

SUMMER 2022 : NEWS FROM

The Gunnar Lab

for Developmental Psychobiology Research



UNIVERSITY OF MINNESOTA

Greetings from Professor Megan Gunnar:

The Gunnar Lab studies stress physiology and neurobehavioral development and the role of social relationships with

parents, peers, and friends in regulating stress. It has been quite a time for stress research and human research in general since March of 2020. In-person research was put on hold for many months. The lab pivoted to conducting research remotely and developing new tasks in order to do that well. We also pivoted to learning about the impacts that COVID-19 (i.e., illness, job loss) and the mitigation practices (i.e., working from home, school closures, social isolation) were having on parents and children.

One research activity the lab became involved in was a study of families with children under the age of 5 years. The study was conducted by Dr. Philip Fisher, now at Stanford University and then at the University of Oregon. Dr. Fisher and I have collaborated on many projects over the years. This project involved brief questionnaires completed on smart phones by thousands of families who were signed up for a variety of parenting listserves around the country. Initially, we fielded questionnaires each week then less regularly

as the pandemic progressed. The goal was to gather and process information rapidly and then get that information out for use by people who were making policies affecting families and children. Soon graduate students from the Gunnar Lab got involved helping to write policy briefs. You can look at how the pandemic affected families over the entire period from April 2020 to now by checking out the [RAPID-EC \(Rapid Assessment of Pandemic Impact on Development - Early Childhood\) website](https://rapidsurveyproject.com/latest-data-and-trends). This report covers changes in childcare use, well-child pediatric visits and vaccination rates, family hardship, and parent well-being over the last 2 years. <https://rapidsurveyproject.com/latest-data-and-trends>. For example, Figure 1 shows four symptoms reported by parents in the study.

The lab has also completed three COVID-19 studies and the results are reported in the first three stories in this newsletter. It is no surprise our research found that mother and child hair cortisol levels are higher with more COVID-19 stressors. However, we also found that mothers who scored higher on self-compassion weathered the early months of the pandemic better, meaning that the pandemic stressors did not increase their parenting stress (and view that their child was difficult) as much as they did for women who scored lower on self-compassion.

Finally, we have been looking at how preschool children ages 2-5 are navigating a return to school and finding that those with more peer experience

Gunnar, to page 2

PARENT WELL-BEING OVER TIME

Four symptoms (described below) are plotted to represent parent distress. Responses for each symptom were averaged to create a single score and transformed to a range of 0-100 for each caregiver at each month.

- **Stress:** Caregivers responded to the question "Stress means a situation in which a person feels tense, restless, nervous or anxious or is unable to sleep at night because his/her mind is troubled all the time. Have you felt this kind of stress in the past week?"
- **Loneliness:** Caregivers reported how often they felt lonely.

- **Anxiety:** Caregivers reported how often they were bothered by "feeling nervous, anxious, and on edge" and "not feeling able to stop or control worrying."
- **Depression:** Caregivers reported how often they were bothered by "feeling down, depressed, or hopeless" and "little interest or pleasure in doing things."

