



Acknowledgments Representative Articles

The age-21 follow-up of the Abecedarian study was funded jointly by:

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- The State of North Carolina

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The findings of the Abecedarian Project do not necessarily reflect the views of the granting agencies.

Ramey, C. T., & Campbell, F. A. (1984). Preventive education for high-risk children: Cognitive consequences of the Carolina Abecedarian Project. *American Journal of Mental Deficiency, 88*, 515-523. This article describes the child care program in detail and presents findings from cognitive testing of study participants from early infancy through age 54 months.

Ramey, C. T., & Campbell, F. A. (1991). Poverty, early childhood education, and academic competence: The Abecedarian experiment. In A. Huston (Ed.), *Children reared in poverty* (pp. 190-221). New York: Cambridge University Press. This chapter describes a school-age component of the project and presents findings from cognitive testing of study participants in the primary grades of school.

Campbell, F. A., & Ramey, C. T. (1994). Effects of early intervention on intellectual and academic achievement: A follow-up study of children from low-income families. *Child Development, 65*, 684-698. In this article, results of cognitive and achievement testing of study participants at age 12 are presented.

Campbell, F. A., & Ramey, C. T. (1995). Cognitive and school outcomes for high-risk African-American students at middle adolescence: Positive effects of early intervention. *American Educational Research Journal, 32*, 743-772. This article presents results of cognitive and achievement testing at age 15 as well as data concerning grade retention and assignments to special education.

Burchinal, M. R., Campbell, F. A., Bryant, D. M., Wasik, B. H., & Ramey, C. T. (1997). Early intervention and mediating processes in cognitive performance of children of low-income African American families. *Child Development, 68*, 935-954. In this article, the Abecedarian data are combined with a similar program called project CARE and the mechanisms by which early intervention affected cognitive performance are examined.

Ramey, C. T., Campbell, F. A., Burchinal, M., Skinner, M. L., Gardner, D. M., & Ramey, S. L. (in press). Persistent effects of early intervention on high-risk children and their mothers. *Applied Developmental Science*. In addition to presenting results of child testing, this article presents findings demonstrating the benefits of the availability of high-quality, consistent child care for the mothers of children in the Abecedarian study.

Early Learning, Later Success

THE ABECEDARIAN STUDY

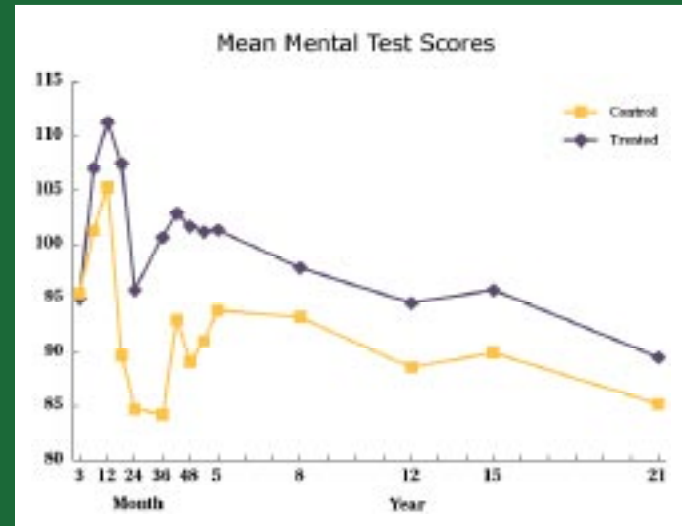
The Importance of Early Intervention

- Children are more likely than any other age group to be poor.
- After declining in the 1960s and 1970s, child poverty rates are climbing.
- Minority children are 3 times more likely than majority children to be reared in poverty.
- Poverty in early childhood has long-lasting negative consequences for cognitive development and academic outcomes.
- An enormous human resource is lost when children do not achieve to their highest potential.
- Early childhood education can make a critical difference in the later success of poor children.

