EXAMINING THE INFLUENCE OF PRE-ADOPTIVE RISK ON ATTACHMENT BEHAVIORS IN INTERNATIONALLY ADOPTED CHILDREN

by

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TABLE OF CONTENTS

LIST OF TABLES

ABSTRACT

Children adopted internationally have often experienced adversity in the form of social neglect prior to adoption, often in the form of institutional care. Children who were in institutionalized care before adoption are at-risk for negative outcomes related to attachment formation and security. Removal from institutional care and experience with adoptive parents may help children overcome the impact of pre-adoptive experiences. The duration of previous adverse experiences may be important to the children's developing attachments, however. The association between length of time children were institutionalized and secure attachment behaviors was examined. Results showed that children who were institutionalized for longer periods of time showed fewer secure attachment behaviors with their new caregivers than children institutionalized for shorter periods of time. Similar findings emerged when considering child age at adoption as the predictor variable.

Chapter 1

INTRODUCTION

Institutional care represents an environment that is not suitable to the development of relationships between a child and a specific, reliable caregiver because of the ratio of many children to few caregivers and frequent caregiver changes (Carlson, Hostinar, Miliner, & Gunnar, 2014). In 2015, 5,647 children were adopted internationally within the United States (Child Welfare Information Gateway, 2016). Therefore, it is important that we understand the ways in which pre-adoptive experiences can shape post-adoptive functioning. Children who are adopted internationally lag behind in a number of developmental areas, including but not limited to communication, gross motor development, and attachment (Dalen & Theie, 2014; Van den Dries, Juffer, van IJzendoorn, & Bakersman-Kranenburg, 2008). The present study aims to examine the degree to which internationally adopted children's attachment behaviors are influenced by their pre-adoptive experiences.

Attachment

Attachment stems from an instinctive nature of children to direct signals to a caregiver in times of perceived danger. A reciprocal exchange occurs in which the child expresses distress and the caregiver responds, creating a working model for the child of what to expect in relationships and how to elicit responses (Bowlby, 1982). Parent-child attachment relationships are critical as they affect the child's functioning in future relationships and mental health later in life (Stovall-McClough & Dozier,

2004). Maltreatment and neglect are known to negatively impact attachment security; more specifically, maltreatment has been shown to predict disorganized attachment and there is evidence to support that neglect predicts insecure attachment (Van den Dries et al., 2008).

Traditionally the Strange Situation Procedure is the method used to categorize attachment based upon infant and caregiver behavior during two separations and two reunions into secure (group B), insecure-avoidant (group A), insecure-resistant (group C). Group B infants seek proximity with their caregivers upon reunion and show an ability to be soothed preferentially by their caregiver over a stranger. Group A children do not usually show distress during separation and tend to ignore their caregiver upon reunion. Group C infants, on the other hand, show severe distress and are difficult to soothe, often seeking out then displaying resistance to the caregiver's touch (Ainsworth, 1979). Infants can also be given a group D disorganized classification, indicating that the child exhibits disoriented behaviors like approaching then fleeing from the caregiver or appearing to dissociate (Main & Solomon, 1986).

Although the Strange Situation is the preferred and only widely accepted approach to assessing attachment quality, it can only be used at very wide intervals because it is distressing to the child. The Parent Attachment Diary enables researchers to capture children's attachment behaviors in day-to-day scenarios within the home rather than in a laboratory setting and can be administered very early in the child-caregiver relationship, perhaps before the dyad could even be brought into the laboratory. Dozier et al. (2009) used the Parent Attachment Diary avoidance scale as the primary outcome measure in a study of a sample of foster children randomly assigned to receive either the control (called Developmental Education for Families)

or the experimental (Attachment and Biobehavioral Catch-up program) intervention. The use of the avoidance scale alone as a predictor for attachment security was based upon previous research regarding avoidant attachment in the Strange Situation measure (Stovall-McClough & Dozier, 2004). Previous research has also validated the use of the Parent Attachment Diaries such that secure behaviors in the diaries were significantly correlated with Strange Situation proximity seeking scores and avoidant behaviors in the diary were significantly correlated with avoidance in the Strange Situation, but there was no significant association between resistant behaviors in the diaries and Strange Situation resistance scores (Stovall-McClough & Dozier, 2004).