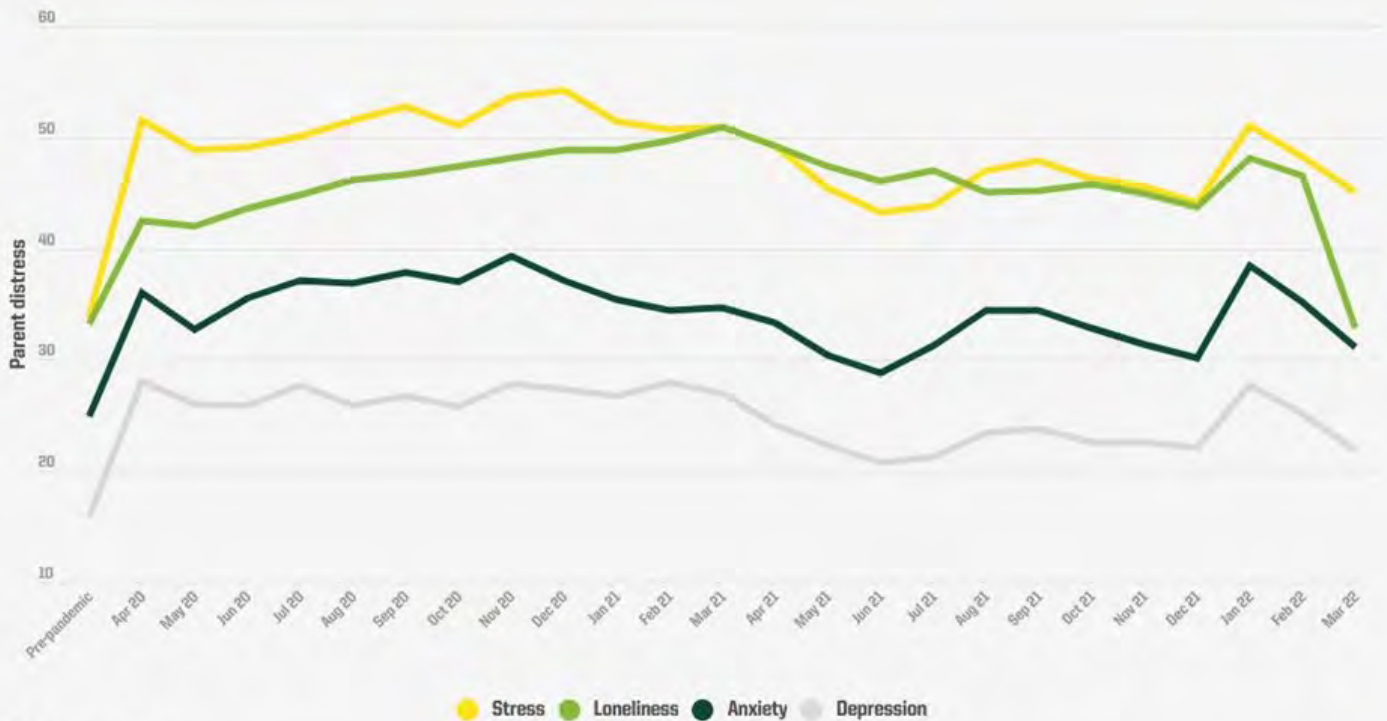


Figure 1. RAPID-EC reported parent’s levels of stress, loneliness, anxiety and depression at the start of the Covid-19 pandemic of April 2020.

Gunnar, from cover

during the 2020-2021 period, transitioned more easily into the 2021-2022 school year. Interestingly, it was not sibling or older (school-age child) experience that helped, but experience being around other children their age. We are now coding videotapes of their initial days at school to get a richer idea of how school-entry was navigated by these young children.

We continue to collect data on studies we started before the pandemic but then had to put on hold. We describe these studies in this newsletter and welcome those of

you with children of the ages we are testing (mostly teens) to get involved. The Cardiovascular Health Study follows-up internationally adopted children and provides all the families participating with high quality measures of the child’s cardiometabolic functioning.

As I do every year, I want to deeply thank all of the families who have helped us with our research. We are very grateful to you and your children, and hope that your research experiences have been fun and interesting.

Megan R Gunnar



Mother and child stress hormone production during the Covid-19 pandemic

By Nicole Perry & Bonny Donzella

It is not news that the pandemic has been stressful for both parents and children. We know that a person's psychological stress shows up physically, as the body responds to stressful events. In this study, we wanted to look at whether the stress of the pandemic could be seen in mother's and children's stress hormone production, and whether mother's stress hormone production was associated with that of her child(ren).

To measure stress hormone production we took a small sample of hair. Cortisol, one of the main stress hormones of the body, accumulates in hair. Hair grows about 1 cm a month. We take 3 cm's of hair from the back (vertex) of the head to measure stress hormone production in the last 3 months. Just a little bit of hair is needed.

Nearly 200 mothers completed online questionnaires about their pandemic-related experiences, and sent in samples of hair from

themselves and their children. We collected these data from August 2020 to March 2021.

What we found:

- (1) Moms produced more stress hormone if they reported family job loss, working from home, reading more pandemic-related news, and less contact with others (i.e., more social distancing).
- (2) Children produced more stress hormone in families experiencing job loss and less contact with others (i.e., more social distancing).
- (3) Mom and child stress hormone production was correlated, with the highest correlations for the youngest kids, but even among the oldest kids, the correlation with mom's stress was statistically significant.
- (4) Moms with higher stress hormone levels reported their children to have greater anxiety and depressive symptoms.

PARENTING STRESS DURING THE PANDEMIC: A SUB-STUDY OF

THE TODDLER AND PARENT PLAY STUDY

By: Emmy Reilly, Katie Edmonston, & Ruby Davenport

Parenting stress can be measured by looking at stress hormones, it can also be measured by having parents complete a questionnaire about how stressful they find it to parent their child(ren). The parenting stress questionnaire has been used in countless studies over the years. We examined parenting stress during the pandemic in a study that was originally designed to study the relationship between compassion and parenting.

Let us explain.

Warm, sensitive parenting is one of the most beneficial aspects of a child's early experiences. The goal of the Toddler and Parent Play Study is to see whether compassion for others and/or self-compassion (compassion towards yourself) is associated with nurturing parenting behaviors in parents of toddlers. Compassion involves feelings of caring and concern for others and a motivation to relieve the suffering of others. Self-compassion includes feelings of kindness and understanding towards your own suffering and understanding your inadequacies without judgement, which may help reduce stress and support parenting. When we measure self-compassion and compassion for others, women are often higher on compassion for

others than they are on self-compassion.

Our plan was to first measure self and other compassion online and then bring parents and toddlers to our lab to observe them interacting to measure sensitive parenting. But then the pandemic struck and closed down in-person research. So, faced with lemons, we decided to make lemonade.

We pivoted to examining how families who had completed our first questionnaires before the pandemic would respond six months into the pandemic if we measured parenting stress and how impacted the family had been by COVID-19. Would other compassion and/or self-compassion make a difference in parenting stress in families affected more by the virus?

The Pandemic Sub-study of our Toddler and Parent Play Study was conducted 100% online, using online surveys and video calls.

Who participated?

We had 151 families with children aged 18- to 60- months old complete two online surveys over the course of six months during the COVID-19 pandemic. 86 of those families also met with our research team over Zoom to complete tasks such as providing a speech sample

about their child and engaging in structured play with their child.

When did we collect data?

Data were collected from June 2020 to January 2022.

What we did

Parents took two online surveys answering questions about their household, other-compassion, self-compassion, parenting stress, and COVID-19 pandemic impacts. The parent, child, and someone from our research team all joined for the video call portion of the study. We first talked solely with the parents and had them tell us about their child.

