News from the University of Minnesota

International Adoption Project

Spring 2011

Greetings from Professor Gunnar

This newsletter is being sent to all families of internationally adopted children who have participated in our research and/or are on our participant registry. It is also being sent to all the parents who have participated in our research with their children who were born and raised in Minnesota. We want to thank you all for giving your time so generously to this work.

In 2002, the Minnesota International Adoption Project (MnIAP) began working to obtain grant funds to study the brain and behavioral development of children adopted internationally. Because early deprivation can impact brain development, we were especially interested in finding information that would help improve outcomes for children adopted from orphanages or other institutions. However, we also knew that children who are minorities in the US may experience discrimination. For this reason, our colleague Professor Richard Lee is devoting considerable efforts to understand how parents can help support their internationally adopted children who are ethnic/racial minorities in this country.

We are now focusing on two critical periods in the lives of children who enter their families through international adoption. First, through the Transition Study (story on p. 2) we are focusing on pre- and post-adoption factors that influence how the child makes the transition into the adoptive home. Second, in several studies we are examining factors that influence the adjustment in adolescence, a challenging time for most children, but especially for many internationally-adopted children. We also focus a good deal of work on better understanding the attention and self-control problems that children with difficult early life histories often have.

We are happy to report that the federal government, through the National Institute of Mental Health, continues to provide financial support for MnIAP research. But it is the families and children who allow this work to continue. Thank you again for your help and on-going support.

~ Regents Professor Megan Gunnar & the Minnesota International Adoption Project Team

Inside this issue:

Transition into the Family Study

The goal of the Transition Study is to follow children intensively, seeing them every 8 months, for the first two years that they are in their families. These first two years are a period of rapid recovery from pre-adoption deprivation for children who lived in orphanages or other institutions. We are following patterns of change in emotions, relationships, growth, thinking/learning and physiology over these two years and using these changes to predict children's functioning at the cusp of entering kindergarten. Our goal is to determine ways of identifying children who may need extra help early, before they get to school.

The study began enrolling families in August of 2008 and now has 195 families. Our goal is 200. We are following three groups of children: children who were adopted at a later age (18-36 months) from an institutional care setting (Late Adopted, Post-Institutionalized or LA/PI) and we are comparing them as they transition into the family to children of the same age who were adopted early from foster care overseas (Early Adopted from Foster Care or EA/FC) and children born into their families in Minnesota.

Families attend research sessions in which the child is observed playing with the parent, interacting with unfamiliar adults, reacting to new and stimulating toys, and during which we measure resting heart rate. Parents also complete phone interviews, questionnaires, and saliva sampling at home.

Of 195 participants already in the study, 144 (94 LA/PI, 50 EA/FC) are children who were adopted internationally and 51 were born into their Minnesota families. Our current internationally adopted group of children represents several countries (*Figure 1.*)

The Late Adopted/Post-Institutionalized children were placed in institutions anywhere from birth to 29 months with length of institutional care ranging from 3 to 35 months, and 70% of internationally adopted children experienced between 2 to 4 care transitions or settings prior to adoption. Children who came from foster homes were adopted before 12 months of age with a length of foster care ranging from 4 to 11 months, and 72% experienced between 2 to 3 care transitions or settings prior to adoption.

We have some preliminary results to share.

Indiscriminate Friendliness: One of the behaviors seen among children in orphanages is friendly approach to any seemingly nice adult. That is, children act overly familiar with strange adults, and this behavior has been noted to persist after adoption. Because it can involve failure to check back with the parent and willingness to go off with strangers, it has been interpreted as a sign of that the child has failed to form an attachment to their adoptive parents. This interpretation is now being questioned by a number of researchers, including the MnIAP.

To examine the relation between indiscriminate friendliness and attachment, we first have to measure children's friendliness towards strangers and we have to separate out behaviors that are seen frequently among non-deprived children from those that are rare and might indicate some problem. To do this we have been examining how children who were raised in their birth families and those adopted from institutions behave towards a stranger.

We have a 10 minute period of time in the Transition Study when a stranger comes into the room. The parent is filling out questionnaires and the child has little to do. The stranger says hello and then sits down and also starts working on

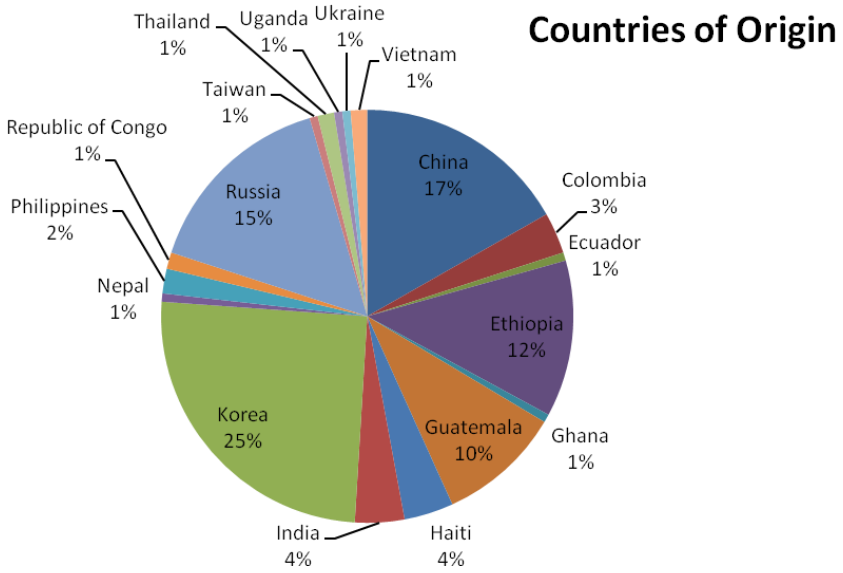


Figure 1. Internationally adopted children group.

papers, ignoring the child and parent. After a little while the stranger invites the child to see some toys. Finally the stranger invites the child to play with her. We videotape and score what the child does. The tester also makes a rating based on how the child behaved toward her across the whole session.

In analysis, behaviors fell into two groups. One group involved physical contact initiated by the child towards the stranger: touching, leaning against, climbing in the stranger's lap, and so on. The other involved making bids for the stranger's attention, but NOT touching. So far we have analyzed behaviors from our first two sessions, comparing Late Adopted and Non-Adopted children. We will be including the children adopted from foster care when we have seen more of them in these assessments.

