



University of Pittsburgh
Office of Child Development

Early Childhood Care & Education In Pennsylvania

Born Ready To Learn

Making the case for early childhood services

If you need to make a case for high quality early childhood education, a good place to start is recent scientific research that says that when it comes to brain development, it is not just about genetics. From the moment of birth, experiences, relationships, and environments influence virtually every aspect of early development.

Meanwhile, recent trends in family life are redefining childhood in America. More and more, the experiences, relationships, and environments that shape children's development are being found outside of the home. In fact, with so many busy parents, child care has become the norm in America for the first time in history.

Study after study suggests that early childhood education programs and child care can enhance the development of children during these critical years when these services use appropriate curriculum, employ well-educated and trained teachers and staff, and embrace other quality standards.

Brain's Building Blocks

Incredible findings in neurobiological, behavioral, and social sciences over the last decade provide a broader understanding of conditions that influence early childhood development. Most striking are insights into brain development that have shaken the traditional assumption that it is mostly a child's genes that determine how his or her brain develops.

Experience is highly influential. The brain's circuitry is made up of brain cells (*neurons*) and the connections (*synapses*) they form to other brain cells. When synapses link, they form the

neural pathways that are critical to healthy development and learning. When children interact with their environment – reacting to stimuli, taking in information, processing it, or storing it – new signals race along the neural pathways and activate them. Scientists now know that most synapses are formed during the first three years of life. They've also learned that synapses activated many times by repeated early experience tend to become permanent while those that are not used tend to be eliminated.

Such findings have broad implications for early childhood services.

Scientists now realize, for example, that children are born ready to learn. From birth to kindergarten, they make significant linguistic and cognitive gains, as well as rapid progress in emotional, social, and regulatory capacities. At the same time, they are very vulnerable to harm.

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Relationships also matter a great deal. How parents and other regular caregivers protect, nurture, and stimulate a child influences early development for better or for worse.

In The Care Of Others

The American family has undergone several major demographic changes over the course of the last 150 years and each has affected children in important ways. Among the most recent is the surge in the number of mothers who work outside of the home and in the number of single-parent homes.

In 2000, some 61% of mothers with children under age three were employed. Twenty-five years earlier, only 34% held jobs.¹ In Pennsylvania, 25% of the children lived in single-parent homes in 2000 – an increase since 1990, when 20% of Pennsylvania children lived in single-parent homes.²

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The experience of growing up in America has undergone dramatic changes with more children than ever before spending increasing amounts of time in the care of others.

Today, for example, nearly 6 million infants and toddlers are regularly cared for by someone else while their mothers work. The use of centers as a source of care for children under age three has nearly tripled since 1997. And the National Institute of Child Health and Human Development (NICHD) Study of Early Child Care reports that 72% of the infants in the study experienced regular, nonparental care during the first year of their lives. The child care study is most comprehensive ever conducted in the U.S.

Early Services Work

Quality early education and child care can have a lasting impact on how children develop, learn, and behave. The benefits cross economic and social classes, with children from families with the least formal education often making the greatest strides.

After studying a range of early childhood programs, the Rand Corporation reported that disadvantaged children made significant gains in measures of intellectual performance, at least in the short term.³ In some programs, these early childhood participants scored 10 or more points higher in IQ tests than students who were not enrolled in the early childhood services.

Children exposed to early childhood education tended to have higher high school graduation rates than those who did not attend preschool or have similar experiences. And even a slight decline in drop-out rates can benefit thousands of students. In Pennsylvania, for example, 3.8% of ninth through

twelfth graders dropped out of school during the 1999-2000 school year.

Early childhood programs are also associated with better behavior and other outcomes in adulthood. The findings of the High/Scope Perry Preschool Study, an extensive long-term study, suggest early childhood services reduce criminal behavior and welfare dependency, increase earnings as an adult, and even strengthen a person's commitment to marriage. For

example, significantly fewer arrests were reported among adult men who, as children, participated in the early childhood program. Also, program participants were less likely to need welfare assistance as adults.

Such benefits, however, are only realized by early childhood programs of high quality. In Pennsylvania, limited access to high quality programs has emerged as a serious concern.

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references

This report was based largely on the following study conducted by the Universities Children's Policy Collaborative.

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¹ Committee on Ways and Means, U.S. House of Representatives. *2000 green book: Background material and data on programs with-in the jurisdiction of the Committee on Ways and Means*, pp. 573. Washington, DC: U.S. Government Printing Office, 2000.

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