Then, we asked their child to join the call and had them complete a variety of tasks with their parent. These tasks include playing with some toys, cleaning up the toys, and working together to make a face out of Play Dough. During the interactions, the researcher turned off their camera, allowing the parent and child to play as they would typically.

What we found

Self-compassion was protective during the pandemic, more so than compassion for others. We saw a wide range of self-compassion in

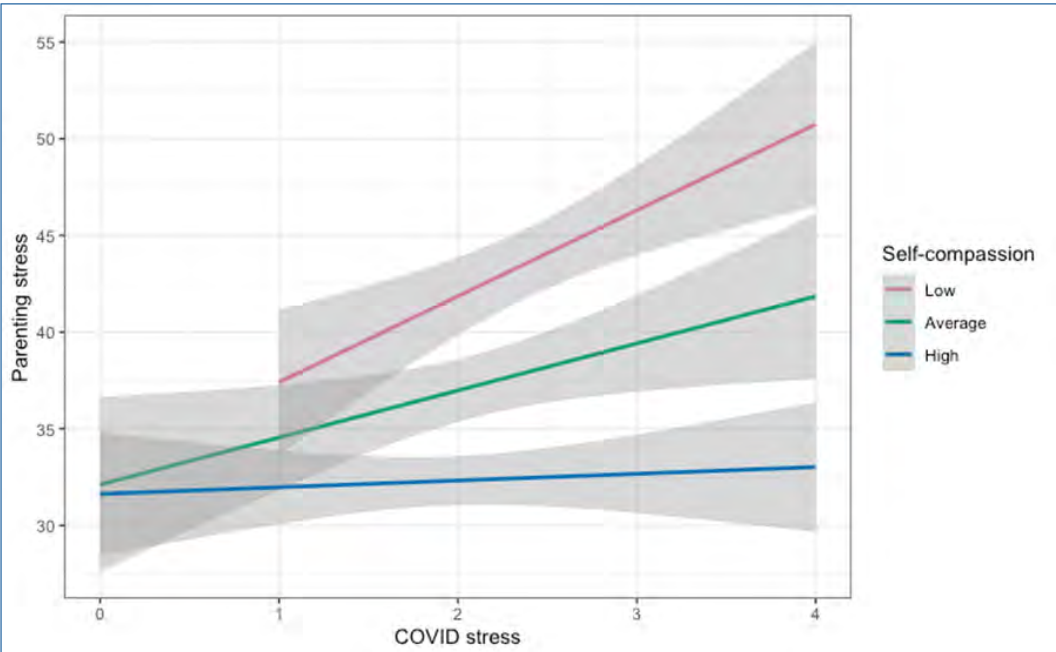


Figure 2. Parent self-compassion buffered the association between COVID stress and parenting stress.

the parents in this study. From the online surveys, we found that parents with greater self-compassion were likely to report lower parenting stress levels. And self-compassion buffered the impact of COVID-19 stress on parenting stress, such that for parents with high self-compassion, there was no association between COVID-19 stress and parenting stress (see Figure 2).

For parents of young children during the COVID-19 pandemic, giving themselves kindness and caring during difficult times may help to buffer stress and support warm, sensitive parenting behaviors towards their children. In this way, self-compassion can benefit both parents and their children, and may promote healthy child development.

From the video calls, we found that parent self-compassion was associated with more warm, nurturing parenting behaviors (see Figure 3).

The Takeaway

Parenting is hard. Parenting of young children during the pandemic was really hard. Women typically (and it was true of the moms in our study) report more compassion for others than for themselves. Yet, from this study, it seems that when the parent can acknowledge and accept their imperfections without judgement, they navigated the pandemic with less negative fallout to their parenting.

