



## The Link between Early Childhood Education and Health

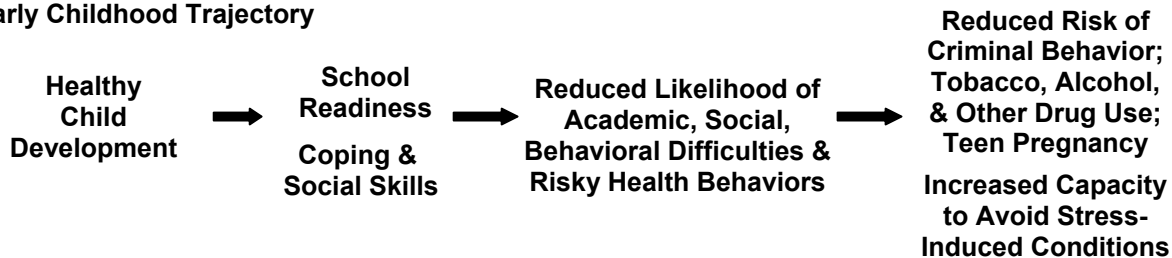
**By focusing early in childhood on prevention and protective factors, quality care and learning can help children to grow up healthy.**

### **Early Experiences Are Important Determinants of Adult Health Status**

A child's early experiences are lifelong determinants of health and well-being. Studies in neurobiology, neurodevelopment, and early intervention show that the years birth to school age are critically important for brain development.<sup>1</sup> During this critical time, children develop the essential language and cognitive skills required to learn, develop their ability to manage emotions and stress, and learn to cooperate with others. Properly shaping the architecture of the brain in these earliest years of life has profound benefits in adult life.

Many of the risks for the diseases of adult life (e.g. heart disease) are, in part shaped by learning, coping, and decision-making skills that are set in the earliest years of life.<sup>2</sup> These skills determine performance in the school system and set children onto life pathways that in turn, affect their health and well-being over time.

#### **Early Childhood Trajectory**



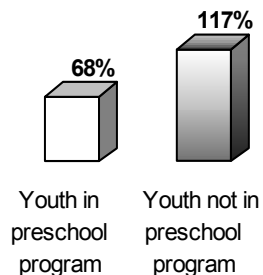
### **The Role of Early Childhood Education**

Early childhood education plays a crucial role in children's development. A key requisite for optimal healthy child development is secure attachment to a trusted caregiver, giving consistent caring, support and affection early in life.<sup>3</sup> Coping skills are strongly influenced by how well children are "nurtured" during the early years of childhood. Spending one's early years in an unstimulating, emotionally and physically unsupportive environment affects brain development in adverse ways, and leads to cognitive, social and behavioral delays.

Evaluation of quality early learning and care provision before the age of 5 years has found that it is associated with improvement in a range of educational and social measures, some of which have been documented many years after the care. In one of the studies, the Perry Preschool Project followed participants up to 27 years of age and showed that the people from the preschool group were more likely to have advantageous social outcomes such as high school graduation, employment, fewer arrests, higher earnings, and owning their own home than those who did not participate in the program.<sup>4</sup> These findings have been confirmed by multiple other studies.<sup>5</sup>

The Perry Preschool program also measured a significant effect on teen pregnancy, showing that youth who did not receive the program were nearly twice as likely to have a teen pregnancy than those who did receive the program.<sup>6</sup> Similarly, the research demonstrated the benefits of creating opportunities for children to participate in decision making from an early age. The study discovered that children from impoverished inner-city environments who planned and made decisions about their school activities in their preschool years were, in adulthood, significantly less (as much as 50 percent) involved in using drugs.

#### Preschool Youth Less Likely to Have a Teen Pregnancy



Lack of school readiness puts children at risk of academic, social and behavioral difficulties in school. Those children are more likely to leave school before high school graduation, get involved in criminal behavior, become pregnant as a teenager, and become addicted to tobacco, alcohol, and other drugs.<sup>7</sup> And the combination of behavioral problems and failure in school are also associated with low levels of physical and mental health in adulthood.<sup>8</sup> The reverse is also true. Children from high quality early learning and care programs are more likely to graduate high school, go on to college or higher learning, and earn more. These outcomes are all associated with better physical and mental health as adults.

