



Preschool Programs

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Topic

Preschool programs

Introduction and Subject

Preschool programs are purposeful arrangements of recurrent activities that provide care and education to children in the years before they enter school. While “preschool” logically encompasses the entire period from birth to school entry, it sometimes refers specifically to the year or two before school entry, which is kindergarten entry for five-year-olds in many places.

While families continue to rear young children from birth to five years old in their homes as they always have, an increasing proportion of families arrange for some care and education of young children by non-relatives; that is to say, they enrol their children in preschool programs. A nationally representative U.S. survey (2001) of the care and education of young children under six who were not yet in kindergarten¹ found that:

- 40% of these children had no additional arrangements, receiving care and education exclusively from their parents;
- 22% received care and education from non-parental relatives in homes, 70% of them being grandparents;²
- 16% received care and education from non-relatives in homes, settings known formally as family or group daycare homes;
- 33% received care and education from non-relatives in centres. Centre care and education increased substantially and steadily with age, from 8% for infants under one to 16% for one-year-olds, 25% for two-year-olds, 43% for three-year-olds, and 65% for four-year-olds.

Problems and Research Context

Preschool programs have become more widespread since the middle of the 20th century for two reasons. One is the worldwide movement of mothers of young children into the work force. The other is widespread knowledge of the accumulating evidence of the value of good early childhood education from recent research on the development of the human brain and evaluative research on model early childhood programs. Neuroscience research has found that the brains of young children raised in high-toxic-stress settings are visibly less developed than the brains of young children raised in low-toxic-stress

settings and that children's brains are much more active from ages three to seven than in subsequent years.³

Recent Research Results

Evaluative program research has found a variety of important effects of model preschool programs on participants from early childhood even into adulthood.⁴ These studies have combined rigorous design, long-term study, and low rates of missing data to arrive at evidence that high-quality early childhood program experience has important positive long-lasting effects on participants that result in substantial economic return on investment.

- The High/Scope Perry Preschool Study randomly assigned 123 poor children to participate in a high-quality preschool program at ages three and four or to no preschool program and followed these study participants through age 40. The study found that this high-quality preschool program had strong positive effects on participants' intellectual abilities, school achievement and commitment, high school graduation, adult earnings and employment, and avoidance of criminal activity.⁵ Economic analysis found that, in constant 2000 dollars discounted at 3%, the economic return to society for the program was \$258,888 per participant on an investment of \$15,166 per participant – \$17.07 per dollar invested.
- The Carolina Abecedarian study randomly assigned 111 infants from poor families averaging 4.4 months of age to a special program group or a typical child-care group that used the prevalent child-care arrangements in homes and centres.⁶ It found that such a high-quality child-care program for children from infancy to school entry improved participants' intellectual performance and school achievement. Fewer program participants repeated a grade or required special services or became teen parents; and more of them graduated from high school and more attended a four-year college. Economic analysis found that, in 2000 dollars discounted at 3% annually (converted from the 2002 dollars reported), the program cost \$34,476 per participant and yielded benefits to society of \$130,300 per participant – a return of \$3.78 per dollar invested.⁷
- The Chicago Longitudinal Study compared 989 low-income children who attended the city school district's Child-Parent Centres to a comparison group of 550 of their classmates who did not attend these centres.⁸ The centres provided a part-day preschool program for three- and four-year-olds. The preschool-program group surpassed the no-preschool-program group in educational performance and social behaviour, with lower rates of grade retention and special education placement and a lower rate of juvenile arrests, followed by a higher rate of high school completion. Economic analysis found that, in 2000 dollars discounted at 3% annually (converted from the 1998 dollars reported), the program cost \$6,956 per participant and yielded benefits of \$49,564 per participant – a return of \$7.10 per dollar invested.⁹

In the past few years, a new generation of rigorous short-term preschool studies, most randomly assigning children to the program or no-program conditions, has produced relatively disappointing results. These studies have looked at the effects of publicly funded preschool programs, either typical Head Start programs or special Head Start and other federally funded early childhood programs.

Two studies of typical Head Start programs are now underway. The Head Start Impact Study involves a nationally representative sample of Head Start programs and random assignment of children to Head Start or no Head Start. This study has so far provided results for entering three-year-olds and entering four-year-olds after one year in Head Start and will follow some children through first grade.¹⁰ In its first report, the study found evidence of small to moderate Head Start effects on children's literacy skills, reduced problem behaviours of three-year-olds, children's access to health care, parents' reading to their children, and reduced use of physical discipline of three-year-olds. The Head Start Family and Child Experiences Survey¹¹ is a study of a representative national sample of Head Start programs in the U.S. Relative to national norms, children made significant gains during their Head Start year, particularly in vocabulary and early writing skills. Children in Head Start grew in social skills and reduced hyperactive behaviour. Head Start graduates showed further progress toward national averages during kindergarten.

Rigorous evaluations of several special Head Start and similar programs have found small program effects, examining the effects of the Early Head Start program,¹² the Head Start Comprehensive Child Development Program,¹³ and the U.S. Department of Education's Even Start Family Literacy program.¹⁴ A study of the effects of five state-funded preschool programs, using a regression discontinuity design, found statistically significant, meaningful effects on children's vocabulary, print awareness skills and early mathematics skills.¹⁵

Curriculum is a critical component of preschool programs that has been studied empirically. Several preschool curriculum comparison studies that began in the 1960s have followed preschool participants for years afterwards. One study found that young people born in poverty experienced fewer emotional problems and felony arrests if they attended a preschool program that used the child development-focused High/Scope model or a traditional child-centered Nursery School model, rather than a teacher-centered Direct Instruction model.¹⁶ This study and two other longitudinal studies found that children in Direct Instruction programs significantly outperformed children in traditional and other programs on various measures of intellectual performance during the program and for up to a year afterwards, but then these gains faded out.^{17,18} In one of these studies, however, the high school graduation rates were strikingly if not significantly different – 70% for the traditional program group, 48% for the Direct Instruction group and 47% for the no-program group. Evidence continues to accumulate that early childhood curriculum models differ significantly in some of their effects on children.^{19,20}

Conclusions and Implications

The evidence is clear that early childhood experiences can greatly influence people's

PRESCHOOL PROGRAMS

lives, and model preschool programs can evoke such early childhood experiences. But it is becoming increasingly apparent that it is also possible to intervene in young children's lives in ways that do not tap this great reservoir of potential. Effective preschool programs need qualified preschool teachers who know how to contribute to children's cognitive and social development and do so. These teachers must reach out to parents and make them full partners in educating their young children. Many young children now attend preschool programs. Ensuring that all these programs have qualified teachers who know how to contribute to young children's development and motivate parents to do the same will contribute greatly to the success and achievements of the next generation.

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PRESCHOOL PROGRAMS

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