

Study finds link between handedness and mathematical skills

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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 [handedness](#) 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 [mathematical ability](#).

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 [mathematical skills](#) influenced by age, type of mathematical task, and gender. For example, the most lateralized children - that means those who were very one-sided, either left- or right-handed, tended to underperform compared to the rest of the sample. However, this effect disappeared in male left-handed 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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