

CONVERSATION GUIDE

The Effects of Early Experiences on Lifelong Learning and Health

Part 2: The Biology of Early Adversity (with Dr. Nicole Sherren, Palix Foundation)

Understanding how adversity affects children's brain development has important implications for creating welcoming, caring, respectful and safe learning environments.

Key understandings

- Stress is also a factor in shaping the architecture of the developing brain, but not all stress is the same.

Three levels of stress:

- *Positive stress* (like meeting new people) produces a mild and brief activation of the stress response system and supports the development of emotional regulation and coping skills.
- *Tolerable stress* produces a more intense and longer lasting activation of the stress response system but is buffered by supportive adult relationships that help children regulate their emotions and cope with the threat.
- *Toxic stress* produces a severe, prolonged activation of the stress response system and there are no supportive adults available to buffer the child's response to the stress. Toxic stress is caused by adverse experiences like physical, sexual or emotional abuse, chronic neglect, exposure to violence, or living with a parent with an addiction or untreated mental illness.
 - Toxic stress can weaken brain circuits as they are forming, altering the architecture of the developing brain. Toxic stress also damages other bodily systems such as our cardiovascular, immune, and metabolic systems and can result in a lifetime of difficulties related to learning and health.
 - How toxic stress affects a child's outcomes depends on which areas of the brain were forming when the child was exposed. However, the brain continues maturing until our mid-twenties, meaning there is a long window of opportunity for interventions.
- Whether a child has positive or negative life outcomes can be thought of like a scale that tips to one side or another. If we work together as a community to ensure that there are lots of positive experiences stacked on one side, and as few toxic stresses as possible stacked on the other side, the child will have positive and healthy life outcomes.

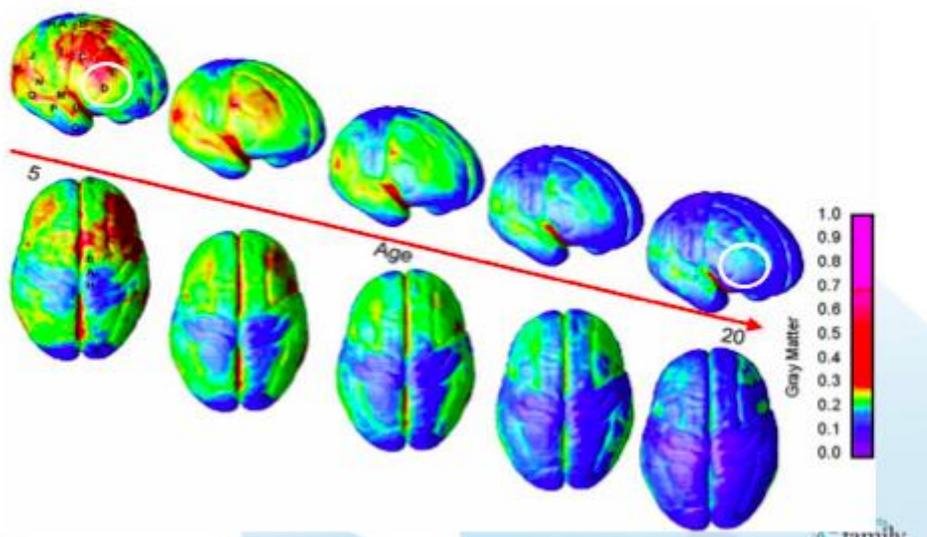
For more information

- View the 4-minute video *Toxic Stress* on the Alberta Family Wellness website: <http://www.albertafamilywellness.org/resources/video/toxic-stress-0>

Questions for reflection and discussion

- How would you describe your staff's current understanding of the impact of different types of stress on children's brain development? How could this understanding be integrated into your school or jurisdiction's professional learning and instructional planning?
- What is happening already in your school or jurisdiction to support students who are coping with stressful experiences?
- Are there current activities or practices in your school or jurisdiction that might cause unnecessary or unintended stress for some students? If yes, how could these practices be modified?
- How could using what we know about adversity in childhood inform how we create welcoming, caring, respectful and safe learning environments?
- What school-wide approaches are currently being implemented in your school or jurisdiction that could be leveraged to buffer students from the effects of toxic stress?
- Consider the slide below. What are the implications of this information for designing new interventions and supports for students?

Brain Still Maturing Until ~ 25 Years



Source: Gotgay, Giedd, et al., 2004