



# Labour Market Matters

## Special points of interest:

- Researchers use “Genetic Lotteries” as research tool in award-winning study by Fletcher and Lehrer
- Increased income benefits found to have stronger effects on educational outcomes and physical health for boys and on mental health outcomes for girls in Milligan and Stabile Study

*“Poor mental health among youth appears to have a much more adverse affect on educational attainment...than poor physical health measures such as obesity”*



Jason Fletcher (Yale University)

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## Study finds that poor mental health affects academic achievement more adversely than genetic predisposition to poor physical health

Statistics indicate that poor health outcomes are becoming increasingly prevalent among Canadian youth. Over the last 25 years, the proportion of youth who are overweight or obese has jumped from 15% to 26%. In addition to worsening indicators of physical health, it is also estimated that between 10% and 20% of all Canadian youth also suffer from a mental, emotional or behavioural disorder.

An award-winning study\* by **Jason M. Fletcher** and **Steven Lehrer**: *The Effects of Adolescent Health on Educational Outcomes: Causal Evidence using ‘Genetic Lotteries’ between Siblings* ([CLSRN Working Paper no. 32](#)), examines the differences in genetic codes between siblings as a strategy to identify the impact of poor health on academic outcomes. The study finds that mental conditions can affect academic achievement more adversely than genetic predisposition to poor physical health conditions such as obesity.

Numerous studies have reported siblings and twins that are radically different in personality traits, health, education and labour market outcomes. Examining the genetic differences between siblings and non-identical twins can shed further insight into the genetic bases for certain behavioural and/or physical problems, and how they in turn can affect educational

and labour market outcomes in youth. Fletcher and Lehrer examine a unique dataset that contains information on mental health, obesity, academic outcomes and specific portions of an individual’s genetic code for full biological siblings including dizygotic (non-identical) twins. They study differences in genetic inheritance among children within the same family to estimate the impact that poor health conditions have on academic outcomes. A key premise of the study lies in the assertion that a “genetic lottery” occurs every time a sibling is conceived – with roughly half the genes from each parent passed onto the child in a random process – meaning that siblings (not counting identical twins) have different genetic makeups that are randomly assigned, and fixed at conception irrespective of all “nurture investments” such as differences in exposure to schooling, extracurricular activities, nutrition etc. As many social, behavioural and health outcomes are grounded in genetics, examining the genetic characteristics and educational and labour market outcomes between siblings can shed light on a large number of questions related to health and academic and labour market success.

The study finds that poor mental health has a substantial negative impact on academic achievement. In contrast, poor physical health measures, such as being overweight (or obese) have negligible impacts on academic performance.



Steven Lehrer (Queen’s University)

While the rising rate of obesity and poor physical health among Canadian youth need to be mitigated, the results of Fletcher and Lehrer’s study suggests that equal attention needs to be paid to addressing mental health issues among young people. Poor mental health among youth appears to have a much more adverse affect on educational attainment and, in turn, future labour market outcomes of youth than poor physical health measures such as obesity.

\* Jason Fletcher (Yale University) and Steven Lehrer (Queen’s University and NBER) received the Victor F. Fuchs Research Award for the paper featured in this article. The [RAND Corporation](#) presents the Victor F. Fuchs Research Award to researchers publishing the best research paper with the potential to spawn new research in underdeveloped areas of health economics or health policy.



Kevin Milligan (University of British Columbia)

**“The study finds that an extra \$1000 of child benefits leads to an increase of 7.4 percent...in the math score”**



Mark Stabile (University of Toronto)

## Child tax benefits linked to better wage-earnings potential later in life

A wide body of literature supports the principle that increased income can be a channel through which improvement in a family’s ability to provide food, shelter, clothing, books, and other essential inputs for healthy childhood development can positively affect childhood development outcomes. A new study by **Kevin Milligan and Mark Stabile: *Do Child Tax Benefits Affect the Wellbeing of Children? Evidence from Canadian Child Benefit Expansions*** ([CLSRN Working Paper no. 12](#)), links increased child tax benefit income to better wage-earnings potential later in life.

The study uses recent reforms in the Canadian child-benefit system and the [National Longitudinal Study of Children and Youth \(NLSCY\)](#), to study the relationship between increased government transfers to poorer families, and the impact this has on child and family well-being.

Milligan and Stabile’s study has two major advantages from previous studies done on the area: one, is that they study Canadian children over a time period in which income transfer policies to families underwent substantial reform – which differed from province

to province, and across time and family types. This policy variation allowed for the examination of the impact of extra family income by comparing similar families who live in different provinces, or who are studied in different time periods. The second advantage to the study is that the usage of the NLSCY allowed the researchers to broaden the focus beyond the direct “resources effect” – direct investments of extra family income in education (books, educational aids, tutoring etc.) and also include analysis of several measures indicative of an active ‘family process channel’ – which is the effect lack of family income may indirectly have on family relations in areas such as increased stress, aggravation and troubled relationships between family members.

The study finds that an extra \$1000 of child benefits leads to an increase of 7.4 percent of a standard deviation in the math score and a 6.8 percent increase in the Peabody Picture Vocabulary Test – a standard measure of language ability for young children ages four through six. Compared to other results in recent literature finding an increase of 25 percent of a standard deviation for an extra \$10,000 in extra income, the observable result

in this study is relatively large. Milligan and Stabile also examine the impact of child benefits on indicators of mental and emotional well being, finding that more child benefit income leads to lower aggression in children and decreases in depression scores for mothers.

Breaking down their results by gender, Milligan and Stabile find stark differences across boys and girls. They find that increased income benefits have stronger effects on educational outcomes and physical health for boys and on mental health outcomes for girls. In general, it is found that girls show greater response on mental health and behavioural scores while boys show greater response on test scores. These findings provide support for the hypothesis that the benefits of child-tax income transfers can also operate to improve measures of family emotional well-being in addition to the more concrete improvement to family income.

Milligan and Stabile’s study contributes to a strong body of existing literature that increasingly shows that improvements in child mental health can lead to long-term academic success which is strongly correlated with improved earnings in the future.

## Endnotes

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