BU BEE Lab Summer 2015 Newsletter

Referral Contest!

Thank you so much for being part of the BEE Lab community!

- As a thank you for your participation, we are running a referral contest! Word of mouth is the best way to get more families involved in the BEE Lab community. Please help us by telling your friends about us and sharing the link to our website:

http://www.bu.edu/cdl/bee/for-parents/

- Families can also call us at 617-353-9328 or email us at beelab@bu.edu
- For every family who signs up on our website and lists you as the referral source, you will receive one entry in our drawing for **two $50 Amazon gift cards!**

Research Update: Findings from the SEED Study

THE POWER OF A GOOD NIGHT'S SLEEP

- In the ***Social Experiences and Early Development (SEED) study***, 12-month-old babies who slept longer at night had lower levels of the stress hormone cortisol in their hair. Those whose moms described them as less fussy also had lower cortisol levels. Smiling at your baby and talking to your baby also helps to buffer them from biological stress.
- We found that when babies slept longer at night, their brains were more engaged while playing with our friendly researcher. Babies learn and develop through playing with parents and caregivers, and our research suggests that being well rested can help babies to make the most of these social learning opportunities.

- **What's the take home message?** A good night's sleep protects your baby from stress and supports your baby's learning!

BUILDING YOUR BABY'S BRAIN THROUGH JOINT ATTENTION

- In the ***SEED study***, we measured 12-month-old babies' brain activity while our friendly researcher pointed to and commented on pictures. This interaction is called joint attention because the researcher and the baby were both looking at the same picture together. Babies showed more brain activity when the researcher was engaging them in joint attention than when the researcher was singing songs or hiding behind a curtain. We found that babies were specifically activating the social parts of their brains during joint attention, which means that joint attention not only helps babies to socially engage with the world, but also helps them to develop social brain networks as a foundation for future social and language development.
- Twelve-month-old babies who didn't smile or laugh much during our puppet show were the ones who showed the biggest increase in brain activity when our researcher played with them, compared to when she was behind the curtain. These more reserved babies especially benefited from social interaction!
- Babies whose moms described them as less fussy showed more activity in social areas of the brain when our researcher interacted with them.
- **What's the take home message?** Pointing and talking about people and objects helps build connections in your baby's brain as early as 12 months, specifically in social brain areas!

Research Update: Findings from the MIND Study

PARENTS AND THE FOUNDATIONS OF SELF-CONTROL

- Children benefit from having parents with better self-control and attention skills, known as executive functions. With help from all of our families who participated in the ***Mapping Intelligence and Neural Development (MIND) study***, we now know that for families who face more economic strain, parents who demonstrate greater executive function skills particularly promote these school readiness skills in their preschool children!

- Parents' own executive function skills promoted children's cognitive development, especially for children with lower levels of the stress hormone cortisol.
- **What's the take home message?** Supporting parents with strategies to increase their own executive function skills is just as important as helping children build these lifelong skills.

GETTING READY FOR KINDERGARTEN: EXECUTIVE FUNCTION IN THE BRAIN

- The ***MIND study*** is one of the first to show the brain basis for preschool children's executive function. We asked children to sort pictures by different rules. Children's brain response to each picture related to how well they did at this game. Children who showed a brain response that has to do with efficiently figuring out which sorting rule to use completed the game faster. Interestingly, girls on average showed a more efficient brain response to the task than boys.
- Children were more careful and accurate in their responses when they were given feedback and sticker rewards – as every parent knows, stickers are very motivating!
- **What's the take home message?** Understanding the brain areas young children use to succeed at executive function tasks, and the conditions under which they learn best, are important steps toward designing effective interventions to promote executive function skills and school readiness.

Current and Upcoming Studies

SHIELD Study (Infants & 3.5-year-olds)

The ***Stress Hormone Influences on Early Learning and Development (SHIELD) study*** aims to understand how children's physiological stress relates to their various life experiences.

LAMP Study (6- to 8-year-olds)

In the ***Language and Mind Project (LAMP)***, we are interested in how bilingual children develop attention and memory skills, as compared to monolingual children.

MAPP Study (4 ½ - to 5 ½ -year-olds)

The goal of the ***Mind and Attention Processes in Preschool (MAPP)*** study is to understand more about how preschool children develop self-control and memory skills that prepare them to succeed in kindergarten.

Keep in Touch with the BEE Lab

- Call us! 617-353-9328
- Email us! beelab@bu.edu
- Follow us on Facebook! https://www.facebook.com/BUbeelab