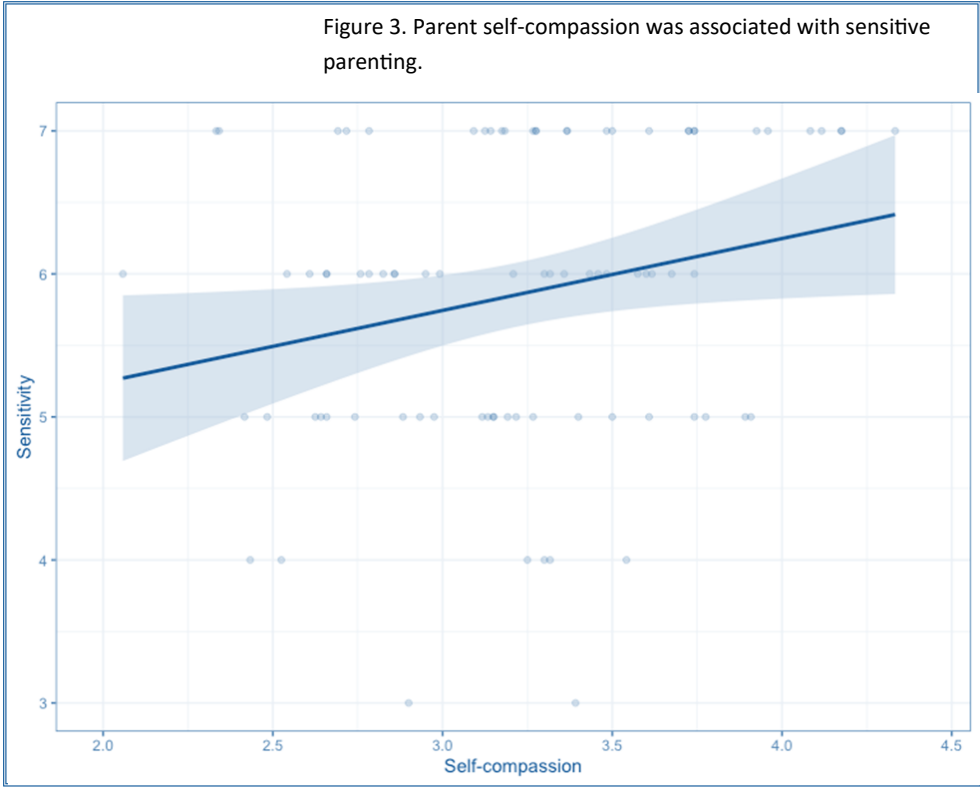


Figure 3. Parent self-compassion was associated with sensitive parenting.



The Pandemic's Effect on Young Children's Social Development

By Maya Bowen

Throughout the pandemic, one of the main questions everyone has been asking is, how will it affect our children? When COVID-19 hit the United States in the spring of 2020, many schools were forced to shut down. Preschool is an important time for children, as it is their first introduction to formal education, and many times, it is the first time children are exposed to new adults and large groups of children around their own age. The increased interactions provide children the chance to develop and practice their social skills, like taking turns, sharing, and conflict resolution. With preschool closures, young children in the midst of a developmentally-critical learning period were denied important opportunities they would normally experience in starting school.

Instead, many preschool-aged children were spending increased time with adults working from home and experiencing limited, if any, exposure to other children. Over the course of the pandemic, however, variation among children in peer and other-adult exposure was large. Some children were able to return to preschool at half or minimal capacity, others were placed in child care for some of the week, and still others stayed at home but may have had access to neighborhood kids or the children of close family friends.

In fall of 2021, many preschools began opening back up with almost regular rates of enrollment. We wanted to see how children readjusted in their return to preschool after a wide range of peer and other-adult social experiences during the

pandemic.

What we did

We collaborated with the Child Development Laboratory School (CDLS) half-day program at the University of Minnesota to study how varying degrees of peer and other-adult social experience during the pandemic relate to how children adjust to a return to preschool social interaction.

In the fall of 2021, the CDLS half-day program had an enrollment of 74 children, ages 2-5 years old, in 6 different classes with varying class schedules. We set up five GoPro 360 cameras on the 3 playgrounds used at the half-day program. With these GoPro 360 cameras, we were able to film 2-hours of each class's free play sessions each day for the first 6 weeks of classes. The video footage is currently being observed by a team of trained research assistants who will code the children's moods, behaviors, and interactions. This will give us detailed behavioral data on children's natural interactions.

In addition to the filming, we also collected a parent survey asking about their child's social experiences from the fall of 2020 through the summer of 2021 and a teacher survey with a rating of each child's adjustment to preschool after the 12th day of classes. Other information such as demographic and temperament survey data were shared with our team.

Preliminary findings

So far, we have received 57 completed parent

surveys and are in the process of collecting the remaining surveys. Based on the data we have for these 57 children, we found that while only 6 families reported having a family member with COVID-19 between the fall of 2020 and summer of 2021, over half of families reported the pandemic being very stressful. Parents reported a moderate amount of interaction of the child with adults outside the family, with an average of 3 but as many as 7 other adults. In the fall of 2020, there was little interaction with children outside the family, with 45% of parents reporting that their child didn't interact with any other preschool-aged child and 55% of parents reporting their child interacting with 1 or more children (range 1-12). However, child interaction seemed to increase in the winter 2020 and spring 2021, with 70% of parents reporting interaction with 1 or more children (range 1-12), and even more so in summer of 2021, with 80% of parents reporting interaction with 1 or more children (range 1-20). This pattern follows lock down measures at the beginning and then reopening measures with the introduction of the vaccines.

When the children had been at school for 12 days, the teachers rated each child's ease of entry on a 5-point scale from 1 to 5: 1 – still very anxious, worried, experiencing separation distress or otherwise needing a lot of support; 3 – adjusting fairly typically for someone their age, but needing some support at times; 5 – has really entered into the swing of things, seems very at home. So far, we have only been able to analyze the results for the children whose parents completed the survey. The teachers rated 85% of these children as responding in ways typical of children their age or adjusting even more readily. Only 16% were rated as needing more time to adjust.

However, even with these ratings we saw associations with the children's experiences during the fall 2020 through summer 2021 and the teacher's adjustment scores. Comparing the number of child interactions to the teacher's rating of adjustments to preschool, we found that playing with other preschool-aged children during the pandemic was associated with higher teacher adjustment ratings. This held true even after we took account of the ages of the children and whether they had attended the CDLS the previous school year (2020-2021). Interestingly, the children who adjusted the most

easily (ratings of 4 and 5) had been with 3-5 preschool children at least once a week on average during the previous school year, while the children who were adjusting the most slowly (ratings of 1 and 2) had been with 1 or fewer children each week during that period. Notably, when we examined experiences with older children (ages 6-11), these experiences were unrelated to ease of adjusting to preschool in the fall of 2021.

Conclusion

Our preliminary analysis has given us some interesting leads to pursue, but we do not have the full picture yet. We are currently in the midst of collecting the remaining parent surveys, which will be crucial for understanding the children's social experiences during COVID, and in continuing to code the large amount of GoPro 360 footage, which will be important for understanding children's behavior and their patterns of adapting to the start of the school year. Findings from this study will help us better understand how the pandemic may influence children's adjustment to preschool, and that information will be invaluable in helping teachers better support children's varied experiences.



