"Nothing stops a bullet like a job."

- Father Greg Boyle, Founder, Homeboy Industries

The effects of preschool programs benefit society at large, in the form of a more educated, independent workforce. For example, the state of Illinois has gained an estimated \$353 million to \$530 million as a direct result of their investment in early education. This income partly results from reductions in costs of remedial education, criminal punishment and property losses, unemployment, and drug treatment. The gains are also due to increases in tax revenue from parents' increased productivity and the higher earning potentials of the children themselves when they reach adulthood (Wilder Research, 2011). After examining several of the largest and most well-known preschool programs, Barnett and Hustedt (2003) found that given these programs' high ratio of benefits to costs, the evidence strongly favors continued investment in high-quality preschool education.

Because children who attend preschool are higher-achieving throughout their academic careers, they are also likely to get better jobs and earn more money as adults. For example, alumni of the Perry Preschool were significantly more likely than their peers to be employed at age 27 and at age 40. These long-term effects improve children's individual economic outcomes as they grow older. However, other employment returns from preschool programs are visible immediately. In Los Angeles County, the early care and education industry provides more than 65,000 jobs (Insight Center for Community Economic Development, 2008).

Additionally, parents whose children are in preschool become free to return to work, or to augment their skills by attending training or higher education classes; this means an investment in preschool is an investment in

⁶ BEEP provided 5 years of early intervention services, including home visits and childcare, to Boston children from ages 2-7.

today's economy, as well as tomorrow's.

The potential long-term monetary returns of preschool programs are vast. For every dollar spent on the Illinois program, the state expects to recuperate between \$2.36 and \$16.14 (Wilder Research, 2011). The size of these returns is closely replicated in the results of similar programs. The Abecedarian Project had saved \$2.50 per dollar spent by the time participants were 21 years old. And for every dollar spent on a child in the Perry Preschool, \$7.16 in relative return was recuperated by age 27; by the time alumni were 40, returns had increased to \$17.07 per dollar (Campbell et al., 2012). Financial returns of this type are unprecedented for a social program. Add to these returns the intangible positive effects of an environment with lower crime and drug abuse, higher employment, and more educated citizens, and it becomes clear that preschool programs are one of the best investments a government can make.

Recommendations

"The best evidence supports the policy prescription: invest in the very young and improve basic learning and socialization skills."

- James J. Heckman, Nobel Laureate in Economics, 2000

Every year, children step into their first day of kindergarten with far less social and academic preparation than their preschool-educated peers, simply because they happened to be born into families that could not pay for preschool programs. Already at a disadvantage before the school year has even begun, these children are embarking on what is statistically likely to be a lifetime of playing catch-up, struggling with adverse economic circumstances at home while falling farther behind academically. Eliminating this academic gap early in life will help to level the playing field for children born into poverty, making it more likely that they will succeed in school and avoid frequent pitfalls such as drugs, crime, or dropping out. Preschool cannot erase all the potential struggles children may face throughout their lives; however, it may enable them to more easily surmount these challenges.

Extensive research on preschool programs consistently finds benefits for children, parents, and communities. A uniquely compelling aspect of these long-term effects is that they accrue precisely because of the nature of child development: inherently cumulative, building on itself day by day. Just as an early financial investment grows into a substantial resource over time, early intervention works with development to produce powerful results – the educational, social, and economic rewards of preschool.

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