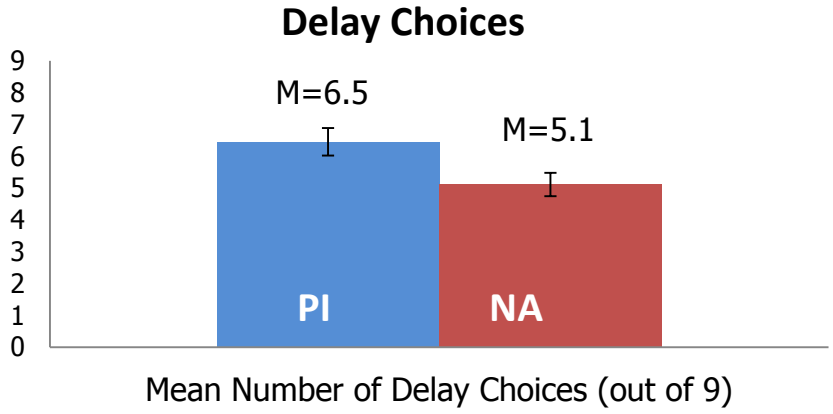
Soon after adoption, the post-institutionalized children are very friendly to the stranger. Not only do they smile and make social bids to the stranger, they also often touch and make/request physical contact. By 7-9 months post adoption, most of the LA/PI children are no friendlier to strangers than are children born and raised in their families in Minnesota. But there are some who continue to be so, and what really sets them apart is that they continue to make physical contact with the stranger. Often it is pretty subtle (i.e., sit close enough to be touching), but it is quite distinct from nearly all of the other adopted and non-adopted children.

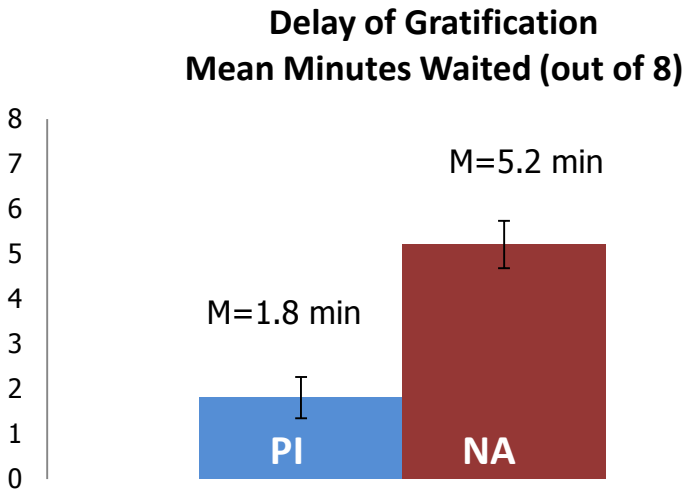
We will continue to examine indiscriminate friendly behavior during the children's second year in the family. We hope to shed light on how the persistence of these behaviors in some children is related to other aspects of their social and intellectual functioning. We also hope that we can help determine behaviors to look for soon after adoption that will tell parents and those working in international adoption which children will quickly grow out of these behaviors and which need more help to do so.

Delay of Gratification: One of the important achievements of the preschool years is the ability to delay gratification. In a famous study many decades ago, Walter Mischel asked preschoolers to choose between pretzels and marshmallows. Nearly all chose marshmallows. He then told them that they could have the marshmallows if they could wait until he got back. If they couldn't wait, they could ring the bell and he would come back early; but, this would mean they got the pretzels and not the marshmallows. Children get better at this task over the preschool years and there are wide individual differences. For children who are growing up in their birth families, how long you can wait as a preschooler predicts how well you exert self control as a teen and adult.

We have been running two versions of this type of task 12 months after the LA/PI children are adopted. One version runs just like Walter Mischel's version described above. The other version asks the child to make a number of choices between smaller and larger amounts of things (coins, stickers, food prizes). In each choice they can have the smaller amount now. If they choose the larger amount, it goes in a bag to take home. So, between the tasks, we find out if the child will *choose* to wait for the larger amount, and whether they can *actually* wait.

The results have been very interesting, but they are preliminary. So far we only have enough data on the LA/PI and non-adopted children to analyze; we will be getting more on the EA/FC children soon. What we see is that for the Delay Choice task, LA/PI children choose more often to wait for the larger quantity reward, especially if the choice is a food reward. This is the one area where we have found that children adopted from institutions are more developmentally advanced than are non-adopted children. We think that this reflects the higher value that LA/PI children place on tangible rewards because of their earlier deprivation.





Unfortunately, when LA/PI children have to actually make themselves wait, they have a very hard time doing so. Non-adopted children of their same age made it through 65% of the waiting period before ringing the bell, while on average the LA/PI children made it through 22% percent of the waiting period.

We will track whether the combination of being more responsive to rewards but having trouble actually delaying gratification continues to characterize children adopted from conditions of deprivation and, if so, how this coupling may play out in their lives. We will also examine whether this pattern is specific to the children adopted from institutions, or whether it is also shared by children adopted from foster care.

Cognitive Recovery: In the session 12 months post-adoption, the children were administered the Mullen Scales of Early Learning. We wanted a snapshot of where the children were in cognitive recovery a year after adoption. The Mullen provides a composite score that is like an IQ score. In the general population, the mean is 100 and 66% of the population scores between 84 and 116. Among the LA/PI children we have tested so far, the mean is 90. There were some children scoring in a range where one might be concerned, but because the children are still rapidly recovering from their pre-adoption experiences, it is hard to tell how predictive scores one year post adoption will be. Indeed, that is one of our questions. How early can you test a child to see who will need extra help cognitively? We did find, as expected, that higher scores on the Mullen were related to less time in institutional/orphanage care and larger head circumferences.

What's Next?

We continue to see families for session visits 1-4. After session 4 families should receive a DVD containing Freeplay segments of all their sessions. This gives families the opportunity to watch their child's growth within a repeated play model.

Families will also be soon contacted regarding a phone interview to discuss their children's behavior with the important people in their lives. We have begun seeing families for their last visit (see page 5.) We look forward to reporting more results next time.

Thanks to all the families for their patience and support with this longitudinal study. We hope to see how the children are going to adapt and transition into kindergarten (see page 5.)

Please call 612-624-9322 or email at IAP@umn.edu regarding questions about the Transition into the Family Study.