360 view of GoPro camera

Brain Study of Stress & Social Support

By: Zach Miller & Bonny Donzella

when they are not. Bright spots reflect greater activity, so greater “work” under pressure, as seen in the images. We can see greater activity in the frontal cortex, specifically in the middle frontal gyri. These areas of the brain are associated with literacy and numeracy, with retrieval from long-term memory, and with decision-making. The early analyses confirm that our task works and our data make sense.

In our ongoing study of the effects of stress and social support on the brain, we have some preliminary findings to report. We have had 125 families already participate in this in-person session at the MRI. That alone, given the pandemic constraints on all of our lives, is something of a victory to us! We can't thank families enough.

What we can share at this time is, proof that math is harder when you are under stress. Figure 4 shows images that demonstrate regional changes in the brain when a person is performing the math task while under pressure as compared to

Participants read the math problem, use their knowledge of arithmetic, and choose their answer. We will begin to examine comparisons of social buffering conditions in future analyses, once we have a full sample.

Help us with science! Tell your friends. This study is currently in data collection phase and we could use your help to bring it across the finish line. We are recruiting 11-14 year-olds for participation. Email us at socialbuffering@umn.edu or call 612-626-8949 for an eligibility intake.

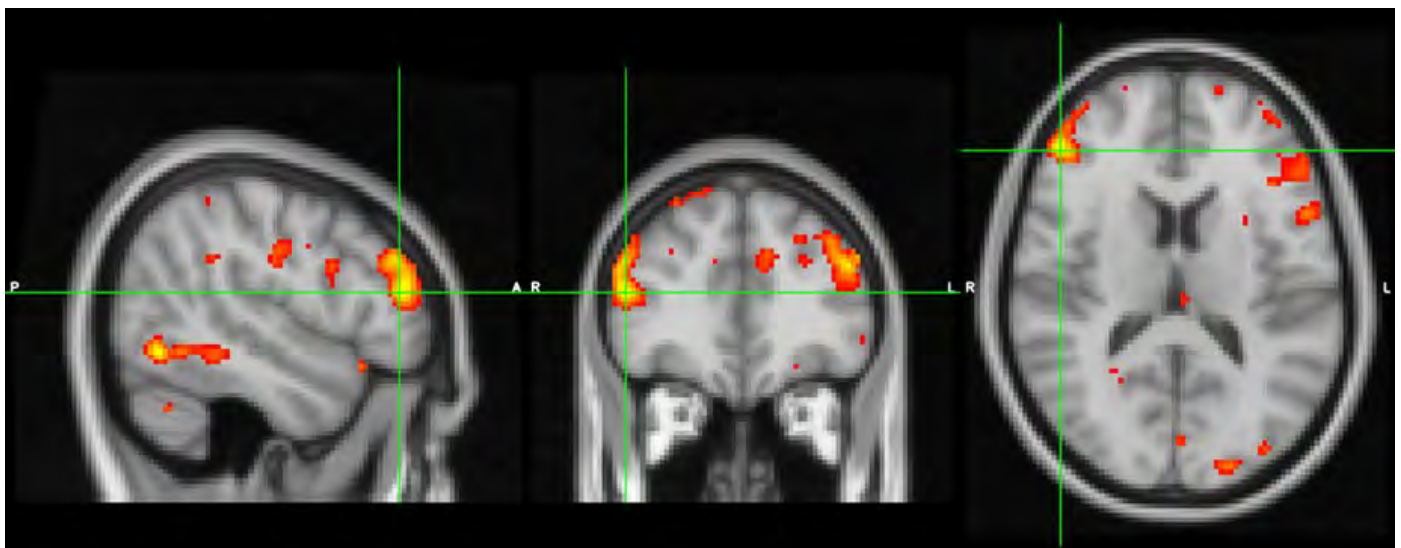


Figure 4. Images of the brain showing spots that are activated when participant is completing mental math.

Interview with the Cardiovascular Health Study Team

Bonny (Senior Research Fellow in the Gunnar Lab): Hello families and friends, the Gunnar lab is now hosting interviews with our lab coordinators and research assistants to share their experience with our ongoing studies. This year we have Danruo with us. Danruo is a fourth-year graduate student at the Gunnar Lab.

Danruo, could you tell us a bit about the study you are currently running?

Danruo: Absolutely! The study my colleagues and I are running is the [Cardiovascular Health Study](#), which is designed to examine how early life experience affects adolescents' cardiovascular health.

Bonny: Oh, that sounds very interesting! Can you tell us more about that?

Danruo: Of course! In developmental science we know that atypical rearing situations may “program” or shape our body and brain differently, so we could be more adaptive to the environment, which is good for our immediate survival. However, these changes may not be healthy for us in the long-run and could even put us at a higher risk for developing physical disorders. For this study, we aimed to see if the early experience of institutional/orphanage rearing would affect cardiometabolic functioning in adolescence, which is the earliest age period when these assessments are associated with adult cardiovascular health.

Bonny: It sounds pretty cool! But how do you measure all these? I mean, say, if I were a parent and I would like to participate, what should I expect?

