

At-risk children who can self-regulate behavior have higher test scores than their peers

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Megan McClelland, an associate professor of human development and family sciences, is a national leader in early childhood development. She has developed the Head-to-Toes task, demonstrated here.

A study that will be published in a forthcoming journal adds to the mounting evidence that self-regulation - or children's ability to control their behavior and impulses - is directly related to academic performance.

A key finding in that study shows that at-risk [children](#) who can self-regulate have higher reading, math and vocabulary achievement.

The study was conducted by then-Oregon State University graduate

student Michaella Sektnan, who did the research as her master's thesis working with Megan McClelland, an associate professor at OSU and a nationally recognized leader in the areas of self-regulation and early childhood development. Sektnan is now a faculty research assistant for OSU Extension Family and Community Health.

In her paper to be published in a fall edition of *Early Childhood Research Quarterly*, Sektnan used data on 1,298 children from birth through the first grade from the National Institute of Child Health and Human Development (NICHD) Study of Early Child Care and Youth Development. "Family risk" in the data was defined by [ethnic minority](#) status, low maternal education, low family income and chronic [depressive symptoms](#) in the mother.

"We know that these risk factors can lead to a gap in academic achievement," Sektnan said. "The relationship to risks such as poverty, ethnic status, and maternal education has been well-documented. What we wanted to know was, controlling for these factors, does self-regulation make a difference?"

It turns out the answer to that question is yes. Controlling for these risk factors, Sektnan found that children whose parents and teachers reported that they had strong self-regulation in preschool and kindergarten did significantly better on math, reading and vocabulary at the end of first grade.

"For all outcomes, higher self-regulation was related to higher reading, math and vocabulary, regardless of which risk factor was present," Sektnan said. "This builds on the increasing body of knowledge about the need to develop self-regulation skills in young children."

To give an example, McClelland points to the test scores of the children in this national survey. At-risk children with stronger self-regulation in

kindergarten scored 15 points higher on a standardized math test in first grade, 11 points higher on an early reading test, and nearly seven points higher on a vocabulary test than at-risk children with weaker self-regulation.

"These were pretty impressive increases in children's achievement," McClelland said. "I'm a proponent of building self-regulation in children but even for me, these results were surprising. The discrepancy between these children, tested at a very young age, and their academic scores compared to their peers who were not as able to regulate their behavior was larger than we anticipated."

McClelland, who has developed simple games such as the Head-to-Toes task to measure self-regulation and predict academic achievement, said it is obvious that in the case of at-risk children, merely focusing on self-regulation skills won't be enough.

"Obviously, these issues - poverty, educational status, maternal depression - are extremely serious and must be addressed," she said. "But we now know that we can also help children be successful by teaching them how to self-regulate."

McClelland added that the data is clearer now than ever: a child that can listen, pay attention, follow instructions, and persist on a task, even if faced with what seems to be giant hurdles at a very young age, will achieve greater success in school.

"Self-regulation is not just about compliance or being obedient," McClelland said. "It's about a very basic, but very necessary skill: being able to listen and pay attention, think, and then act. The message to parents may be to put down the flash cards and see if another approach, like playing a simple game of 'Simon Says' works better."

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