

Early childhood development



Young children naturally invite interaction.

Photo: Laurel McCalla

8 things everyone should know about early development

Will listening to Mozart make your baby smarter?

Is brain development solidified after age three?

The short answer to both questions is no, although popular misconceptions have suggested otherwise.

The Mozart Effect: Parents were advised to play classical music tapes to their babies after it was incorrectly and widely reported that this would improve their IQ. What researchers found — based on limited findings in adults, not children — was that listening to a Mozart piano sonata may temporarily improve spatial intelligence or the ability to think in pictures.

It's all over by age three: Misinterpretation of research on sensitive periods of brain development led to other wrong conclusions — namely, that brain development was essentially complete by age three. What studies indicated, however, is that developing brain functions are particularly receptive, or sensitive, to environmental influences during the early years. The brain continues to develop and change throughout life, however.

How to separate facts from fiction?

Scientists became concerned over inaccurate media coverage of the rapid advances made by neuroscience in the 1990s, especially when this led to misguided policies and parenting advice. The Harvard-based National Scientific Council on the Developing Child brought together leading experts and a U.S. communications think tank on social issues called FrameWorks to tackle the problem. After seven years, the council was able to create “a core story on child development” that was scientifically accurate and easy to understand.

The eight key concepts were presented in an article recently published in the *Child Development* journal.

1. Child development lays the foundation for community and economic development. Healthy children create healthy communities and economies.
2. The architecture of the brain is built through a step-by-step process that begins before birth and continues into adulthood. Building a strong foundation in the early years increases the chances of positive development, and vice versa.
3. One skill leads to another. Brain development occurs from the bottom up, with increasingly complex skills and capacities built on top of simpler skills and capacities.
4. Thinking, emotional, physical and social skills are intertwined. So is learning and behaviour, and mental and physical health. You cannot address one area without affecting the others.
5. Children's relationships with family, caregivers and the community shape the wiring of the developing brain. This happens through a serve and return process, like in a tennis or volleyball game. Young children naturally reach out for interaction. When adults respond consistently and appropriately, the brain is wired in a way that supports healthy development. When adults do not respond or respond negatively, the brain is wired in a way that leads to dysfunction and difficulties.
6. Toxic stress in early childhood, caused by extreme poverty and abuse, for example, can damage the developing brain and cause lifelong difficulties in behaviour, learning and mental and physical health.
7. The brain becomes less malleable and behaviour more difficult to change over time. Providing children with the right supports for healthy early development is an effective preventative measure.
8. Early childhood supports can be measured for their effectiveness, and sound policy and program choices can then be made.

Source: Jack P. Shonkoff and Susan Nall Bales. *Science Does Not Speak for Itself: Translating Child Development Research for the Public and its Policymakers*. Child Development. January/February 2011, Volume 82, Number 1, pages 17-32. Control-click [here](#) or go to <http://onlinelibrary.wiley.com/doi/10.1111/j.1467-8624.2010.01538.x/pdf>