Parental occupation and children’s school outcomes in math.

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Abstract

We study the relationship between math attitude and students math scores using data obtained from PISA 2012 and a 2SLS model. Math attitude is approximated by three subjective measures: parental attitude, student instrumental motivation and student math anxiety. The presence of one family member in a math-related career is our instrumental variable. Our working hypothesis is that parents may ease their children’s approach to math through three channels.

First, parents who are in a math-related career may assert that math is important in terms of placement in the job market (parental attitude). Second, parents who are in a math-related career might succeed in transmitting this belief, so that the children - if asked- would assert that math is an instrument to find a good job (student instrumental motivation). Third, the fact that parents might appear to be more self-confident and relaxed about math when working in a math-related career, might help reduce math anxiety in their children (math anxiety). We find that regardless of the proxy that is used for math attitude, an increase of one standard deviation increases the student score by at least 40 points, the equivalent of one year of schooling.

KEYWORDS
Parental attitude toward math, Student instrumental motivation, Math anxiety, Math-related career, Math scores