News

From the MN International Adoption Project

Fall 2005

Minnesota International Adoption Project (MnIAP)

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Greetings from Prof. Gunnar

We are sending you this letter as a way of thanking you for participating, or being willing to participate, in research with the International Adoption Project. This letter is being sent to all of the parents who have joined our international adoption registry as well as parents who have participated in international adoption research with their birth children. We would like to thank all 3,500 of you for your willingness to participate in research. Unfortunately, due to funding restrictions, we may not be able to send a newsletter next year. If you do not receive a similar letter next fall, please visit our website at: http://education.umn.edu/icd/iap for future results. You may also access past newsletters from our website.

Brain and Behavioral Development in Internationally Adopted Children

In last year's newsletter, we told you about a grant awarded to the International Adoption Project by the National Institute of Health to study brain and behavioral development in internationally adopted children. This grant was awarded both to the University of Minnesota's IAP under the direction of Megan Gunnar, and to the University of Wisconsin's IAP under the direction of Seth Pollak. Now in its 2nd year, it includes 7 studies examining attention, sensory motor integration and emotion regulation in 8-11 year old children. Two studies are already underway, and 2 more will launch this fall.

106 children between the ages of 8-11 have participated so far at the Minnesota site. Children recruited for these studies fit into 1 of 3 groups: 1) children adopted internationally at 12-months or older having spent the majority of that time in an institutional (i.e. orphanage) care setting, 2) children adopted early (before 8-months) having spent the majority of that time with a foster family, 3) children born and raised in their birth families in Minnesota. This grant is only in its 2nd of 5 years, so if you have children who will be between 8 and 11 in the next 3 years who fit into one of the three groups, you will likely be contacted about participating in one of these studies in the future.

All children who participate in studies as a part of this grant complete an initial profile assessment before being assigned to one of the seven studies.

Brain and Behavioral Development continued on page 3

State of the Children Report-New Arrival Study

By Dr. Megan Gunnar, Kristin Frenn & Meg Bale

We last reported on the "New Arrival" study in our 2003 newsletter. For this study, we are asking parents who join the Minnesota International Adoption Project (MnIAP) registry to fill out a survey about the parent's pre-adoption experiences, along with some questions about their children's pre-adoption history and post-adoption health. This survey has also been called the "state of the children" report. The study is being conducted in order to create a picture of how international adoption is changing over time, and to examine how children are doing shortly after arrival. In this newsletter, we will report data from 514 Minnesota parents surveyed between 2002 and 2005.

New Arrival Study continued on page 5

Cultural Socialization Attitudes, Beliefs, and Parenting Behaviors

By Dr. Richard Lee

Dr. Lee and the MnIAP team recently completed a study using a subsample of the original MnIAP survey data from families who adopted internationally between 1990 and 1998. In their study, which is currently in press with *Journal of Family Psychology*, they examined the cultural socialization attitudes, beliefs, and parenting behaviors in 761 families with children between ages of 5-13 years old. It was hypothesized that parents who recognize racial differences and inequities in society would be more likely to engage in ethnic-specific and race-related parenting behaviors because they hold stronger beliefs in the value and importance of cultural socialization. Figure 1 provides definitions for the key concepts tested in the study and illustrates the relationships among them (see page 7)

Overall, parents had relatively low mean scores on color-blind racial attitudes and relatively high mean scores on enculturation and racialization parenting beliefs. The majority of parents also had their children participate in at least one cultural activity (with an average of three activities in the last year), spoke with their children about racism and discrimination in school, and spoke with teachers about their children's adoption history. Although most parents reportedly engaged in cultural socialization behaviors that directly benefited their children, they were less likely to have participated in post-adoption support groups/listserves/etc. The only distinguishable group difference finding was that parents with children from Russia reported relatively lower enculturation and racialization parenting beliefs than parents with children from Asia and Latin America. Parents with children from Eastern Europe similarly reported relatively lower enculturation parenting beliefs. Finally, parents with lower color-blind racial attitudes were more likely to have their children participate in cultural activities, to participate themselves in post-adoption support groups, to speak with their children about racism and discrimination in school, and to a lesser extent to speak with teachers about their children's adoption history, because these parents held stronger beliefs in the value and importance of enculturation and racialization. This latter finding strongly suggests that parents must be more than simply racially aware of discrimination and racism in society; they must truly believe in the value of cultural socialization for it to affect their actual parenting behaviors.

