

Social Programs That Work Review

Evidence Summary for the Perry Preschool Project

HIGHLIGHTS:

- **PROGRAM:** A high-quality preschool program for children from disadvantaged backgrounds.
- **EVALUATION METHODS:** A well-conducted randomized controlled trial (RCT) with a sample of 128 three- and four-year-old African-American children living in poverty.
- **KEY FINDINGS:** Large effects on educational attainment, income, criminal activity, and other important life outcomes, sustained well into adulthood.
- **OTHER:** This was a relatively small study launched in the 1960s, and it included a few departures from random assignment that may reduce confidence in the findings. Replication of these findings in a second trial would be desirable to confirm the initial results and establish that they generalize to present-day settings.

I. Evidence rating: **SUGGESTIVE TIER**

The standard for Suggestive Tier is:

Programs that have been evaluated in one or more well-conducted RCTs (or studies that closely approximate random assignment) and found to produce sizable positive effects, but whose evidence is limited by only short-term follow-up, effects that fall short of statistical significance, or other factors. Such evidence suggests the program may be an especially strong candidate for further research, but does not yet provide confidence that the program would produce important effects if implemented in new settings.

II. Description of the Program:

The Perry Preschool Project, carried out from 1962 to 1967, provided high-quality preschool education to three- and four-year-old African-American children living in poverty. About 75 percent of the children participated for two school years (at ages 3 and 4); the remainder participated for one year (at age 4). The preschool was provided each weekday morning in 2.5-hour sessions taught by certified

public school teachers with at least a bachelor's degree. The average child-teacher ratio was 6:1. The curriculum emphasized active learning, in which the children engaged in activities that (i) involved decision making and problem solving, and (ii) were planned, carried out, and reviewed by the children themselves, with support from adults. The teachers also provided a weekly 1.5-hour home visit to each mother and child, designed to involve the mother in the educational process and help implement the preschool curriculum at home. The program's cost was approximately \$21,800 per child (in 2017 dollars).¹

[Click here to go to the Perry Preschool Study's web page.](#)

III. Evidence of Effectiveness:

This program was evaluated in an RCT with a sample of 128 children -- 64 in the program group that received the preschool program, and 64 in the control group that did not. All effects shown below are statistically significant at the 0.05 level unless stated otherwise.

Educational outcomes for preschool group (versus control group):

At age 27 follow-up:

- Completed an average of almost 1 full year more of schooling (11.9 years vs. 11 years).
- 44 percent higher high school graduation rate (66 percent vs. 45 percent).

Pregnancy outcomes for preschool group (versus control group):

At age 27 follow-up:

- 50 percent fewer teen pregnancies in the subsample of female children (0.6 pregnancies per female vs. 1.2 pregnancies per female). This effect was statistically significant at the 0.10 level but not the 0.05 level.

Lifetime criminal activity for preschool group (versus control group):

At age 40 follow-up:

- 46 percent less likely to have served time in jail or prison (28% vs. 52%).
- 33 percent lower arrest rate for violent crimes (32% vs. 48%). This effect was statistically significant at the 0.10 level but not the 0.05 level.

Economic outcomes for preschool group (versus control group):

At age 40 follow-up:

¹ This is the per participant program cost as reported in Schweinhart et al 2005 and adjusted for inflation.

- 42 percent higher median monthly income (\$2,712 vs. \$1,911 in 2017 dollars). This effect was statistically significant at the 0.10 level; the study report does not provide enough information to determine if it was also significant at the 0.05 level.
- 26 percent less likely to have received government assistance (e.g. welfare, food stamps) in the past ten years (59% vs. 80%).

Discussion of Study Quality:

- The study had low attrition and a long-term follow-up: Outcome data were obtained for between 91 and 96 percent of the original sample (depending on outcome measure) at the age 27 follow-up, and for 94 percent at the age 40 follow-up.
- The study reported outcomes using an intention-to-treat analysis.
- In measuring outcomes, the study used official crime records, social service records, and high school graduation records to supplement data from personal interviews.
- Staff gathering outcome data were blind as to which individuals were in the preschool group versus control group.
- Prior to the program, the preschool and control groups were equivalent in measures of intellectual performance and most demographic characteristics.
- Study Limitations: There were three deviations from random assignment.
 - › First, after random assignment, between 5 and 10 children were transferred between the preschool group and the control group to reduce the number of children of employed mothers in the preschool group, because it was difficult to arrange home visits with these working mothers. This resulted in a large and statistically significant difference in the percent of children with working mothers in each group. In the age 40 follow-up sample, 10% of the preschool group had working mothers vs. 30% of the control group ($p < 0.01$).
 - › Second, the random assignment was carried out in two stages -- (i) matching of the children into pairs based on IQ and randomly assigning each pair member to one of two groups, and (ii) randomly assigning the two groups (by coin toss) to the preschool versus control condition. After the random assignment of children (stage 1), but before the random assignment of the two groups (stage 2), the researchers switched the assignments of 5 to 10 children so as to better balance the two groups on demographic characteristics and intellectual performance.
 - › Third, in the 20 families in the sample with two or more children of preschool age, the younger siblings were assigned to the same group as their older sibling. This is actually a legitimate procedure (it means that families rather than individuals were the unit of random assignment); however, the study then conducted its tests for statistical

significance as if individual children had been randomly assigned, possibly leading to erroneous findings of statistical significance.

Overall, we believe this study is a small but reasonably well-designed randomized controlled trial. However, the departures from random assignment noted above somewhat reduce confidence in the study's findings. We'd also caution that this was a demonstration program with close researcher involvement in program delivery, and we do not know if the results can be replicated on a broader scale in typical classroom settings.

IV. References:

Lawrence J. Schweinhart, Helen V. Barnes, and David P. Weikart. Significant Benefits: The High/Scope Perry Preschool Study Through Age 27 (High/Scope Press, 1993).

Lawrence J. Schweinhart, Jeanne Montie, Zongping Xiang, W. Steven Barnett, Clive R. Belfield, and Milagros Nores. Lifetime Effects: The High/Scope Perry Preschool Study Through Age (High/Scope Press, 2005).

Peter Muennig, Lawrence J. Schweinhart, Jeanne Montie, and Matthew Neidell. Effects of a Prekindergarten Educational Intervention on Adult Health: 37-Year Follow-Up Results of a Randomized Controlled Trial (American Journal of Public Health, 2009).