Transition into the Family Study – Session 5 Visit

We are excited to see families for the last lab visit. This is not JUST another session. This last visit is extremely important, because it is the "Big Payoff" that we have been waiting for as we will use sessions 1-4 to try to predict how things turn out in session 5 when the child is on the cusp of going to kindergarten.

Session 5 is different from the previous sessions. There won't be any saliva collection at this visit (or at home!) Instead, the child wears a hat with tiny sponges to record brain activity while playing computer games. Children will be asked to complete tasks that examine attention, memory, and problem solving as well as self-control and social perception. Your child will have the chance to participate in an interview about his/her feelings. We call this the puppet interview because we conduct conversations through two puppets making the task more comfortable for the children. You will be contacted for session 5 when your child is between 5-5.5 years old. If you would like to contact us sooner, please call **Meg at 612-624-9322 or email at IAP@umn.edu**

Transition into the Family Study – Kindergarten Assessment

As some of the children participating in the Transition into the Family Study are now old enough to begin attending Kindergarten, we were fortunate to obtain additional funds to follow them into Kindergarten. This phase of the study has a special focus on the children's adjustment to formal schooling.

The adjustment to formal schooling is often the point when children's attention- and emotion regulatory challenges become more clearly recognized. Formal schooling brings a more structured day with greater learning requirements, more transitions as the class moves through the required curriculum, larger class sizes, and less free choice in activities.

Families already participating in the Transition Study who have a child beginning Kindergarten this fall will be contacted soon to see if they would like to participate in this portion of the study. We would ask parents to complete a questionnaire packet and assist us with contacting their child's school to arrange one day of a school observation visit. We would also like to collect 3 saliva samples from the child while s/he is at school and ask the child's teacher to complete a questionnaire packet. Families and teachers will each be compensated with a $25 Target gift card when the completed questionnaires are returned. This portion of the study will allow us to gain a greater understanding of how children are functioning in an important real-life context.

We will discuss more details about the study when we contact you. If you have questions or would like to contact us soon, please call or email **Shanna Mliner at 612-624-4351 or newma039@umn.edu**. Thank you for your consideration and interest in the Transition Study!

The Effect of Early Deprivation on Executive Attention in Middle Childhood

Decades of research in developmental science suggests that attention regulation is affected by what the child experiences early in life. Children adopted from orphanages or other conditions of deprivation are at risk for problems in regulating their attention. However, we don't know much about what may be going on in their brains that makes it hard for them to control their attention.

The goal of this study was to measure children's brain waves while they solved tasks that required them to use what has been termed "executive" attention. This is the type of attention that allows children to be good at games like red-light/green-light or Simon Says.

For this study we saw 10- and 11-year olds in the laboratory. Some were adopted from orphanages or other institutions, some were adopted from foster care overseas and some were born and raised in their families of origin. The children completed two types of tasks. In the Go-No-Go task, they had to press a button for every letter that popped up on a screen ("go") *except* the letter X ("no-go").

For the other, they were to press the right button if the arrow on the screen pointed right and the left if it pointed left. Sometimes the arrow was flanked by arrows that pointed in the same direction (congruent) and sometimes by arrows that pointed in the opposite direction (incongruent). These games sound simple, but you have to pay attention.

The results suggest that children adopted from conditions of deprivation have problems sustaining attention to tasks such as these, because they make more mistakes even on the go trials of the Go-No-Go task and on the congruent trials of the arrow-flanker task. Further, their brain activity suggests particular problems with executive attention.

There is a wave form that occurs very shortly after the onset of a stimulus in these kinds of cognitive tasks that reflects activity of the executive attention system. The wave form is a negative deflection in the electrical signal and it is called the N2 (for 2nd negative deflection). As you can see in figure 1, during the Go-No-Go task, the N2 was smaller for the PI children than for either the EA/FC or non-adopted children.

When we make mistakes, our brain generates another negative deflection that is time-locked to when we goof. This is generated by a brain region that appears, among other things, to specialize in detecting conflicting information (like between what we were supposed to do and what we did). When we get that signal, we often react by slowing down and being more careful. The signal is called the "error-related negativity" or ERN. We found that PI children have smaller ERNs than non-adopted children, with EA/FC children in between, as shown in figure 2 for the arrow (also called flanker) task.

Conclusions

The behavioral results suggest that

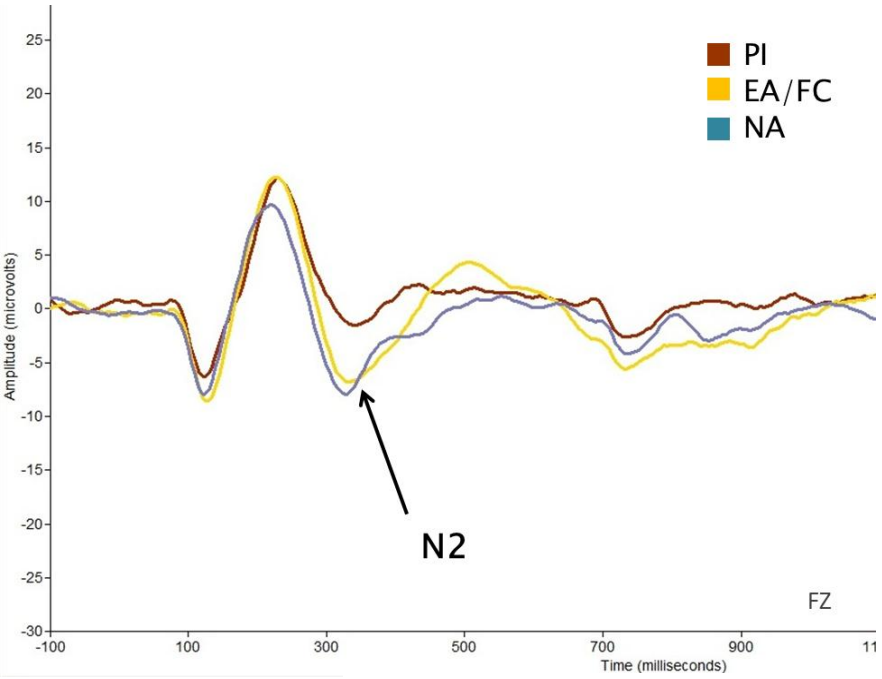
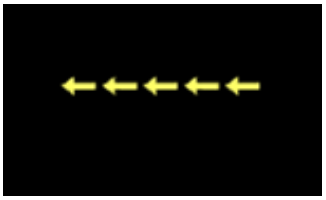
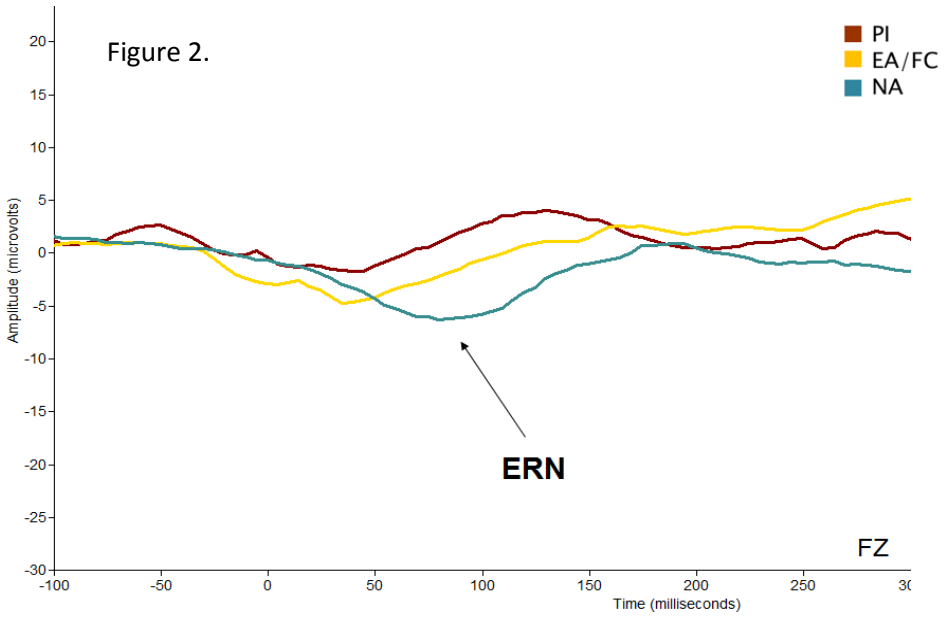


