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Link Between Child Care and Academic Achievement and Behavior Persists Into Adolescence

Teens who were in high-quality child care settings as young children scored higher on measures of academic and cognitive achievement and reported fewer acting-out behaviors than peers who were in lower-quality child care arrangements during their early years, according to the latest analysis of a long-running NIH funded study.

Moreover, teens who logged more hours in child care in their first 4½ years reported a greater tendency toward impulsiveness and risk-taking at 15 than did peers who spent less time in child care.

The study results appear in the May/June *Child Development*.

The 1,364 youth in the analysis had been tracked since birth as part of the NICHD Study of Early Child Care and Youth Development (SECCYD), the largest, longest running and most comprehensive study of child care in the United States. Families were recruited through hospital visits to mothers shortly after the birth of a child in 1991 in 10 locations in the United States.

The study authors noted that the differences in these measures among the youth in the study were small, but the magnitude of both patterns was consistent from early childhood to adolescence. Previous studies have noted similar trends, but the NICHD SECCYD is the first to track children for a full decade after they left child care.

“These findings reveal that the modest association between early child care and subsequent academic achievement and behavior persists through childhood and into the teen years,” said Alan E. Guttmacher, M.D., acting director of the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development (NICHD), the NIH Institute that supported the study. “What is less clear is how these early care experiences may shape later academic performance and behavior.”

From 1 month of age through sixth grade, children were evaluated regularly on tests of cognitive and academic progress. In addition, researchers queried parents regularly and recorded the type, quantity and quality of child care during the children's first 4½ years. The researchers also observed child care interactions to evaluate the quality of care. Of the children studied, more than 90 percent spent some time in child care. High-quality care was characterized by the caregivers' warmth, support, and cognitive stimulation of the children under their care.

The researchers also requested that caregivers or teachers evaluate the behavior of children under their care at 4½ and every two years through elementary school. When the students were 15, the researchers tested the students' academic achievement and, using a questionnaire, had the students evaluate their own behaviors. These included measures of behavioral problems (acting out behaviors such as rule breaking, arguing, and hanging out with peers who get into trouble); impulsivity (acting without thinking through the consequences); and risk taking (engaging in behaviors that might harm themselves or others).

Rating child-care quality on a scale of 1 to 4, researchers found that more than 40 percent of the children experienced high-quality or moderately high-quality care. They noted a correlation between higher quality care and higher results on cognitive and academic assessments, including reading and math tests. This correlation was similar at age 4½ and age 15. A new finding that emerged at age 15 was that youth who had spent more time in quality child care as young children reported fewer acting-out behavior problems as teenagers.

"These results underscore the importance of interaction between children and their daytime caregivers," said first author Deborah Lowe Vandell, Ph.D., professor and chair of the Department of Education at University of California, Irvine. "We're seeing enduring effects of the quality of staff-child interaction."

Similarly, the researchers noted a correlation between the average number of hours children spent in child care each week through age 4½ and the youths' own evaluations of impulsivity and risk-taking tendencies at 15. These correlations reflected earlier associations between hours in child care and caregivers' reports of problem behaviors that the researchers had originally detected when the children were 4½. Hours in child care were calculated as the average number of hours per week a child spent in child care in infancy, as a toddler, and as a preschooler.

The study's findings were consistent among boys as well as girls. In addition, previous studies had suggested that child care could have benefits for children from economically disadvantaged homes. So the researchers created a risk index with such factors as family income, the mother's level of education, and mothers' reports of depression symptoms, dividing their group into three based on risk. Both the achievement and behavior patterns they had found were consistent across all three groups.

“High quality child care appears to provide a small boost to academic performance, perhaps by fostering the early acquisition of school readiness skills,” said James A. Griffin, Ph.D., deputy chief of the NICHD Child Development & Behavior Branch. “Likewise, more time spent in child care may provide a different socialization experience, resulting in slightly more impulsive and risk-taking behaviors in adolescence. These findings underscore the importance of studying the linkages between early care and later development.”

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The NICHD sponsors research on development, before and after birth; maternal, child, and family health; reproductive biology and population issues; and medical rehabilitation. For more information, visit the Institute’s Web site at <http://www.nichd.nih.gov/>.

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