Cultural Socilization Continued on page 7

Early Social Communication Study

By Amanda Tarullo

We are currently studying nonverbal social communication skills (such as eye contact and pointing) in children who were adopted from orphanages, children adopted from foster care, and non-adopted or birth children. We are interested in these early social communication skills as building blocks for later development of language, attachment to parents, and social skills. At age 18 months, we assess these early social communication skills and their relation to cognitive development, language, pre-adoption experiences, parent-child interactions, and patterns of brain activity. Thank you so much to the 122 families who have participated in this study so far! We are looking for about 30 more 18-month-olds, and hope to be done with this phase of the study in the next few months. So stay tuned for the results in the next issue of the newsletter.

Families who participated in the 18-month-old visits are being contacted when their child is 30 months old and invited to participate in a follow-up phone interview and complete a questionnaire about their child's social and emotional development. Then, when their child is 36 months old, families will be invited back for a follow-up visit, which will include measures of social, emotional, and language development as well as of the parent-child relationship. The 36-month-old visits will begin in September. So, if you participated in this study and gave us permission to contact you in the future, you will be hearing from us as your child approaches 30 and 36 months of age! We greatly appreciate your invaluable assistance with this project. If you have any questions about this research, please contact Amanda Tarullo at (612)624-6002 or taru0007@umn.edu, or Missy Chatham at (612) 626-0353 chat0058@umn.edu.

Brain and Behavioral Development –continued from page 1

The initial profile assesses IQ, language comprehension, general cognition, sensory integration and screens for Fetal Alcohol Syndrome. Children's hearing and vision is also tested at this first visit. Information obtained through the initial profile visit is used to decide on which study the child will go into.

Studies currently in progress:

Attention/Memory/Motor Development: This study has 3 components. The first section (CANTAB) is a series of computer games designed to look at different domains of brain function. Some of the tasks examine memory skills, some look at problem solving skills and others look at reaction time. The second section is a motor coordination assessment designed by U of MN president, Robert Bruininks. In this section, children are asked to walk on a balance beam, stand on one foot, perform several tasks requiring coordination of arm and leg movements, and several fine motor tasks like cutting out circles, drawing shapes, and picking up pennies. The third section involves several table top games, such as looking at children's faces, listening to sounds while placing blocks in a container, and listening to a story and retelling it to an experimenter. This study is being run at both Minnesota and Wisconsin sites. So far 36 children have participated in Minnesota and about the same number in Wisconsin. The study calls for a total of 150 children. Look for results in next year's newsletter.

Stress Response to Public Speaking: This study looks at children's physiological responses to a social challenge. In this study children are asked to wear four heart rate sensors while watching videos and preparing a speech. Children are then asked to present the speech in front of two unfamiliar adults, and are also asked to complete some math problems aloud. Throughout the session, children are asked to provide saliva (spit) samples. Saliva is used to look at reactivity of the stress hormone cortisol. We also ask the families to bring home some supplies, and complete more saliva samples at home. So far 45 of the 120 children needed have participated in this study to date. We may have results to report by next year's newsletter.

Upcoming Studies from the IAP Brain and Behavioral Development Grant

Facial Expression and Emotion Study- This study examines children's responses to emotion-eliciting events. There are three tasks. In the 1st task, children simply press a button to indicate whether a dot appears on the left or right side of a computer screen. Before the dot is shown, the children see pictures of adults posing different emotional expressions. How quickly they respond to the "dot" tells us about how they react to the emotions they see. The 2nd and 3rd tasks measure the effects of emotional stimuli (pictures or short film clips) on eye-blink startle reactions. Positive emotional stimuli produce smaller and negative stimuli larger eye-blink startles compared to neutral stimuli. The difference in size of the eye-blinks tells us about how intensely children experience emotions. During these 2 tasks children wear four small sensors to measure blinking. During the film-clip task the children wear four more sensors to measure changes in heart rate as an index of nervous system activity. This study will begin some time this fall.