Figure 1.





post-institutionalized children have trouble with these attention tasks. The brain wave data indicates that their problems are related to reduced functioning of brain regions that support executive attention. Even though most of the PI children we tested were not diagnosed with ADHD, the brain wave differences we noted have also been reported for children diagnosed with this disorder. This raises questions about the similarity and differences in attention functioning for post-institutionalized children and children with ADHD who do not have histories of early deprivation (see ADHD Study on page 15).

Gene and Resilience Study

Children adopted from depriving situations often are quite delayed at adoption but show remarkable capacities for recovery in their adoptive homes. Nonetheless, every study of post-adoption recovery reveals that some children are quite resilient and recover rapidly, while others continue to struggle years after adoption. Among the many processes that facilitate and constrain resilience, substances produced in the brain that protect neurons and support brain growth and repair likely are involved. One of these substances is called brain-derived neurotrophic factor or BDNF.

The MnIAP is conducting a study on BDNF by examining whether variations in the gene that codes for this substance help explain some of the variations in resilience in post-institutionalized children. Our study, which is being done in collaboration with Professor Kathleen Thomas at the University of Minnesota and other colleagues in New York, consists of two phases. In Phase I, parents of children ages 8-13 complete questionnaires on their children's behavior and the children provide saliva samples from which we determine the version of the BDNF gene the child carries. In Phase II, when the children are 12-14 years old, some of the children are asked to come in for a brain scan. We choose the children based solely on their genotype and not on how the parents respond to the questionnaire. During the scan we measure the size of brain structures involved in emotional learning, and the activity of these brain regions when the children complete different learning tasks. We just finished recruitment for Phase I and have 621 children (70% girls). Of the Phase 1 group 54% are from Asia, 33% are from Eastern Europe, and 13% are from Latin America. Around 49% spent more than 12 months in an institutional care setting. We have also seen 131 participants (83 female, 48 male) in Phase II.

We have some preliminary findings to share.

Attention Problems

Families completed a questionnaire about the children's functioning, where one of the scales involved attention problems. Girls were described as having fewer attention problems than boys, as were children adopted from countries in SE Asia. Children who were older at adoption were described as having more attention problems, but this partly depended on which version of the BDNF gene the child carried. The MET version is supposed to be the less efficient version of the gene. We expected that it would be associated with more attention problems. *But*, we found that this was true only for the children who were older at adoption; for those who were younger having the MET version was associated with FEWER attention problems (see figure 1). This was surprising, but we are finding some similar things in Phase II.

Complex Attention Task

In Phase II, children performed a very complex attention task that sounds simple, but isn't. The young person is shown two discs on a computer screen, one red and one green. The discs also have lines that move up or down on them. The task is to press the button corresponding to the red disc when a "c" for color appears on the screen. However, when an "m" appears, the person is supposed to press the button for the upward moving lines, regardless of the color. This task is simple when you see a whole string of color or a string of movement commands. But when the rules change, it gets tricky because the game moves pretty fast.

The kids did quite well on this task, but how well they did was affected both by how old they were at adoption and which version of the gene they inherited. About half of the children were adopted before 12 months and half after, so we split the group at 12 months. As you can see in figure 2, and just as in parent questionnaire reports, the MET version of the gene which we expected to be the less efficient version was associated with better performance for children adopted early, and worse for children adopted later.

