

EXPERIENCE AND THE DEVELOPING BRAIN

December 18, 2018
Wellstone Center



**INTERFAITH
ACTION** OF GREATER
SAINT PAUL
OPPORTUNITY SAINT PAUL

Introduction and Data

THE PRESENTATION

Opportunity St. Paul Director Zac Poxleitner harkened back to the story he told to begin Session Two about the hypothetical family of four living on 63K in St. Paul. (Remember: According to the Massachusetts Institute of Technology's [Living Wage Calculator](#), the average family of four requires an annual income of \$70,077 to afford proper housing, enough food, basic health insurance and other essentials, such as child care). He then shared some additional statistics to help set the stage for the evening's discussion about how the daily stresses of making ends meet can impact the healthiest of families and affect how young brains evolve and adapt.

THE LESSONS

- In St. Paul, nearly 22 percent of the population lives at or below the Federal Poverty Level, which \$12,140 for an individual, \$24,300 for a family of four. (For a review of the most current poverty statistics in the Twin Cities, visit the [Minnesota State Demographic Center's website](#).)
- Economists and social scientists estimate that to provide for their basic needs, people need to live at 200 percent of the poverty line. In St. Paul, 42.3 percent of the population are living on less and struggle to pay for fundamentals. (To learn more about how these numbers break down, see [Poverty in St. Paul: What the Data Tells Us](#), a report from Minnesota Compass.)
- In St. Paul, 30 percent of children are living in poverty and nearly 70 percent are eligible for free or reduced lunch programs, since they [live at or below 185 percent of the poverty line](#).
- The metropolitan statistics are particularly stunning, since the [Opportunity Index](#) rates Minnesota as the second-best state in the nation for economic mobility.

The Development of Brain Architecture: Relationships, Experience, and Toxic Stress

THE PRESENTATION

As a youth basketball game rumbled below a comfortable gathering spot at the Wellstone Center, Regents Professor and Distinguished McKnight University Professor, Dr. Megan Gunnar helped explain how some of those players' brain development may have been impacted by poverty in the surrounding community. Using a dynamic PowerPoint [which is attached to this email for you to download], she emphasized that the more we know about child development, the more we can all do to create better opportunities and healthy outcomes for every member of our community.

([Click here](#) to learn more about Dr. Gunnar's biography and groundbreaking research.)

THE LESSONS

- Healthy brain development is not about "good" or "bad" genes. That's a damaging myth. What's important is that the right genes are expressed in the right context. What we experience in life "writes

on genes," a process studied by those in the field of epigenetics. Environmental factors can literally turn genes "on" and "off". This helps people adapt and thrive in certain environments but can also cause disorders.

- For further detail, see the [Brain Architecture page](#) at the Center on the Developing Child's website at Harvard University.
- A misconception in the United States: "We think intelligence is something we have, as opposed to something we grow."
- Our brains circuits are wired in a bottom-up sequence, and much of the development of these circuits happens in the first few years of life. It's like a snowball rolling downhill. The more we learn the more we can learn. Or, as Dr. Gunnar says: "The brain becomes what the brain does." Healthy stimulation is important for developing healthy brain architecture.
 - See the first chapter of the book *Facts for Life*, "[Child Development and Early Learning.](#)"
- Humans come into this world expecting the context of relationships. And those relationships are the basis for healthy brain development. To learn more about this process, see Part 2 of the Harvard University's Child Development Core Story video series, [Serve and Return](#).
- Support reduces stress for overburdened caregivers. And stress is one of the primary causes of unhealthy brain development. As volunteers, we can assist and helping parents provide care and opportunity for children, which both relieves stress in children's homes and provides them with opportunities for the sort of concentration attention that is sometimes lacking.
 - For further detail, see the [Toxic Stress page](#) at the Center on the Developing Child's website at Harvard University.

[Click here](#) to see a highlight video of Dr. Gunnar's presentation.

[Click here](#) to watch Dr. Gunnar's full presentation.