Join Your Friends!

The IAP registry was established three years ago to encourage researchers to write more grants and conduct research regarding issues of concern to families who had adopted internationally. Currently 2900 families have registered over 3500 children to participate in future adoption research. It is important that we continue to gather families who have recently welcomed home a child so that our registry continues to represent 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. The families do not have to live in Minnesota, nor do they have to have adopted in Minnesota in order to be included in this registry. Any family with a child up to the age of 18 is welcome.

To learn more about this registry, please contact us at 612-624-9322 or email us at iap@umn.edu.

Brain and Behavioral development Continued on page 5

Neuroendocrine Functions in Post-Institutionalized Children

Children who grow up in orphanages experience a range of physical and social deprivation prior to adoption. We found in previous studies that about 40% of these children are delayed in physical growth at adoption. Some of these children grow incredibly rapidly as soon as they are in the care of a loving family, but a few do not. In this study we are trying to figure out why some children continue to have difficulty growing. Early identification of those who may not grow well once in a family is important for early intervention.

One possible reason for continued poor growth may be that their pre-adoption experiences changed the way their stress system functions. Stress hormones can act to tell the growth system to slow down. To find out if this explains some problems of poor growth after adoption, the MnIAP is conducting this study in collaboration with the Department of Pediatrics, International Adoption Clinic. The children we are studying were adopted from orphanages when they were between 8 and 48 months old. The study involves measuring activity of the growth system (growth hormone), stress system (cortisol hormone) and physical growth.

Currently we are collecting information about children who have recently arrived from Eastern European countries. More than 50 families have already come for their initial visit at the International Adoption Clinic at the University of Minnesota. This initial visit includes both physical assessments (physical growth measurements, growth and cortisol hormone collection) and developmental assessment. Parents complete several questionnaires and collect cortisol via saliva samples at one month and six months after their child's arrival into the US. Six months after adoption children are seen again for a follow up assessment. More than 30 families have already been back for a second visit. We look forward to meeting more new families.

If you are planning to adopt from an Eastern European country and would like to participate, or would like to know more about this research project, please contact Maria Kroupina by phone at (612) 624-6609 or by e-mail at kroup003@umn.edu.

News from other Researchers Studying International Adoption

Sackler Institute for Developmental Psychobiology:
In New York, Jane Aaronson and researchers at the New York Presbyterian Hospital-Weill Medical College are studying the brain development of 4- to 16-year-old children adopted from institutions around the world. They are examining whether the children's pre-adoption experiences influence the development of brain structures that are involved in emotions and memory. These structures include a brain region called the amygdala (emotions) and hippocampus (memory) that are affected by circulating levels of stress hormones. This study is in its early stages. As we hear about results, we will include them in future newsletters. If you know of people living in New York City who might want to take part in this study, please contact us and we can get you information about how to contact the researchers.

Evan B. Donaldson Adoption Institute

A study assessing the health and development of 103 children adopted from Guatemala upon arrival in the U.S. showed that children coming from Guatemalan foster homes prior to adoption had significantly better physical growth and cognitive scores than children who had resided in orphanages. "Health of Children Adopted from Guatemala: Comparison of Orphanage and Foster Care," by Laurie Miller, Wilma Chan, Kathleen Comfort, and Linda Tirella, was published in the June 2005 issue of *Pediatrics* (Volume 115, Issue 6). Most of the children were doing well developmentally (80-92 percent of expected performance), but 14 percent had global developmental delays. The most common medical problems found among the entire group were anemia (30 percent) and symptoms of prenatal alcohol exposure (28 percent).