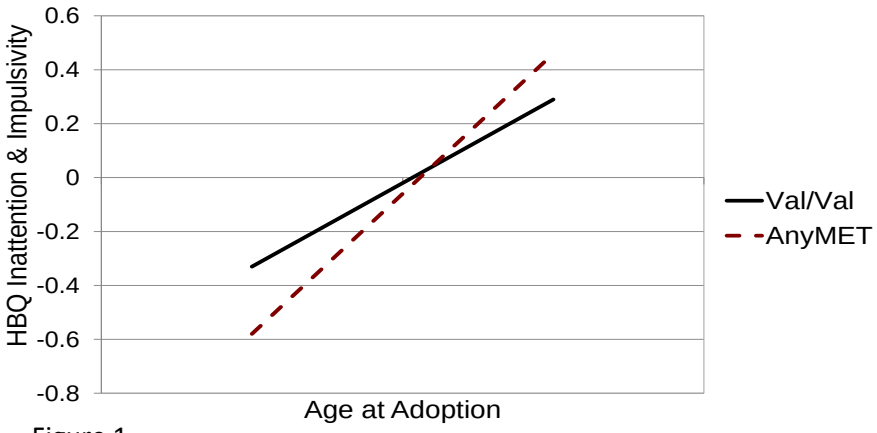
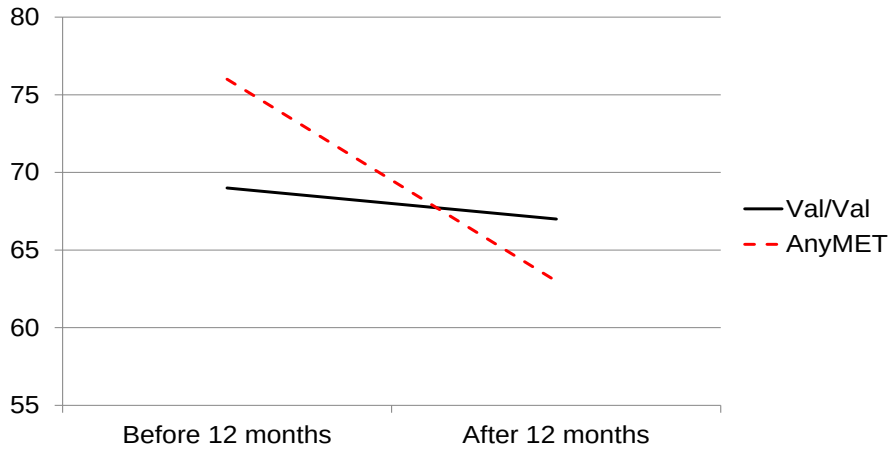


Figure 1.

While these results did surprise us, they are a lot like what others are finding who are studying other genes that vary with high frequency in the population. For variations in genes that are common, it looks more and more like each variation is helpful under some conditions and not helpful under others. That makes sense; genes that are always harmful would be rare because they would reduce what is called "reproductive fitness". We don't understand why the "less efficient" version of the BDNF gene seems to support the development of better attention for children adopted early. It may be that the less efficient version of the gene slows down the sculpting of the brain (BDNF is a brain growth factor) resulting in a longer sensitive period for the development of attention systems. If the child is adopted early, then this may give the child a better chance to have his or her attentional systems sculpted in the supportive context of their adoptive home. If the child is adopted later, the sensitive period may be past and now the child needs the more efficient version of the BDNF gene to "relearn" and "reshape" brain attentional systems. That is one hypothesis we are entertaining. We are continuing to collect data in this study, especially brain images, and will be getting more results out to you in the next year.

Figure 2. Percent Correct



Stay In Touch

We want to be sure that we maintain current information for all of our registry families so that we can keep you appraised of new studies and results. If you've recently moved or have a new e-mail account address, please update your registry info by e-mailing IAP@umn.edu, calling 612-626-8949, or completing the enrollment form online at: **www.cehd.umn.edu/icd/IAP/**

Thanks for your help in keeping our registry current!

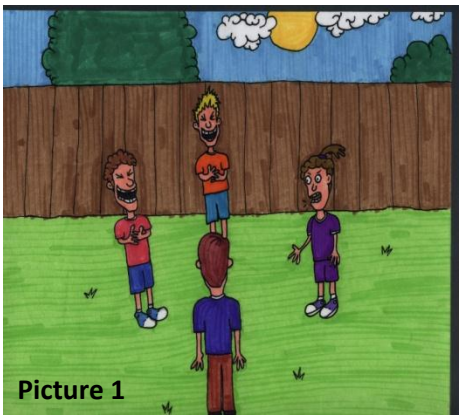
The 5-Year-Old Study

We know from decades of research in developmental science that misinterpreting what others are feeling and thinking can lead children to be more aggressive. They think the other person is threatening them when they are not. Overt acts of hostility such as taunting, teasing, kicking, fighting and biting other children can make it hard for children to make and maintain friendships. Based on data from the MacArthur Health and Behavior Questionnaire, parents of internationally-adopted children reported more behaviors of overt hostility in their children than parents of non-adopted children. We were interested in understanding what might be contributing to this overt hostility and how internationally-adopted children understand emotions in others.

Children in this study either participated in the Social Communication Study beginning at 18 months, or were recruited especially for the 5-year time point. The following results represent data from 101 children (79 female) age 5.5 years. The three groups in the study were: 42 children internationally adopted from institutions overseas between 10-37 months, 24 children internationally adopted from foster care between 4-15 months, and 35 non-adopted children.

Understanding Emotions

Our task examined whether the child understood that people sometimes feel differently on the inside than they look on the outside. Gaining this kind of complex social reasoning is what allows children to understand, for example, that "Johnny is acting angry, because he is really sort of scared." Understanding the difference between emotional displays and inner emotions is a very helpful building block in negotiating the complexity of social relationships. Here is an example of a story which was given for this task (see picture 1): "Bob is hanging out with friends. One of the friends tells a mean joke about Bob that makes everyone laugh, except it hurts Bob's feelings. Bob doesn't want the other children to know how he really feels about the joke because they will call him a baby, so he tries to hide how he feels. How does Bob feel on the inside and how does he look on his face, and why?"

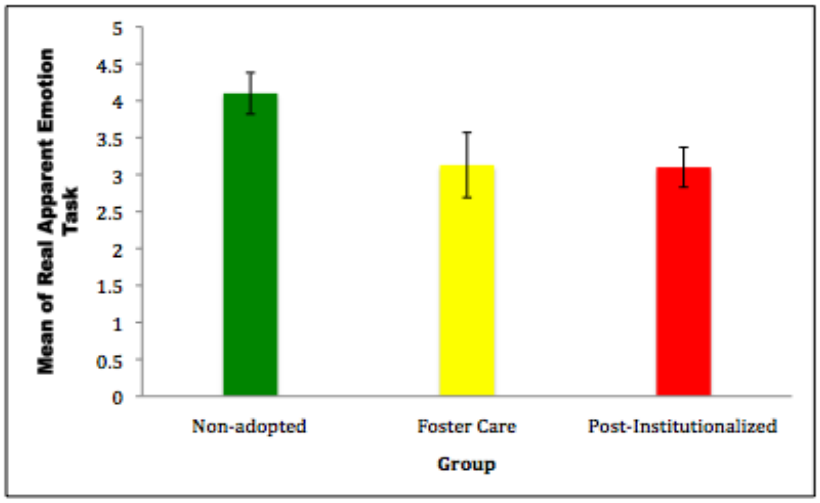


Picture 1

Results

We found that both groups of internationally-adopted children (those adopted from foster care and those adopted from institutions) performed more poorly than non-adopted children on this task (see graph 1). For instance, they were more likely to say that Bob felt sad on the inside and looked sad on his face. Furthermore, we found that difficulties on this emotion task contributed to the hostile behaviors exhibited by internationally-adopted children. So, those children who were better able to distinguish between internally felt emotions and facial expressions of emotions were less likely to show hostile behaviors, at least according to parent report. These results may help explain some of the challenges in negotiating peer relationships and maintaining social boundaries seen in internationally-adopted children.