### Access to Health Services

Early care and learning programs are often a vehicle for health education and promotion to children. Research has shown that early childhood programs can affect children's physical health by requiring that children be properly immunized; by linking them to health services; by conducting vision, hearing, and developmental screenings, and in some cases, by providing them with nutritious meals.<sup>9</sup> Children who attend quality early child programs have greater access to health care and improved physical health, receive better dental care, and demonstrate improved nutritional status and better nutritional practices.<sup>10</sup>

Early learning and care programs are also essential in getting children enrolled into low-income children's health insurance programs for which they are eligible, such as Medicaid and the Children's Health Insurance Program (CHIP).<sup>11</sup>

### Prevention Results in Cost Savings

Cost implications are very clear. Loading our energies at the beginning of the children's services continuum makes sense since early childhood development and prevention services are immensely more cost-effective than waiting to pay for health care services later in the life.

<sup>1</sup> Shonkoff, J.P., Phillips, D.A. (2000) *From Neurons to Neighborhoods: The Science of Early Childhood Development*. National Research Council and Institute of Medicine. Washington, D.C.: National Academy Press. P. 314. <http://www.nap.edu/books/0309069882/html/>

<sup>2</sup> Hertzman, C., Mustard, F. (1997) A Healthy Early Childhood = A Healthy Adult Life. Founders Network Report, The Canadian Institute for Advanced Research: 1(1) <http://www.founders.net/fn/Entropy.nsf/d6534131a118818f852568ef005dad3a/418d2b65d888570485256583006a78c5?OpenDocument>

<sup>3</sup> Shonkoff, J.P., Phillips, D.A. (2000).

<sup>4</sup> Barnett, W. S. (1996). *Lives in the balance: Age-27 benefit-cost analysis of the High/Scope Perry Preschool Program* (Monographs of the High/Scope Educational Research Foundation, 11). Ypsilanti, MI: High/Scope Press. <http://www.highscope.org/Research/PerryProject/perrymain.htm>

<sup>5</sup> Reynolds, A.J. et al. (2001) Long-term Effects of an Early Childhood Intervention on Educational Achievement and Juvenile Arrest: a 15-Year Follow-Up of Low-income Children in Public Schools. *JAMA*. <http://jama.ama-assn.org/> "Smart Start: A Six County Study of the Effects of Smart Start Child Care on Kindergarten Entry Skills," Frank Porter Graham Child Development Center Smart Start Evaluation Team, North Carolina. (1999). <http://www.fpg.unc.edu/~smartstart/>

<sup>6</sup> The rate for youth not receiving the program is higher than 100 because some youth may have had more than one teen pregnancy during the course of the study.

<sup>7</sup> Hertzman, C., Keating, D. (eds.) *Developmental Health and the Wealth of Nations: Social, Biological, and Educational Dynamics*. New York: The Guilford Press, 1999.

<http://www.acscd.ca/acscd/public/dhwn.nsf/79bd30dc8fee05dc85256638007535f0/82a8cbdf1c3c9ff085256ba70073f35c!OpenDocument>

<sup>8</sup> Acheson, D. (1998) *Independent Inquiry into Inequalities in Health*. London: The Stationary Office. <http://www.archive.official-documents.co.uk/document/doh/ih/contents.htm>

<sup>9</sup> Zigler, E., Piotrkowski, C.S., Collins, R. (1994) Health services in Head Start. *Annual Review of Public Health*: 15:311-34. <http://publhealth.annualreviews.org/>

<sup>10</sup> Howes, C. 1990. "Can the age of entry into child care and the quality of child care predict adjustment in kindergarten?" *Developmental Psychology*, 26(2), 292-303. <http://www.apa.org/journals/dev.html> McKey, R.H., Condelli, L., Ganson, H., Barrett, B.J., McConkey, C., & Plantz, M.C. 1985. *The impact of Head Start on children, families, and communities. Final report of the Head Start Evaluation, Synthesis, and Utilization Project*. (Washington, DC: CSR Incorporated for the Head Start Bureau, Administration for Children, Youth and Families, U.S. Dept. of Health and Human Services). <http://www2.acf.dhhs.gov/programs/hsb/>

<sup>11</sup> Centers for Medicare and Medicaid Services. <http://www.hcfa.gov/MEDICAID/ch-guide.htm>