Danruo: This is a great question! The participation process is actually very simple! There are two parts of the study: **In the first part**, you and your child(ren) just need to fill out some online questionnaires, telling us what you guys had for dinner, how your child(ren) have been feeling lately, how much you and your child have exercised in the past few days, just simple stuff like that. Then in **the second part**, you and your child(ren) would be invited to our clinic at the University of MN. Your child would have the waist, hip, height, and weight measured by a nurse. Then we would measure your child's blood pressure and do a fasted blood draw. We would also take a small hair sample to measure the child's stress hormone and do a DEXA scan.

Bonny: Wait, hair and stress hormone?

Danruo: Yes! A stress hormone called cortisol can be detected in our hair. Since hair grows 1 centimeter (0.4 inches) per month, with a 3-centimeter hair sample, we would be able to tell how much you have been stressed (concentration of cortisol) in the past 3 months, and how that is related to your cardiovascular health.

Bonny: And what is DEXA?

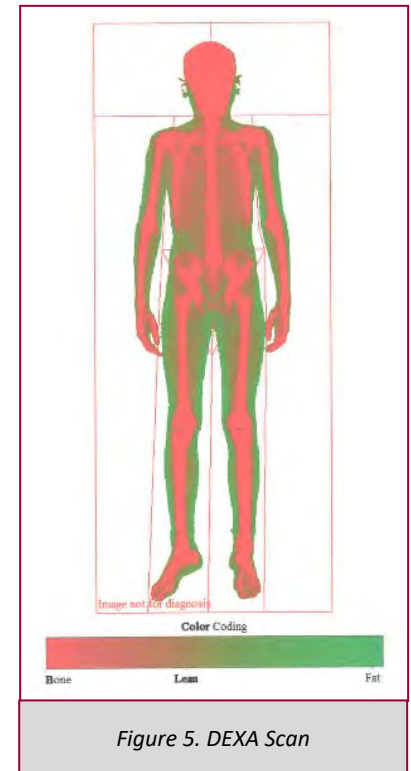
Danruo: It is an x-ray machine that takes a picture of your body. It gives you information about your body composition, like body fat and muscle mass. It is totally *noninvasive* and all you have to do is to lie still for about 7 minutes. You would have a copy of the DEXA scan to take home with you after our study.

Bonny: It all sounds very interesting. Would I be eligible to participate?

Danruo: We welcome parents and their child(ren) 12-21 years old to participate in our study! Compensation and free parking will be provided. For more information, please email us at cardiohealth@umn.edu.

We are looking forward to hearing from you!

This research is conducted by Dr. Megan Gunnar in collaboration with Drs. Aaron Kelly, Brie Reid, Don Dengel, Michael Linden, and Alicia Kunin-Batson. This research is supported by The National Heart, Lung, and Blood Institute R01 HL149709. This study is approved by the UMN Institutional Review Board #STUDY00009969.



Friends, Peers, & Stress Study

By *Bonny Donzella*

Can I get a little help from my friend?

Over many years, we have learned a lot about how the body uses a hormone called cortisol to cope with challenges, and how the response changes across development. Among other things, cortisol helps the body prepare calories for ready use, as one would need to face the extra effort of some stressor. Social relationships are powerful buffers of stress hormone activity. The first relationships that buffer stress are the child's relationships with parents. But as children grow up, friends become important stress buffers. In fact, mid-point of puberty and beyond, parents are not very effective at lowering their child's stress hormone production when the teen is facing a challenge, like giving a speech.

Given that the teen years are a time of vulnerability to anxiety and depression, it is interesting that this is also the

time when they lose their stress buffers. *Or, do they?* Perhaps this is a period of social development where friends step in to help with stressful challenges, in the same way that parents do for younger children.

In the *Share the Load Study*, we want to learn about the roles that friends and peers play in potentially buffering a stress response in youth all along the range of pubertal development. Some participants are randomly assigned to do the study alone, some with another unfamiliar peer and some do the study with a friend.

This study has recently started, and we are looking for participants to join us! The entire study takes place online, using Zoom, and participants can earn up to \$20/\$70 for parents/youth. Contact us at sharetheload@umn.edu.

Baby Teeth Study of International Adoptees

By *Mariann Howland*

Thank you very much to all the families from the International Adoption Project registry who responded to our interest survey to determine if a study of the baby teeth of internationally adopted children is feasible! We were surprised and excited by the responses we received!

As background: Baby teeth start forming in the womb. During tooth development, the dentine and enamel that make up our teeth are deposited into rings, much like the rings of a tree. These growth rings incorporate compounds like metals, minerals, and stress hormones as they develop. We can now measure these compounds in baby teeth, providing a remarkable opportunity to "look back" and learn about exposures during prenatal life and infancy.

Last year, we sent out an anonymous survey to ask if families had saved any of their adopted child(ren)'s baby



teeth, and if they had, if they would be interested/willing to send us a tooth for analysis. We received 229 responses, with 218 of these families indicating they have saved one or more of their child(ren)'s baby teeth, and 216 willing to send one in for analysis!

We are now looking towards planning the study, which we hope to launch this Summer of 2022. We will send an email when we are ready to enroll families!

For any questions, email us at: iap@umn.edu.

CARDIOVASCULAR HEALTH STUDY

PARTICIPANTS & THEIR FAMILIES WILL BE COMPENSATED FOR THEIR TIME.



EMAIL FOR MORE INFORMATION!
[CARDIOHEALTH@UMN.EDU](mailto:cardiohealth@umn.edu)

RECRUITING 12-21 YEAR OLDS



PARTICIPATE IN A STUDY OF THE EFFECTS OF STRESS ON CARDIOVASCULAR HEALTH.