We know from other work that parents can help children understand the difference between what people are feeling on the inside and showing on the outside by talking with their children about emotions. Talking about emotions and about other people's feelings tends to improve social functioning in young children.



Graph 1

Transition to Adolescence: A period of risk and opportunity

Puberty brings many changes, some of them welcome and some very challenging. Science is beginning to discover all of the changes in the brain that come about at puberty. It seems to be a time when the brain becomes more open to experience as it shifts from being a child brain to being the brain of a person who is getting ready to leave the family nest.

The MnIAP is beginning a series of studies to understand how puberty and the transition into adolescence impacts children and families formed through international adoption.

In our first study we asked whether emotion and stress systems that were initially sculpted under conditions of deprivation prior to adoption might reorganize at puberty now that the children were living under conditions of low stress and high social support. In this study we chose children who were doing quite well emotionally and socially. Our decision was to examine the effects of puberty on these children first, before going on to examining its effects for children who were struggling.

We had our usual three groups. Children adopted from orphanages/institutions (PI), children adopted early from foster care overseas (EA/FC) and non-adopted (NA) children. All the children were 12 and 13 years old. We screened them over the phone so that we would have equal numbers of 12 and 13 year olds who were either not pubertal or in the very early stages and ones who were mid to late stage puberty. This meant that we could attribute any differences we found to puberty and not to the child's age.

We studied a number of different things in this study; here we report on our stress and emotion measures. The youth took samples of saliva at home on four mornings. We looked at the cortisol awakening response (CAR). Cortisol is a stress hormone that also plays important roles in preparing us for the day. When we awaken there is a surge of cortisol for the first 30-40 minutes and then it goes back down. When we are stressed, this surge tends to increase. But, nature doesn't like us to produce too much of this hormone as it is quite powerful. So, if we are under chronic stress for a long time, there are changes that result in a blunting of the CAR.

For PI children who were pre/early puberty, the CAR was blunted. In fact, they barely showed a CAR at all. This was not the case for the EA/FC and NA children. However, the mid/late puberty PI children showed a very normal CAR that did not differ from that shown by children in the other groups. Puberty seemed to have opened a window of opportunity to re-organize the critical stress system.

The other measure we looked at was fear- potentiated (or fear-increased) eye-blink startle. The startle reflex is organized in the brainstem, but it gets inputs from emotion-centers in the brain. If we are frightened or anxious, we startle more. This is why in scary movies they always give you cues that something bad is going to happen so that when it SUDDENLY does, you jump out of your skin. We tested this response by showing the children pictures that were neutral, pleasant, or negative. While viewing, children would hear a brief burst of white noise, which produced an eye-blink startle. We measured how much larger the blink was when the noise occurred during negative versus neutral pictures.

Non-adopted children and children adopted early from foster care showed a fear-increased startle at all points in the pubertal transition. For the PI children, however, if they were pre/early puberty, they showed a blunted response. If they were mid/late puberty they reacted just like all the other children.

So, once again we see that children reared in orphanages/institutions may have adapted to those conditions by ramping back and responding less. We think that because the early period for setting the stress and fear is passed by the time the children are adopted, they continue functioning with these altered stress and emotion systems. Puberty, though, may open a new window for plasticity when the child can "reset" these systems. If so, this can cut both ways. For children who are doing well, making friends, feeling safe and happy, the resetting may make it easier for them to approach the challenging teen years. For children who are still struggling, who are having problems at school and who are not feeling confident in themselves, this resetting might make them even more emotionally dysregulated. Whether we are right or not is what we hope to study over the next few years. Learning more about this should help parents, educators, physicians and therapists work more effectively with children who need extra help because it might target the pubertal transition as an important time to focus interventions.

We are planning the research grants

we will write to get funding for this work. We are also examining whether we will have enough children on the registry to complete the work. Here is where we need your help. *We would like to double the number of children on the registry.* If you know a family formed through international adoption, tell them about the Minnesota International Adoption Project. If you have one child on the registry, it doesn't mean your other internationally-adopted children are registered. Please help us increase the size of our registry so that we can do this work. To register your family, please contact us at 612-626-8949 or IAP@umn.edu

IAP Parent Board

Much appreciation to the IAP Parent Board for their continuing contribution and involvement of our research projects.

Stacy Anderson

Diane Benjamin

Patti Bower

Kate Brady

David Casey

Jamalee Desmond

Amy Kusber

Cari Lee

Marc Markell

Kate Swensen

Comparing the Behavioral Development of Korean Children Placed in Foster Care, Domestic Adoptive Families, and International Adoptive Families

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Children who have been displaced from their biological families are placed into a variety of systems of care, including orphanages, foster care, and adoption. We know from extensive research that institutionalized children who are adopted internationally fare much better than children who remain in institutions and orphanages. However, international adoption should not be viewed as a long-term solution. It is critical for countries, as they develop economic and political stability, to develop domestic child welfare practices. For example, South Korea has made strong efforts in recent years to promote foster care and domestic adoption as alternatives to institutionalized care, as well as to international adoption. Thus, we became interested in how domestic placement options, particularly domestic adoption, compare with international adoption. In this study, we specifically compare the behavioral development of children from South Korea who were placed in foster care, domestic adoption, or international adoption. It is the first study to compare institutionalized children from the same country who are placed domestically or internationally into families.

There also is growing interest in the role of parental depression in the behavioral development of children. Extensive research suggests that parental depression interferes with the ability to sensitively parent. Not surprisingly, poor parenting, in turn, contributes to a host of emotional and behavioral problems in children. Recently, researchers have begun to study depression or depressive symptoms among adoptive parents as it relates to child development. We build upon this research by examining the extent to which caregiver depressive symptoms impact children's behavioral development. This approach allows us to disentangle genetic influences from the environmental effect of parenting.

