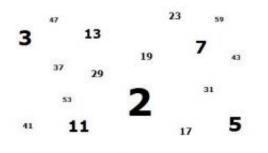


Study finds link between handedness and mathematical skills

May 5 2016



Prime Numbers

A link between handedness and mathematical skills exists, but is more complex than is thought according to a study by the University of Liverpool.

The relationship between <u>handedness</u> and mathematical abilities is controversial. Some studies have claimed that left-handers are gifted in mathematics, and strong right-handers perform the worst in mathematical tasks. Finally, more recently, it has been proposed that ambidextrous individuals are the most disadvantaged group in terms of <u>mathematical ability</u>.

Psychologists from the University of Liverpool and the University of Milan conducted a study involving about 2,300 students in Italy aged



between six to 17 years and asked them to complete a number of mathematical tasks, including simple arithmetic and problem-solving.

In this study, the participants' degree of handedness was ascertained by the Edinburgh Handedness Inventory, a questionnaire which assesses how much an individual is right- or left-handed (or ambidextrous). The researchers then analysed the results in relation to the extent to which they were right- or left-handed.

Liverpool psychologist, Giovanni Sala, who conducted the study, said: "This study found there is a moderate, yet significant, correlation between handedness and mathematical skill. Moreover, the amount of variance in the mathematics scores explained by handedness was about 5-10%, a surprisingly high percentage for a variable like handedness."

"We also found that the degree of handedness and <u>mathematical skills</u> influenced by age, type of mathematical task, and gender. For example, the most lateralized children - that means those who were very onesided, either left- or right-handed, tended to underperform compared to the rest of the sample. However, this effect disappeared in male lefthanded adolescents, who performed much better than their peers."

"These results must not be considered definitive, but only a step towards the conception of a new and more comprehensive model of the phenomenon; A model able to account for all the discordant outcomes reported so far."

Provided by University of Liverpool

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