

Study Shows Big-Brained People are Smarter

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People with bigger brains are smarter than their smaller-brained counterparts, according to a study conducted by a Virginia Commonwealth University researcher published in the journal "Intelligence."

The study, published on line June 16, could settle a long-standing scientific debate about the relationship between brain size and intelligence. Ever since German anatomist and physiologist Frederick Tiedmann wrote in 1836 that there exists "an indisputable connection between the size of the brain and the mental energy displayed by the individual man," scientists have been searching for biological evidence to prove his claim.

"For all age and sex groups, it is now very clear that brain volume and intelligence are related," said lead researcher Michael A. McDaniel, Ph.D., an industrial and organizational psychologist who specializes in the study of intelligence and other predictors of job performance.

The study is the most comprehensive of its kind, drawing conclusions from 26 previous – mostly recent – international studies involving brain volume and intelligence. It was only five years ago, with the increased use of MRI-based brain assessments, that more data relating to brain volume and intelligence became available.

McDaniel, a professor in management in VCU's School of Business, found that, on average, intelligence increases with increasing brain volume. Intelligence was measured with standardized intelligence tests,

which have important consequences on peoples' lives, such as where they'll go to college or what kind of job they get. Critics have called the tests inaccurate or irrelevant to the real world, he said.

“But when intelligence is correlated with a biological reality such as brain volume, it becomes harder to argue that human intelligence can’t be measured or that the scores do not reflect something meaningful,” said McDaniel.

As an industrial and organizational psychologist, McDaniel works with employers to screen job applicants and measure their performance. He said employers will appreciate his findings because intelligence tests are the single best predictor of job performance.

“On average, smarter people learn quicker, make fewer errors, and are more productive,” McDaniel said. “The use of intelligence tests in screening job applicants has substantial economic benefits for organizations.”

Before MRIs, scientists often used external skull measurements or waited until a person died to estimate brain size. The external skull measurements were only approximate estimates of brain volume.

Source: Virginia Commonwealth University

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