THE STUDY INVOLVES ONLINE QUESTIONNAIRES AND 2 HEALTH CHECKS WITH RESEARCHERS AT THE UNIVERSITY OF MINNESOTA.

WE ARE RECRUITING TEENS BORN INTO THEIR FAMILIES & TEENS INTERNATIONALLY ADOPTED INTO THEIR FAMILIES

AT EACH VISIT WE WILL MEASURE BODY COMPOSITION & CARDIOVASCULAR HEALTH.

Precocious Puberty and Kids with a History of Adoption or Foster Care

Judith Eckerle, MD



I remember that day like it was yesterday; the school year had just ended and our family had decided to spend the week at our lake house to celebrate the beginning of summer vacation. Bella had just turned 10 years old at the time, and she had just finished 4th

grade. We were enjoying our summer celebration and then one night I was abruptly woken up by someone sobbing. Bella was at my side crying and in great distress. There was blood all over and she was quite sure something was terribly wrong - “do we need to go to the hospital?” Still blurry eyed and trying to focus, I reassured her that getting her first period was normal and that everything would be ok, however, inside I knew there was nothing normal about what was happening.

Just a few short months earlier, we had visited our pediatrician. The pediatrician had told me that at 4’7” tall and a Tanner score of 1 meaning no signs of pubertal development yet, that Bella was developing in a typical manner for a 10 year old. The pediatrician went on to discuss that puberty would be starting sometime in the next few years and

that once puberty started, menstruation would start a year or two later. So, how could this be happening now – just a few months after the pediatrician told me we were years away from the start of menstruation? I felt overwhelmed and confused, and I knew I needed some guidance.

After I calmed Bella down and took a deep breath, I called Dr. Judith Eckerle at the Adoption Medicine Clinic (AMC) at the University of Minnesota. We had met Dr. Eckerle during our pre-adoption consultation and had seen her routinely after Bella was adopted when she was 2 years old. The annual Comprehensive Child Wellness Assessment with Dr. Eckerle at the AMC helped us navigate a variety of challenges unique to a child who had experienced adoption, orphanage care and early childhood transitions. Among other things, we utilized the occupational therapy services, learned how to manage sensory deprivation and partnered with the Birth to Three Clinic for mental

health services. Because of our frequent visits and communication with Dr. Eckerle and the AMC, I had already been counseled that it was important to look for signs of early puberty – especially in children who were adopted and had spent time in institutionalized care. While early and rapid puberty is known in the adoption world, it can be less commonly recognized outside of specialists who see children

with these risk factors. But, I really didn’t understand why....and now I needed to know.

Precocious puberty is the early onset of signs of puberty. If puberty starts early, it can be physically and emotionally difficult for kids and can sometimes be the sign of an underlying health issue.

Dr. Eckerle reviewed our case that same day and got us in for an immediate visit for a physical exam and to check Bella's bone age. We found that not only did Bella's bones show that they were advanced; equivalent to a thirteen year old instead of her 10 year old body, she had also progressed from a Tanner 1 to a Tanner 4 (almost full pubertal development) in just a few months – a process that take on average 3.2 years. Because the AMC has decades of experience with children who have experienced early childhood trauma and has a multidisciplinary approach, Dr. Eckerle knew exactly how to proceed and connected us with Dr. Brad Miller, Division Director, Pediatric Endocrinology at the University of Minnesota.

Through a series of appointments and tests, we confirmed that Bella had rapidly advanced, precocious puberty meaning her body was flooded with puberty hormones that typically take years to release and make changes to a developing body. Dr. Miller, Dr. Eckerle and the entire team at the University of Minnesota helped us determine the best course of action for Bella. Not only did the early onset of puberty mean that Bella would likely only grow 1-1.5 inches taller, she was not mentally or emotionally ready to go through puberty. Together we decided to treat Bella with Lupron injections, a medicine to try to pause the puberty process, allowing her body to grow first. Additionally, this would allow Bella to become more psycho-socially developed and ready to handle puberty. The treatment was a great success. Six years later, Bella is a sophomore in high school, is 5'1 ½" and is thriving – she is ready to take on the world!

Precocious puberty is the early onset of signs of puberty. If puberty starts early, it can be physically and emotionally difficult for kids and can sometimes be the sign of an underlying health issue. Not only can the early development lead to a child being teased by others his or her age, it can also cause kids

to stop growing too soon and end up at a shorter height than they would have otherwise. Early onset puberty can be caused by a variety of factors including infection, brain issues and/or family history. There is also research that shows precocious puberty can be brought on in children who experience prenatal (before birth) or post-natal (after birth) stressors like orphanage care, multiple transitions, prenatal exposures, neglect or abuse. If your child has a history of adoption or foster care, please make an appointment to have a head to toe screening with the Adoption Medicine Clinic (AMC) at the U of M. We welcome the chance to optimize the health of your child and your family.

