



Society for Research in Child Development

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Environment Plays a Key Role in Children's Readiness for School

Early school success seems to depend largely on children entering school ready to learn, and many policy initiatives have highlighted the importance of preparing children for school entry. A new study finds that children's environment plays a major role in their readiness for school, suggesting that intervention could help boost readiness in at-risk youngsters.

The study, conducted by researchers at Laval University, the University of Montreal, and the University of Quebec at Montreal, appears in the November/December 2007 issue of the journal *Child Development*. It is one of the first studies to consider both environmental and genetic influences on children's readiness for school.

The researchers examined 420 pairs of 5-year-old twins, assessing the children on four measures of school readiness that included identifying colors and shapes; answering questions about spatial position (such as above, below, left, right), relative size (such as smaller, bigger), and order (such as first, middle, last); identifying numbers and counting; and identifying letters and writing. Two years later, the children's teachers were asked to rate the school achievement of 237 pairs of the twins.

Environmental factors shared by twins in the same family—such as family resources and income, parents' behavior with respect to learning, and the twins' child care experiences—were responsible for much of the individual difference in the children's school readiness skills, according to the study. The influence of the environmental factors was seen over and above the influence of genetic factors. These shared factors influenced school readiness in both general and specific ways, that is, they were found to be significant for each component of school readiness, as well for the core abilities underlying overall school readiness.

Genetic factors played a significant role in the children's core abilities underlying the four components of school readiness, but the environment shared by twins of the same family remained the most important factor overall. Both genetic and environmental factors were found to influence the association between children's school readiness and later school achievement.

"Our results have important implications for preventive interventions," said Michel Boivin, Canada Research Chair in Child Social Development and professor of psychology at Laval University in Quebec City and one of the study's authors. "They should be seen as a further incentive for continued implementation and evaluation of preventive intervention programs aimed at improving the level of school readiness in children from at-risk families."

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Summarized from Child Development, Vol. 78, Issue 6, *The Genetic-Environmental Etiology of Cognitive School Readiness and Later Academic Achievement in Early Childhood* by Lemelin, J-P, Boivin, M, Forget-Dubois, N, and Dionne, G (Laval University), Séguin, JR (University of Montreal), Brendgen, M (University of Quebec at Montreal), Vitaro, F, Tremblay, RE, and Pérusse, D (University of Montreal). Copyright 2007 The Society for Research in Child Development, Inc. All rights reserved.