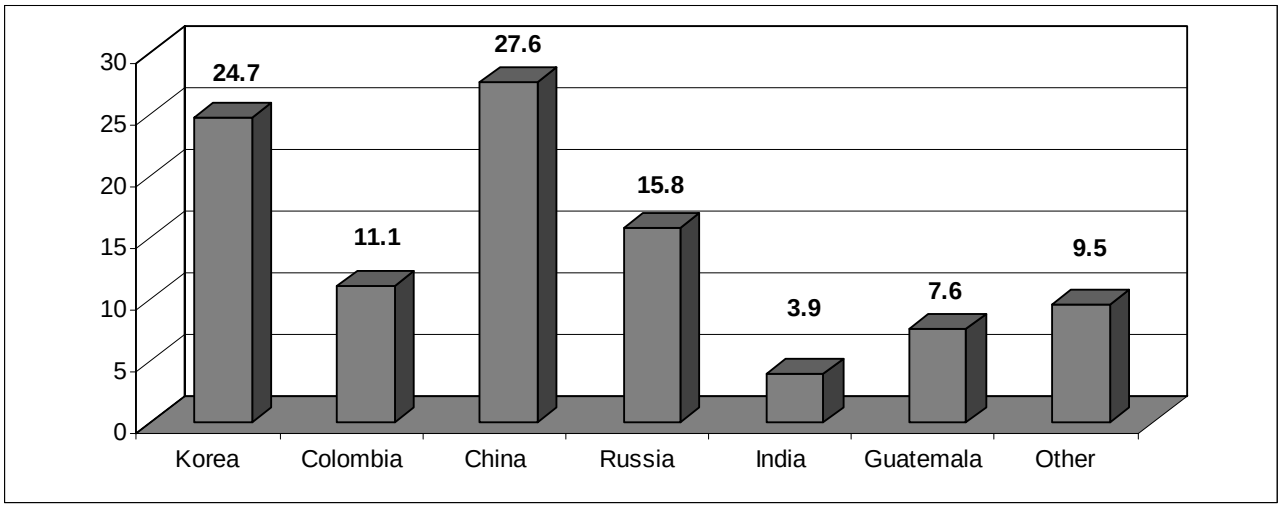
New Arrival Study- continued from page 1

Who are the parents?

Parent education level, income and ethnicity have remained relatively stable in the study over time. 80% of parents in the New Arrival study were college graduates, with 40% having completed advanced (master/professional or doctorate) degrees. A majority of parents fall in the upper-middle-class (65% making more than $76,000 per year), are Caucasian (95%), and are married (86%). These results are consistent with the "New Arrival" results we reported in 2003, and do not differ substantially by year surveyed.

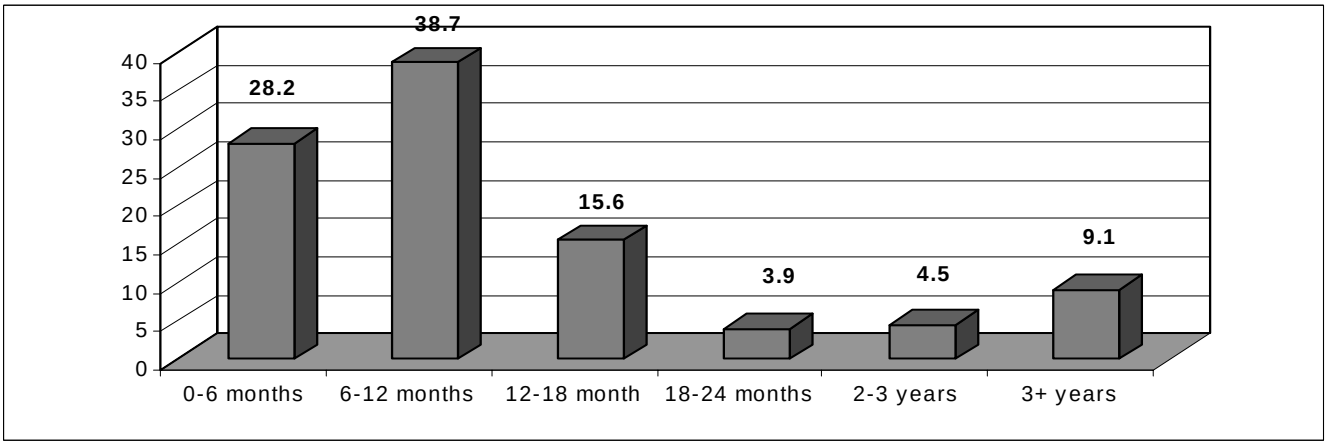
Who Are the Children?

Where do the children come from? (reported in percentages)



These percentages have remained relatively consistent across the years surveyed.

