



THE UNIVERSITY *of* EDINBURGH

News Release

Issued: Wednesday 8 February 2017

Parents' extra focus gives first borns mental edge over siblings, study shows

First-born children's thinking skills outperform their siblings because they receive more mental stimulation from their parents in their early years, research suggests.

First borns score higher than their siblings in IQ tests as early as age one, the study has found.

Although all children received the same levels of emotional support, first-born children received more support with tasks that developed thinking skills.

Researchers say the findings could help to explain the so-called birth order effect when children born earlier in a family enjoy better wages and more education in later life.

Economists at the University of Edinburgh, Analysis Group and the University of Sydney examined data from the U.S. Children of the National Longitudinal Survey of Youth, a dataset collected by the US Bureau of Labor Statistics.

Nearly 5,000 children were observed from pre-birth to age 14. Every child was assessed every two years. The tests included reading recognition, such as matching letters, naming names and reading single words aloud and picture vocabulary assessments. Information was also collected on environmental factors such as family background and economic conditions.

Researchers applied statistical methods to economic data to analyse how the parental behaviour of the child was related to their test scores.

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The researchers then used an assessment tool, the Home Observation Measurement of the Environment, to observe parental behaviour, including pre-birth behaviour, such as, smoking and drinking activity during pregnancy, and post-birth behaviour, such as, mental stimulation and emotional support.

The findings showed that advantages enjoyed by first born siblings start very early in life – from just after birth to three years of age.

The differences increased slightly with age, and showed up in test scores that measured verbal, reading, math and comprehension abilities.

Researchers found that parents changed their behaviour as subsequent children were born. They offered less mental stimulation to younger siblings also took part in fewer activities such as such as reading with the child, crafts and playing musical instruments.

Mothers also took higher risks during the pregnancy of latter-born children, such as increased smoking.

Dr Ana Nuevo-Chiquero, of the University of Edinburgh’s School Economics, said: “Our results suggests that broad shifts in parental behaviour are a plausible explanation for the observed birth order differences in education and labour market outcomes.”

The study is published in the Journal of Human Resources (doi: 10.3368/jhr.53.1.0816-8177)
Link to paper: (<http://jhr.uwpress.org/content/early/2016/11/01/jhr.53.1.0816-8177.full.pdf+html>)

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