Early Puberty “Listicle” from Dr. Brad Miller

1. Monitor growth and pubertal signs with your pediatrician annually.
2. Consider asking for a baseline bone age X-ray if there are signs of rapidly or early progressing puberty.
3. Consider endocrine referral/evaluation if:
 - a. Your child has an early growth spurt 5-8 yo (crosses growth percentage lines upward)
 - b. Boys <9 yo develop body odor, pubic hair, acne, underarm hair, voice change, enlargement of genitals or testicles
 - c. Girls <8 yo develop body odor, pubic hair, acne, axillary hair, breast enlargement, vaginal spotting or bleeding
 - d. Bone age is more than 2 years above assigned age

For more information about the services provided by the Adoption Medicine Clinic, please visit <https://adoption.umn.edu/>

Development and Well-Being of Korean Adoptees

By Claire Min & Amelia Blankenau

Last year, we announced the completion of our 12-year follow-up study of Korean adoptees! In 2007, your family may have participated in a survey study on the Development and Well-Being of Korean Adoptees, conducted by Dr. Richard Lee in the Department of Psychology at the University of Minnesota. In 2014, we followed up with roughly half the families whose children were now adolescents. Twelve years later, in the 2019-2020 academic year, we followed up with 146 Korean adult adoptees and 195 of their parents for a successful third wave of data collection.

Now that data collection is complete, we are organizing all three waves of data and have begun to analyze the data. With this new wave of data, we will

continue to examine how issues of race and ethnicity affect the development and mental health of Korean adoptees. We also will examine levels of interest in different forms of genetic testing to uncover biological family health history and find birth family relatives. We hope to expand our knowledge about this relatively new technology and its role in adoptive families.

Thanks to all families who participated in this study. We will have results available to share in the upcoming year. To our knowledge, it is one of the longest longitudinal follow-up studies on international adoptive families. This work is not possible without the continued support and participation of adoptive families.

We are preparing to launch a fourth wave of the KAD study this

summer. Considering the age of adoptees in the study, we are planning to survey only adoptees in this next wave. We are following up with adoptees more quickly than usual due to the societal events that occurred in the past two years (i.e., the rise in anti-Asian hate crimes; the murder of George Floyd; the Atlanta spa shooting) and our interest in adult adoptees and their well-being. Accordingly, we will update the survey to include new items and remove items no longer appropriate for adoptees at this life stage. We are looking forward to reaching out to you soon for your participation. If you have questions or would like to participate in our upcoming surveys, please email us at koradopt@umn.edu



The Other Ones comic strip is a collaboration between Professor Rich Lee and his cartoonist brother, Martin Lee. IG: TheOtherOnesyLee

February 18, 2022

PARTICIPATE IN RESEARCH

UNIVERSITY OF MINNESOTA

RESEARCH PARTICIPANTS NEEDED



Coping with Previous Experience (CoPE)

Receive **\$25** for completing 2 study sessions

You might be eligible for this study, if you are:

- A first-generation college student
[Neither parent/guardian has a 4-year degree]
- Between 18-25 years old

Details

- Online via Zoom
- Flexible with your schedule
- Introductory session (~1 hr)
- 2nd session includes a short speech & math task (~1.5 hrs)



If you are interested, please scan the QR code to complete a brief interest form

FOR MORE INFO PLEASE CONTACT ME
612-524-5162
repeatedly@umn.edu



CoPE Study Interest Form



BRAIN STUDY OF STRESS & SOCIAL SUPPORT

Are parents able to buffer children and teens from stress?

Recruiting 11-14 year-olds for participation in research study

We are recruiting children/teens for two 2-2.5-hour visits at the University of Minnesota/over Zoom. For one of those visits, participants will complete an MRI scan during which they will give a short speech and perform some math problems. We will measure heart rate and breathing rate during the MRI and collect saliva samples to measure stress hormones. Some participants will be randomly chosen to have their parent or a researcher present. The parent or researcher will sit with the participant on a video call to provide social support.

- Participants & parents will be compensated for their time.
- Free parking is provided.

Call or email for more information!
socialbuffering@umn.edu
612-524-8708



SCAN ME

To save this information!

Friends, Peers, and Stress Study

Recruiting 11-14 year-olds for participation in research study



Are friends able to help buffer children and teens from stress?



We are recruiting children/teens for an online study through the University of Minnesota. This will consist of 2 Zoom meetings totaling 3 hours (the first call is 30 mins, the second call is 2.5 hours). Some participants will be asked to bring a good friend to join them on the Zoom call, and some will be paired with an unfamiliar peer. Participants will complete a short public speaking task and provide saliva samples to measure hormones.

- This study will be held entirely online over zoom calls.
- Participants and friends will be compensated for their time.

Call or email for more information!
sharetheload@umn.edu
612-524-9903



SCAN ME
To learn more!

JOIN THE ICD PARTICIPANT POOL



The ICD Participant Pool is a central database for research labs in ICD.

Researchers use the database to contact local families about taking part in studies. Agreeing to be in the participant pool only means that researchers may call or email your family. Register your child today to receive news on research opportunities.

CLICK HERE

REGISTER NOW



Join the International Adoption Registry

The International Adoption Project (IAP) maintains two registries. We believe that having a Parent Registry and an Adult Adoptee Registry will encourage professors, physicians and other professional experts to do more adoption research. It is our hope that this research will provide answers and improve lives of others with similar experiences.

We encourage international adoptees 18-years or older and families who have children under 17-years-old who were adopted internationally to enroll. You don't have to live in Minnesota to join as some research studies can be completed remotely online. Agreeing to be on the registry means that researchers may call or email your family. Register today to receive news on research opportunities.



Gunnar Lab and Staff

PRINCIPLE INVESTIGATOR

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Center for Neurobehavioral Development
Children's Minnesota

International Adoption Project

Institute of Child Development Participant Pool

ONLINE EDITION

www.innovation.umn.edu/gunnar-lab/

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