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Organized music lessons appear to benefit children's IQ and academic performance--and the longer the instruction continues, the larger the effect, according to a study published in the May issue of the *Journal of Educational Psychology* (Vol. 98, No. 2).

Lead researcher E. Glenn Schellenberg, PhD, says the recent study builds on work he published in 2004, in which 6-year-olds given a year of voice or piano lessons saw a significantly larger increase in IQ than a control group that waited a year for musical instruction.

Considering that study's results, Schellenberg says the natural question he posed to himself was, "Would the effect get bigger with more than a year of lessons?"

Now, his most recent work shows that it does, says Schellenberg, a psychology professor at the University of Toronto at Mississauga.

"There is dose-response association," says Schellenberg, explaining that in general, the longer a child takes lessons, the higher the IQ and the better the performance in school.

In the recent work, Schellenberg and his fellow researchers studied two groups of students: children 6 to 11 years old and college freshmen.

The younger group received an IQ test, an evaluation of their school grades and a measure of academic achievement. More than half of the group had taken music lessons, either in private or group instruction.

The older students surveyed in a second study received an IQ test and supplied their high school grade point average. They also described how many years of music instruction they had received and how many years they had regularly played a musical instrument.

The study involving the younger children found that each additional month of music lessons was accompanied by an increase in IQ of one-sixth of a point, such that six years of lessons was associated with an increase in IQ of 7.5 points, compared with children who did not have the same amount of musical instruction.

For the college students, six years of playing music regularly as a child predicted an increase of two points in IQ over their peers.

Overall, the study found that taking music lessons in childhood was a significant predictor of a higher IQ in young adulthood and a history of better high school grades. For the younger children, the study found a positive association between music lessons and higher school grades and higher scores on achievement testing in mathematics, spelling and reading.

For the college freshmen, a history of playing music regularly as children and teenagers had "small but significant" associations with IQ, perceptual organization, working memory and average high school grades, with the associations remaining significant after controlling for differences in family income, parents' education levels and gender.

Schellenberg isn't sure why music lessons are associated with higher IQ and stronger academic performance, but he has several theories: Children with higher IQs have more cognitive ability to handle the mental challenges of music lessons and school, so music lessons probably exaggerate that advantage. School itself boosts IQ, so the school-like features of music lessons such as learning to read music might also lead to improved intellectual functioning, Schellenberg speculates.

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