NEWS | POSTED JULY 24, 2014

Stronger Early Reading Skills Predict Higher Intelligence Later

PRESS RELEASE / CHILD DEVELOPMENT: Embargoed for Release on July 24, 2014

PRESS RELEASE

Published

Thursday, July 24, 2014 12:01am

Does Learning to Read Improve Intelligence? A Longitudinal Multivariate Analysis in Identical Twins From Age 7 to 16

Read the Child Development article:

WILEY ONLINE LIBRARY

Contact:

Jessica Efstathiou, Senior Media Relations and Communications Associate

A new study of identical twins has found that early reading skill might positively affect later intellectual abilities. The study, in the journal *Child Development*, was conducted by researchers at the University of Edinburgh and King's College London.

"Since reading is an ability that can be improved, our findings have implications for reading instruction," according to Stuart J. Ritchie, research fellow in psychology at the University of Edinburgh, who led the study. "Early remediation of reading problems might aid not only the growth of literacy, but also more general cognitive abilities that are of critical importance across the lifespan."

Researchers looked at 1,890 identical twins who were part of the Twins Early Development Study, an ongoing longitudinal study in the United Kingdom whose participants were representative of the population as a whole. They examined scores from tests of reading and intelligence taken when the twins were 7, 9, 10, 12, and 16. Using a statistical model, they tested whether differences in reading ability between each pair of twins were linked to later differences in intelligence, taking into account earlier differences in intelligence. Because each pair of identical twins shared all their genes as well as a home environment, any differences between them had to be because of experiences that the twins didn't share, such as a particularly effective teacher or a group of friends that encouraged reading.

The researchers found that earlier differences in reading between the twins were linked to later differences in intelligence. Reading was associated not only with measures of verbal intelligence (such as vocabulary tests) but with measures of nonverbal intelligence as well (such as reasoning tests). The differences in reading that were linked to differences in later intelligence were present by age 7, which may indicate that even early reading skills affect intellectual development.

"If, as our results imply, reading causally influences intelligence, the implications for educators are clear," suggests Ritchie. "Children who don't receive enough assistance in learning to read may also be missing out

on the important, intelligence-boosting properties of literacy."

Besides having implications for educational intervention, the study may address the question of why individual children from one family can score differently on intelligence tests, despite sharing genes, socioeconomic status, and the educational level and personality of parents with their siblings.

The study was funded by the U.K. Medical Research Council, the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development, and the European Research Council.

###

Summarized from *Child Development*, Does Learning to Read Improve Intelligence? A Longitudinal Multivariate Analysis in Identical Twins From Age 7 to 16 by Ritchie, SJ, Bates, TC (University of Edinburgh), and Plomin, R (King's College London). Copyright 2014 The Society for Research in Child Development, Inc. All rights reserved.