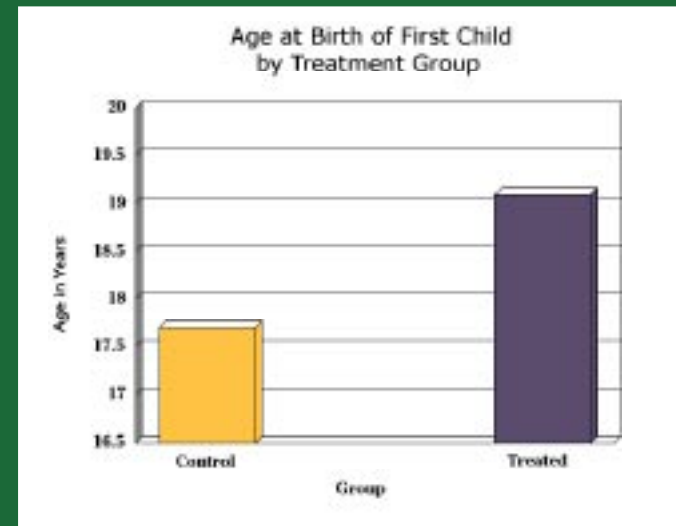
The Abecedarian Intervention

- The Abecedarian project was a carefully controlled scientific study of the potential benefits of early childhood education for poor children.
- Children from low-income families received full-time, high-quality educational intervention in a childcare setting from infancy through age 5.
- Each child had an individualized prescription of educational activities.
- Educational activities consisted of “games” incorporated into the child’s day.
- Activities focused on social, emotional, and cognitive areas of development but gave particular emphasis to language.
- Children’s progress was monitored over time with follow-up studies conducted at ages 12, 15, and 21.
- The young adult findings demonstrate that important, long-lasting benefits were associated with the early childhood program.

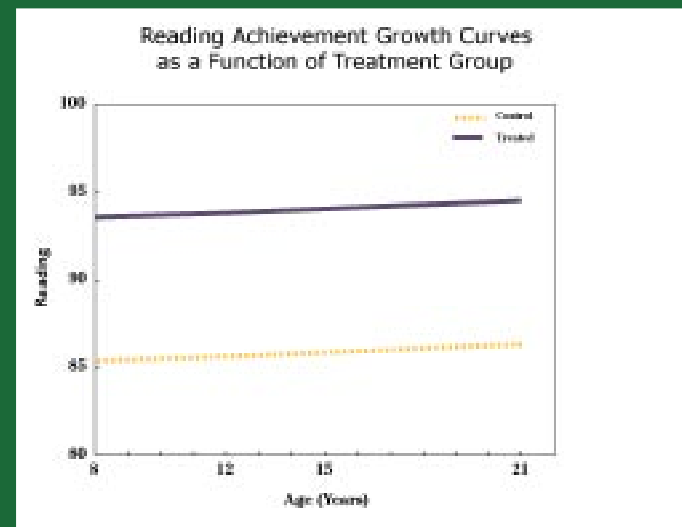
Major Findings



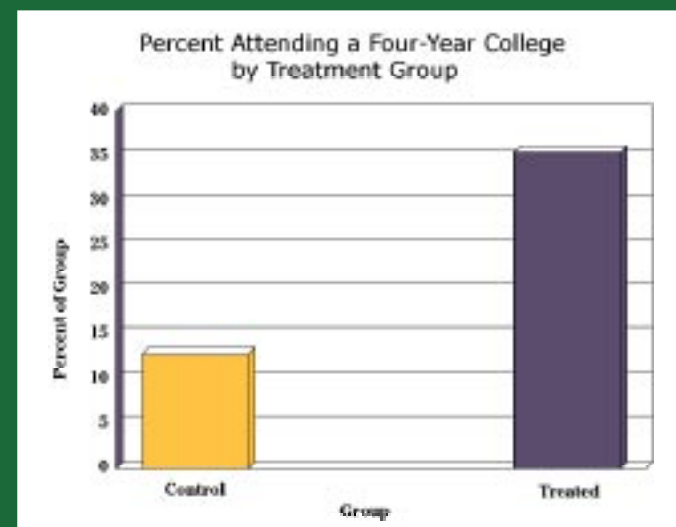
- Children who participated in the early intervention program had higher cognitive test scores from the toddler years to age 21.



- Treated individuals were older, on average, when their first child was born.



- Academic achievement in both reading and math was higher from the primary grades through young adulthood.



- Intervention children completed more years of education and were more likely to attend a four-year college.

- The cognitive and academic benefits from this program are stronger than for most other early childhood programs.
- Enhanced language development appears to have been instrumental in raising cognitive test scores.
- Mothers whose children participated in the program achieved higher educational and employment status than mothers whose children were not in the program. These results were especially pronounced for teen mothers.

Policy Implications

- The importance of high quality, educational childcare from early infancy is now clear. The Abecedarian study provides scientific evidence that early childhood education significantly improves the scholastic success and educational attainments of poor children even into early adulthood.
- Welfare reform has increased the likelihood that poverty children will need early childcare. Steps must be taken to ensure that quality childcare is available and affordable for all families. This is especially critical for low-income families.
- Learning begins in infancy. Every child deserves a good start in an environment that is safe, healthy, emotionally supportive, and cognitively stimulating.
- Childcare officials should be aware of the importance of quality care from the very first months of life.
- Quality care requires sufficient well-trained staff to ensure that every child receives the kind of appropriate, individualized attention provided by the Abecedarian model.
- Future research should concentrate on identifying the specific learning techniques most effective for all groups and types of young children.
- Poverty is increasing among America’s children. At the same time, more and more of them will require out of home care. We must not lose the opportunity to provide them with the early learning that will increase their chances for later success.