



Mental health in infancy and early childhood affects every aspect of individuals' lives throughout their lifetime, including social functioning, psychological well-being, and physical health.

Does Maternal Support Impact Hippocampal Growth in the Early Years?

The early years (0-6) are a critical period for brain development. In fact, by four years of age, a child's brain is already 90% of the size of an adult's brain. Because of the brain's rapid development during early childhood, this is a time when development is most vulnerable and also a time when there is the most opportunity to have a positive impact.

Several studies have examined the link between chronic stress and brain growth and development in young children. These impacts can be life-altering and affect the individual's ability to self-regulate emotions and behaviour; cope with difficulties; or change, learn, and develop satisfying relationships.

Recently, Luby et al. (2012) examined whether maternal support in preschool could decrease maladaptive stress reactions and, thereby, increase hippocampus growth. In past research, smaller hippocampal volume has been shown to be related to adolescent and adult depression and other stress-related health conditions.

Two different measurements were taken over the course of several years. The first was taken when participants were 3-5 years old and thus included an assessment of parent-child interactions, with emphasis placed on levels of support for the

mother. The second measure was taken, at ages 7-13, when MRIs were performed to look at hippocampal volume. As gender impacts the volume of the hippocampus, this was taken into consideration. Preschool depression scores were also considered.

Maternal support during stressful tasks/times was seen to have a positive effect on hippocampal size. However, maternal support provided to preschoolers who already showed signs of depression did not result in increased hippocampal growth. It is hypothesized that this support needs to occur before the onset of depression and that perhaps depression, in and of itself, may impact growth.

Even though this is the first human research to look at empirical evidence of this association, the findings underscore the importance of fostering brain development in early childhood. Further research in this area is needed.

Luby, J., Barch, D., Belden, A., Gafferty, M., Tillmen, R. Babb, D., Nikimo, C., Suzuki, H., & Botteron, K. (2012) Maternal support in early childhood predicts hippocampal volumes to school age. *Proceedings for the National Academy of Science of the USA*, 109(8). Retrieved October 5 from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3286943/>



Professional Development Opportunities

Alberta Early Years Conference

*Marriot River Resort
Edmonton, Alberta
October 6-7, 2014*

To register, [http://
albertaearlyyears.ca/](http://albertaearlyyears.ca/)

Child Care 2020 From Vision to Action

*Fort Gary Hotel, Winnipeg
November 13-15, 2014*

Registration: \$425.00
To register, go to
www.childcare2020.ca

RIRO Resiliency Trainings

*Moose Jaw, SK
September 17-18., 2014
Contact: lklyne@skprevention.ca
Tisdale, SK
October 14 -15, 2014
Contact: robincon@khr.sk.ca*

FASD Live: Mapping Our Way to Success

*Saskatoon Inn and Convention
Centre
Saskatoon, SK
October 7-8, 2014*

Registration: \$400.00 (EB)
To register, go to www.skprevention.ca

Circle of Security Parenting DVD Training

*Liu Institute for Global Issues
University of British Columbia
Vancouver, BC
September 8-11, 2014*

To register contact,
www.circleofsecurity.ca

Teaching Social Thinking Through Stories and Play to Early Learners

*Fort Gary Hotel, Winnipeg
November 13-15, 2014*

Registration: \$425.00
To register, go to
www.childcare2020.ca

2014 SK Conference on Children and Adolescence

*Travelodge Hotel
Saskatoon, SK
November 24-25, 2014*

Registration: \$439.00
To register, go to [http://
www.jackhirose.com/
workshop/the-2014-
saskatchewan-conference-on-
children-and-adolescents/](http://www.jackhirose.com/workshop/the-2014-saskatchewan-conference-on-children-and-adolescents/)

Please feel free to distribute this information to others. If you or someone you know is interested in participating in the network, please contact Lee Hinton at lhinton@skprevention.ca.

saskatchewan
preventioninstitute
our goal is **healthy** children

1319 Colony Street, Saskatoon, SK S7N 2Z1
Bus. 306.651-4300 Fax. 306.651.4301
www.skprevention.ca