How old were children at placement? (reported in percentages)



How many children spent time in orphanages?

A majority of children (73%) in the study spent at least some time in some type of institutional care (orphanage, hospital or baby home) before adoption. Of the children who spent any time in institutional care, 72% spent 12-months or less in an orphanage.

How was the quality of care before adoption?

21% of parents surveyed thought their children received special attention from adults before adoption; while17% of parents were unsure about the level of attention given to their child. 35% of parents reported the child per adult ratio as less than 7:1. 82% of children had 2 living situations or less before adoption.

New Arrival Study continued on page 6

New Arrival Study-Continued from page 4

Post-Adoption Health

Are children healthy at arrival?

The New Arrival study indicated that most children are healthy at arrival, with only 14% of children needing health care treatment upon arrival. This is up slightly from the 10% that we reported from the study results in 2003. Most reported problems were intestinal parasites (17% of those screened), vision problems (13% of those screened), hearing problems (4.8% of those screened), and speech and language delays (5.4% of those screened).

Are children receiving all needed tests at their first U.S. medical visit?

One concern revealed in the New Arrival data is that children may not be getting all the tests they should at their first U.S. medical exam. The New Arrival study found that only 40% of children were screened for vision and hearing problems at their first visit in the U.S. As mentioned above, vision and hearing problems are some of the most commonly diagnosed health concerns of internationally adopted children at their first medical visit.

Dr. Dana Johnson from University of Minnesota's International Adoption Clinic reported in 2004 that screening rates for infectious diseases in internationally adopted children have increased in the last 10 years. This is likely due to Physician's Desk Reference (Red Book) guidelines for internationally adopted children, introduced in the early 90's. Results from the New Arrival study are consistent with Dr. Johnson's findings, with more than 60% of children in the study having been screened for most infectious diseases (intestinal parasites, TB, hepatitis B and C, and HIV/AIDS). The International Adoption Clinic's list of recommended tests for first U.S. medical examinations can be found at: **http://www.peds.umn.edu/iac/for_families/after/screeningtest.html.**