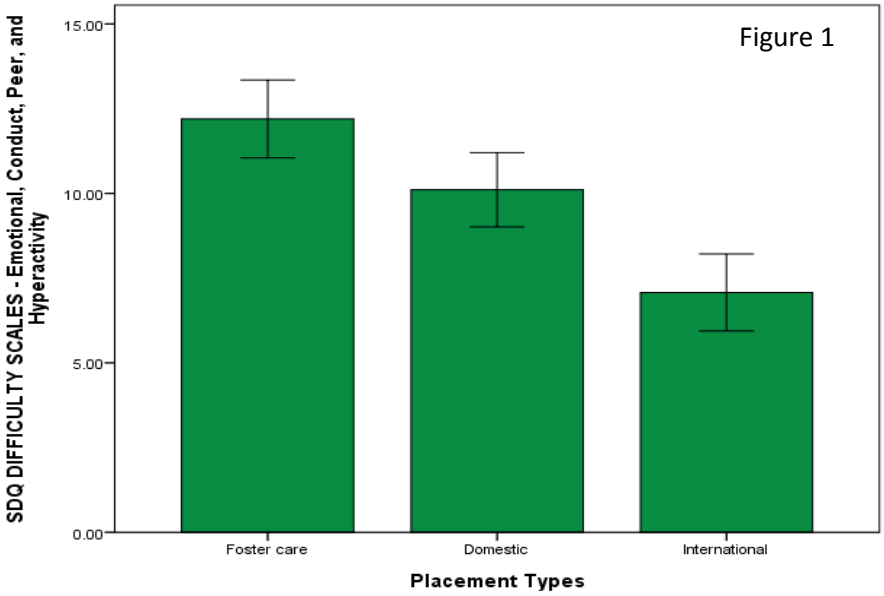
The study was made possible through collaboration with researchers at two universities in South Korea where studies are being conducted on foster care families and domestic adoptive families. Caregiver reports from domestic and international adoptive parents and foster care parents were obtained on 262 Korean children, ages 5-8 years old; 78 children (60% female) were placed in foster care, 90 children (68% female) were domestically adopted, and 94 children (45% female) were internationally adopted. Average age of placement was 3 years-old, 1.4 years-old, and 1 year-old, for children in foster care, domestic adoption, and international adoption, respectively. Caregivers were 55 years-old (72% female), 46 years-old (70% female), and 43 years-old (88% female) for foster care, domestic adoption, and international adoption, respectively. Caregivers completed the Strength and Difficulties Questionnaire (SDQ) as a measure of child behavioral development and a brief measure of the caregiver's depressive symptoms.

Preliminary analyses revealed that children who were adopted, either domestically in South Korea and internationally to the United States, had better behavioral outcomes than children placed in foster care in South Korea (see Figure 1). Internationally adopted children also fared better than domestically adopted children. Although there were significant group differences by type of child placement, we would like to emphasize that children in all three placement groups scored within the normative range on the behavioral development measure. In other words, by and large, children placed in these new family environments are doing well.

We also found that caregivers' self-reported depressive symptoms had a significant association with the behavioral development of all the children. However, this associated was moderated by the type of placement. Only in foster care families did children exhibit more behavioral problems when parents reported greater depressive symptoms. The same pattern was not found for children in domestic and international adoptive families. These findings differ from past research which has found depression or depressive symptoms among adoptive parents to affect the behavioral development of children. We are now trying to better understand this pattern of results. For example, we know that many foster families are actually biologically related to the child (e.g., grandparents). As such, the study findings may reflect a biological link between the caregivers' depressive symptoms and the child's behavioral development.

In summary, we find compelling evidence that Korean children who are at risk for institutionalization fare well when placed into a stable, nurturing family environment – whether it is a domestic or international placement. At the same time, we did find some group differences by type of placement. More research is needed to understand whether these differences reflect different rearing practices or some other set of experiences.

Figure 1



The International Adoption Project Fund

An opportunity to support our work through your tax deductible contribution

The University of Minnesota's International Adoption Project is dedicated to providing answers to families created through international adoption. Our registry currently holds more than 4000 internationally adopted children, giving researchers opportunities to explore questions specific to families created through international adoption. We have been very successful obtaining grants to cover the cost of research with internationally adopted children.

Unfortunately, those grants do not cover the costs of maintaining the registry and sending out the newsletter. If you would like to contribute to the support of these activities, please visit the University of Minnesota's foundation website for the International Adoption Project to make a tax deductible contribution:
https://www.foundation.umn.edu/pls/dmsn/online_giving.frames_broker?owner=IAP

Any amount that you are willing to give is greatly appreciated. Because the University Foundation is overseeing this account, 100% of your donation will go directly to maintaining the registry and providing the newsletter. Your contributions will be anonymous. We feel that providing this research information to families and adoption professionals is worth the cost and we hope you feel the same. Thank you for considering supporting our work through tax deductible contribution. If you have any further questions about this fund, please feel free to contact us at 612-624-9322 or by email at IAP@umn.edu.

Thank you to all who have contributed in the past.

Research Opportunities

We have a few research studies that are now recruiting. Families who are interested are encouraged to contact the individual research studies.

Culturally Proficient Parenting: A new study examining the effectiveness of race & ethnicity workshops with White adoptive parents of Korean American children

What is culturally proficient parenting for transracial adoptive families?

Culturally proficient parenting for parents of transracial adoptees is the ability to openly and actively communicate cultural understanding and competence with their racial and ethnic minority child(ren). It includes a willingness to have deeper conversations about issues of race and ethnicity, an awareness of the parent's own White racial identity, and a developmentally appropriate and sensitive engagement in both racial and ethnic socialization. Culturally proficient parenting recognizes the importance of cultural artifacts and food, but also the need to have conversations around discrimination and the child's racial and ethnic identity.

Why is learning culturally proficient parenting particularly important in transracial adoptive families?

Through observation of their family members, practicing customs and traditions, and acquiring culture-specific life skills, values and languages, children learn to live as members of ethnic and racial groups. Overtime, these messages and practices eventually become internalized and serve as a source of identity development. For transracial adoptive families, White adoptive parents face the additional challenge of helping their racial and ethnic minority children accept and negotiate the racial differences within the family. This ability for a transracial adoptive family to openly acknowledge and talk about race and ethnicity is associated with higher levels of ethnic identity in adopted adolescents, and for adoptees, ethnic pride is positively related with psychological adjustment.

Why do we need this study?

