MIND & MATTER

How Money Helps to Build Brain Power

New research suggests that generous social benefits for lower-income families boost their children’s brain development

By Alison Gopnik

June 15, 2023 2:08 pm ET

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Psychologist Alison Gopnik explores new discoveries in the science of human nature. Read previous columns here.

We know that children who grow up poor are much more at risk for problems later on, from mental and physical health issues to lower education levels and less income as adults. It’s one of the clearest and most worrying results in psychology. Among other things, children from low-income families are more likely to develop anxiety and depression. More recently, we’ve also discovered that low income is associated with physical changes in brain development.
For example, children from low-income families tend to develop a smaller hippocampus—a part of the brain that is important for learning and memory.

The big question is how we could fix this. A new paper published in the journal Nature Communications—by Katie McLaughlin and David Weissman at Harvard and their colleagues—suggests that money can make a difference and so can certain social policies.

Low income is associated with many factors: the place you live, how much social support you can count on and the stresses you experience. In particular, low-income families face more stress, and we know that stress has important effects on brain development. But development is complicated; different social and physical and neurological changes all interact, so it’s hard to know exactly how you could relieve that stress. All this complexity might make it hard to design effective interventions.

Could something as simple as money help? F. Scott Fitzgerald once wrote, “The very rich...are different from you and me,” to which Ernest Hemingway responded: “Yes, they have more money.” Does low income hamper the capacity of children and adolescents? Do we make things better with large-scale social policies like child tax credits, Medicaid or other programs that get more direct financial aid to low-income families?
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The paper came out of a very large study of young brains and minds. The researchers got brain scans of over 10,000 children, ages 9-11, in 17 states and also assessed their psychological development. As in earlier studies, they found that lower family incomes were associated with problems like anxiety and depression and with smaller hippocampi.

But because they looked at so many children from so many different states, they could also compare states with higher or lower costs of living. And because states have very different social policies, they could compare children in states that have more generous child tax credits and expanded Medicaid, like Maryland and Vermont, with states that don’t, like Florida and Utah.

Money did matter. On average, wherever there was a higher cost of living, the effects of lower income on the brain and mind were greater. And the same effect held true for social policies—where assistance was more generous, low income had less impact. Moreover, the effect of social policies only kicked in for children who were eligible for those benefits; they didn’t have an effect on richer children.

Correlation doesn’t necessarily imply causation, but the researchers also controlled for a lot of other differences among the states, like population density, political preferences and education levels. Ideally, you would want a controlled study where families randomly received more income and you could track the effects on the children over time. A study like this called Baby’s First Years is under way, and the first results are promising. But meanwhile, this study provides some guidance and hope.

Making children’s lives better is valuable in its own right, of course. But ultimately, an investment in children could also be cost-effective, yielding more productive, thriving adults.