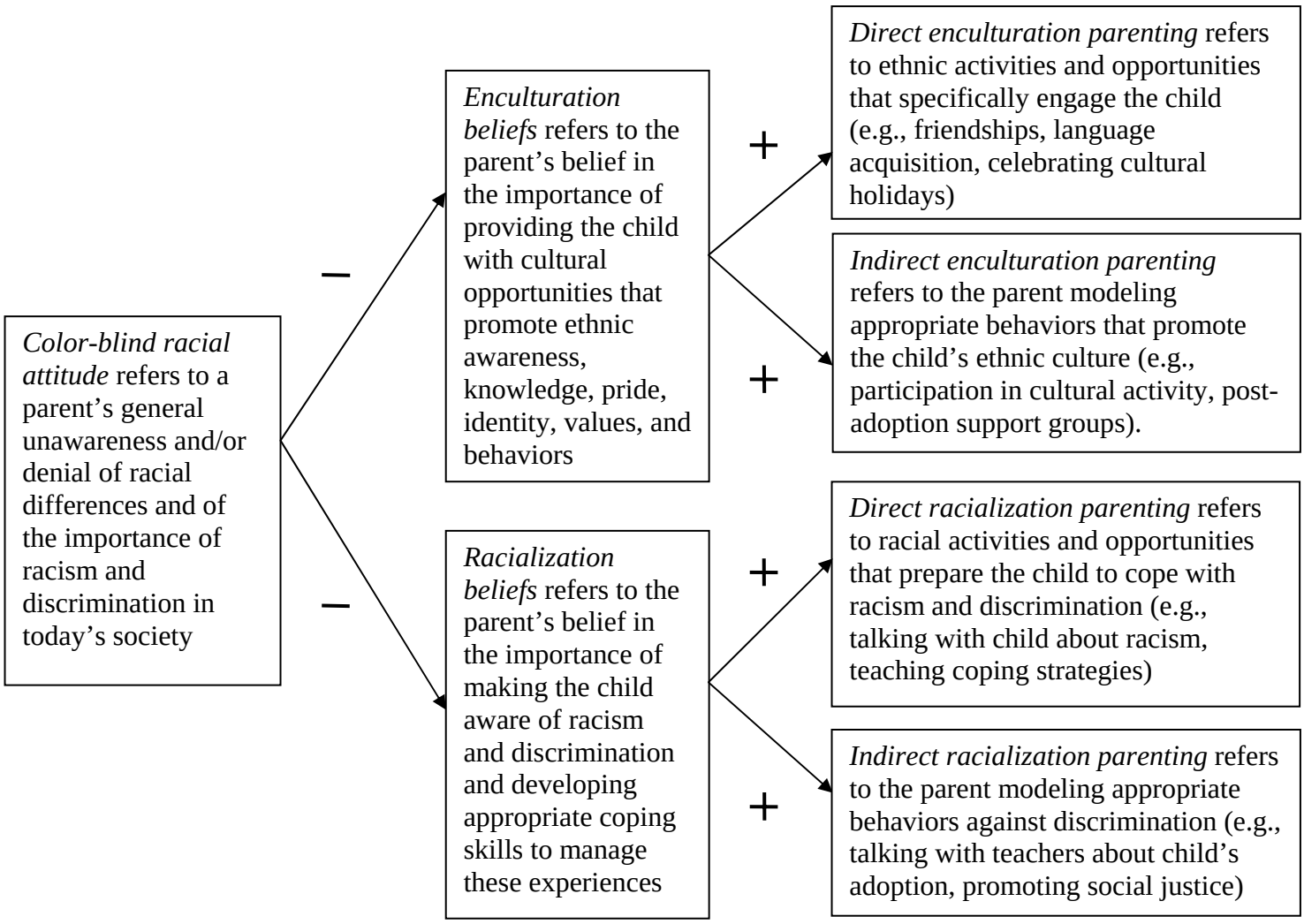
Conclusions

The IAP New Arrival study is an ongoing project. Parents who adopted children internationally within the last year and are on our registry will most likely be called about this study. If you know parents who have adopted and would be interested in this research, and have not yet joined the registry, please encourage them to join. We can be reached at (612) 624-9322 or at iap@umn.edu. We will continue conducting this study, and update you on our findings in upcoming yearly newsletters.

Brain and Behavioral Development- Continued from page 3

A Brain Study Version of Red-Light/Green-Light: This children's game is based on how hard it is to "stop" doing something that you are all set to do it. When you are all set to "go" and you get a "no go" signal, a circuit in the front of the brain turns on. If it doesn't turn on strongly enough, it is almost impossible to stop yourself from "going" and you seem to have an "attention regulation problem". This part of the brain develops during childhood which is why very young children really do have problems when you tell them to "stop", but by school age children typically are pretty good at turning on the "no go" brain circuit. In our brain version of the game, children wear a cap (similar to a swim cap) with sensors that tell us the strength of the "no go" brain circuit. They play a game where they press a button every time they see a letter, except for the letter X. Negative emotions can interfere with our ability to turn on the "no go" circuit. In addition to playing the game with letters, we also have the children play the game with faces: neutral, happy, sad or angry. In the emotion version of the game sometimes the children press to all the smiling faces, but not to the angry faces. Sometimes the game is played by pressing to neutral faces, but not sad faces, and so on. Some children adopted from orphanages seem to have attention problems. This study will tell us whether this is because of problems with the "no go" brain circuit. It will also tell us whether these problems are more likely when emotion circuits in the brain are also turned on at the same time. This study will take place in both Minnesota and Wisconsin, and will begin in early fall of 2005.

Cultural Socialization- Continued from page 2



Note. +/- refers to the direction of the relationship

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The International Adoption Project Fund

An opportunity to support our work through your tax deductible contribution

Since 2000, the University of Minnesota's International Adoption Project has been dedicated to providing answers and resources to families created through international adoption. Over the last four years, more than 3,000 parents have joined our registry – an amazing response – 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 on internationally adopted children.

Unfortunately, those grants do not cover the costs of maintaining the registry and sending out the newsletter. These costs are $10,000 per year and rising.

Enclosed in this newsletter, you will find an envelope that allows you to support our efforts through your tax deductible contribution. 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 and your contribution 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 your 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.