Though a number of adoptive parents understand the importance of talking about issues surrounding race and ethnicity with their children, many parents do not have the language to discuss ethnic identity, issues around discrimination or what it's like to grow up as a racial minority in America. There is also a lack of research examining the efficacy of "bicultural parenting" or "transracial parenting" training workshops, and this study seeks to develop an effective workshop that is grounded in research.

How do I get involved?

We are currently recruiting parents of Korean adopted adolescents who would like to participate in a two-month (4 meetings in total) workshop series aimed at facilitating the quality and comfort of conversations surrounding racial and ethnic identity, particularly within the context of international, transracial adoption. We also are recruiting parents who have already participated in the Korean Adoption Survey, directed by Dr. Richard M Lee in the Department of Psychology.

If you are interested in participating in this study, please contact Oh Myo Kim at berar005@umn.edu

Join the IAP registry!

The IAP registry was established in 2002 to encourage researchers to write grants and conduct research regarding issues of concern to families who had adopted internationally. Currently more than 3500 families have joined. Enrolling on the IAP registry provides future opportunities to participate in adoption research.

It is important that we continue to gather families who have recently welcomed home a child so that our registry represents the current international adoption community.

If you know any family whose child has just come home or has yet to join our registry, we would appreciate your making them aware of this registry. Families do not have to live in Minnesota, nor do they have to have adopted in Minnesota in order join our registry. Any family with a child up to the age of 18 is welcome.

To learn more, please contact us at 612-624-9322 or email IAP@umn.edu or visit us online at www.cehd.umn.edu/icd/IAP/

Can your experiences in the first 6 months of life (pre-adoption) help you in learning a language as an adult?

We are now recruiting Korean adoptees between the ages of 18 and 24 years-old to participate in a study on language development that is funded by a grant from the National Science Foundation. Dr. Richard M Lee, a psychology professor at the University of Minnesota, is a co-investigator on this new study in collaboration with Dr. Janet Oh, a psychology professor at California State University, Northridge. In this study, we are examining the long-term benefits of pre-adoption experiences. Although adopted adults may not remember much, if anything, about their lives before adoption, we have found evidence of long-lasting benefits of their early language experiences. In particular, we have found that adopted Korean American adults show advantages in distinguishing among the sounds of Korean over first-time learners of the language, even when they were adopted as young infants and had no experience with Korean following adoption! We are now interested in further examining the exact nature of these benefits, as well as whether they extend to other areas of language acquisition, such as speaking with a native-like accent and learning new words. You do not have to have any post-adoption experience with Korean to participate in this study.

To learn more, please contact Alison Hu directly at koradopt@umn.edu

Social Support Study

What?
The purpose of this study is to examine whether different early life experiences influence how much our bodies react to challenging situations, like public speaking, and how social support and emotion regulation strategies impact children's reactions to such challenging situations.

Who?
For this study, we are recruiting children between the ages of 9-10 years and adolescents aged 15-16 years who have spent a major part of their early years in an orphanage or institution before being adopted in the United States.

Why?
When people have strong emotional reactions, the brain tells the body to increase its production of a hormone called cortisol. For this study, we measure cortisol in saliva samples collected from children and adolescents after they give a speech and perform arithmetic problems in front of a double-sided mirror, after being told that there will be an audience of several adults behind the mirror. This study mimics the kinds of public speaking activities that children experience at school. We also use questionnaires to measure how children manage challenging situations and assess experiences that may influence their coping strategies.

When?
This is a paid study, and we offer appointment times Monday-Sunday, between 3:30-6:30 pm. The first session is a two hour time commitment, whereas the second visit is a one-hour time slot that needs to be scheduled within a week of the first visit.

Interested?
If so, please contact us at **speechstudy2010@gmail.com** to add your information to the IAP Registry and someone from our study team will contact you about participation.

The Emotion Regulation Study

The Emotion Regulation Study began in August 2010. Since then, 50 families have joined the study. Our ultimate goal is to enroll 150 children. This study seeks to examine how internationally-adopted children in middle childhood regulate their emotions in the face of stress many years after experiencing institutional care. A group of children born into their families here in Minnesota are also participating to help guide us in examining the recovery of children adopted from orphanages abroad.

Problems in managing negative emotions such as fear, anger, and sadness have been noted in internationally-adopted children coming from institutions. However, these reports are based mainly on questionnaire data. The Emotion Regulation Study seeks to go one step further by examining how children manage their emotions when they are actually happy, sad, and frustrated in our lab. We are also interested in how adoptive families help their children learn about coping with negative emotions.

Children 8- to 9-years-old come with their mothers for a one-time research session lasting 2 hours. During this visit, children and their mothers are asked to engage in conversations about things that make them feel happy (e.g., planning a dream vacation) and upset (e.g., why child got a low grade in school). Children are also asked to play challenging computer games that are both rewarding and frustrating. During the session, we monitor children's heart rate and how much their fingers sweat. We will also collect 3 samples of saliva to test levels of the hormone cortisol, which is associated with stress reactivity, and ask mothers and children to fill out questionnaires. Children in this study have resided in institutions anywhere from the first 12 months to 5 years of age.

If you know of a family who has a child 8 to 9 years of age (either adopted or non-adopted), please let them know of this study and encourage them to contact us at 612-624-0234 or by email at emotion.umn@gmail.com

Attention, Reward, and Behavior Study

Has your child been diagnosed with ADHD?

If you have an 11 to 15-year-old child who has been diagnosed with ADHD, he or she may be eligible to participate in a research study.

The Attention, Reward, and Behavior Study is currently recruiting children and adolescents with ADHD (either adopted or non-adopted.) The goal of the study is to learn whether what is labeled and treated as ADHD in post-institutionalized children is really the same as ADHD that arises in children who do not have early experiences of deprivation. We are actually doing fairly well in finding post-institutionalized children with ADHD through our registry. We do not have the same access to children from non-adopted families who are of the same education and income level as families who adopt internationally. If you are interested in participating or know of someone who might, please call or have them call us at **612-624-2561** and leave a message for our research team.

Center for Disease Control and Prevention releases National Survey of Adoptive Parents

We want to inform families that the CDC has released a survey providing insight on the pre- and post- adoption experiences of families of adopted children ages 0-17 years. About 26% of the sample represented international adoptive families who reported about their experiences.

Anyone who's interested should visit the CDC's website at:

www.cdc.gov/nchs/slaits/nsap.htm

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