

Smarter kids can choke under pressure, according to study

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(Medical Xpress)—Whether it's initiated by their parents, friends or themselves, students often feel pressure to perform well in tests.

That [pressure](#) is more intense for typically smarter [students](#) who, under certain conditions, are more likely to choke on math tests than children with lower memory skills, according to a new University of Michigan

study.

Previous studies showed that anxiety consumes people's [memory capacity](#), which can compromise their performance. U-M researchers sought to test situations that would lead to grade school children feeling pressured to do well on math problems.

The researchers recruited 53 third and fourth graders in China to solve three-digit addition problems. They had to complete the equations from left to right without the aid of paper and pencil – a tactic encouraged by their teachers in school.

In the memory test, students had to solve an equation and were asked to select from two possible answers. The equations were divided into easy, normal and challenging – and each child was tested twice in two days. For the first day without pressure, students were told the test was only for practice, while the "actual" test representing pressure was given on the second day.

Students could complete the entire calculation, which would require them to use their working memory, the ability to remember things while thinking, but is also more accurate. They could also opt to simply perform part of the equation and compare the partial results with the two alternative answers.

For the easy equation, pressure barely affected the students with high or low [working memory](#) skills. Both groups did not feel pressured when completing the normal equations.

The challenging equations, however, affected the students differently. When the memory is consumed by pressure, students will likely complete only part of the equation and rely on the choices available to make a decision, said U-M psychology researchers Zuowei Wang and

Priti Shah.

When smarter students performed a task that is moderately easy for them, they had enough resources available to them even if some of their attention is diverted by pressure, the study showed. Kids with lesser working [memory skills](#) may be more affected on these easy tasks because they are, without pressure, closer to reaching their capacity limits.

On difficult tasks, smart students may be closer to their own capacity limits and thus may be affected by pressure, where as their counterparts may use guessing strategies to complete the task.

The findings appear in the current issue of *The British Journal of Educational Psychology*.

Provided by University of Michigan

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