Institutional Care

While the United States and most Western European countries have moved away from institutional rearing in favor of raising children in family-like units whenever possible, countries abroad still rely on institutions for the care of orphaned, unwanted, or maltreated children (Dozier, Zeanah, Wallin, & Shauffer, 2012). Although orphanage care may meet children's basic needs for medical attention, nutrition, and cleanliness, institutional care is also frequently characterized by its scarcity of opportunities for social-emotional experiences and attachment relationships (The St. Petersburg-USA Orphanage Research Team, 2008). Children are an average of one month behind in growth for each five months they spend in institutionalized care, and psychosocial deprivation, rather than poor nutrition, has been implicated as a major contributing factor toward growth deficiency (Alpers, Johnson, Hostetter, Iverson, & Miller, 1997; Johnson, 2000). In experimental studies, developmental scores improved in institutions that hired and provided additional activity-based training to educated caregivers and reduced the caregiver-to-child ratio to 1 caregiver

for every four children (Sparling, Dragomir, Ramey, & Florescu, 2005). During development, young children can thrive only when given consistent opportunities to interact with committed caregivers (Dozier et al., 2012).

Pre-Adoptive Risk

Children who are removed from their families of origin struggle more than children who have remained with their original family units to develop secure attachments (Stovall-McClough & Dozier, 2004). Loss and separation can disrupt the formation of future attachment relationships particularly if the child was placed in institutional care and lacked the opportunity to form attachment relationships with specific caregivers (Pace, Zavattini, & D'Alessio, 2012). Children adopted internationally may be at risk for forming insecure attachments to their adoptive caregivers (Van den Dries et al., 2008).

One factor that influences the formation of new attachment relationships is the age at which the child is placed with their adoptive caregiver. Attachment security of children adopted before their first birthday is not significantly different from attachment security of non-adopted children (Van den Dries et al., 2008). Meta-analytic findings suggest that even late-adopted children are capable of some degree of "catching up," at least in terms of attachment organization; that is to say, whereas 73 to 93% of institutionalized children are disorganized in their attachment quality, children removed from institutional care and placed with families display disorganized attachment at a rate of about 31%, closer to but not quite as low as the normative group rate around 15% (Van den Dries et al., 2008). Additionally, there is evidence that toddlers adopted from institutional care form attachment relationships to their new caregivers within nine months, regardless of the scarcity of consistent caregivers prior

4

to their adoption, but adversity does slow the formation of attachment (Carlson et al., 2014). Pace et al. (2012) found that even children adopted as old as between four and seven years old typically form attachment relationships within six months of placement. While age is initially negatively associated with attachment formation and security, the association lessens as time in placement goes on.

Time spent in institutional care is also known to influence the formation and security of attachment to adoptive caregivers. Children who were removed from institutional care to be placed in foster care were more likely to display secure attachment than those who remained in institutionalized care, and also less likely to show disorganized attachments (Smyke, Zeanah, Nelson, Fox, & Guthrie, 2010). This suggests that shorter periods of institutional care may have fewer adverse outcomes for attachment. Carlson et al. (2014) used a cumulative adversity score that included the following variables: being 2 years or older at the time of adoption, being neglected or abused, being institutionalized for more than half of life, being in the bottom half of the distribution for social care quality, having three or more care settings, and having three or more health problems at adoption for a composite score out of six. This adversity composite was negatively associated with attachment security during the first three months of placement, implicating both age and time in institutional care in attachment insecurity.

Present Study

The current study examined length of institutional care and age at placement as predictors of children's attachment behaviors with their adoptive parents. It was hypothesized that children placed at older ages would exhibit fewer secure attachment behaviors and more insecure behaviors than children placed at younger ages. It was

also expected that children who spent longer periods of time in institutional care would show fewer behaviors characteristic of secure attachment and more resistant and avoidant behaviors than children who were institutionalized for shorter periods of time or not institutionalized at all.

Chapter 2

METHODS

Participants

The sample consisted of 57 parent-adopted child dyads. The average age of the children in the sample at time of enrollment was 14.4 months old, ranging from 4.8 to 34.4 months. 27 of the children (47.4%) were female, while 30 (52.6%) were male. Information regarding children's countries of birth is listed in Table 1.

Table 1   *Birth countries of internationally adopted children*

Country of Birth	Frequency	Percentage
China	15	27.8
Ethiopia	13	24.1
Russia	11	20.4
South Korea	9	16.7
Kazakhstan	4	7.4
Vietnam	1	1.9
Thailand	1	1.9

Procedure

Attachment Behaviors

The Parent Attachment Diary (PAD) was used to assess infant attachment behaviors. At each time point, the primary caregiver was asked to complete the diary for three consecutive days. Each day, the parent was prompted to reflect on a time when the child was physically hurt, a time when he or she was frightened, and a time when the parent and child were separated. First, the caregiver was asked to write a brief narrative and provide the chronological order of any behaviors from a given list that occurred. Then, the caregiver was asked to provide the chronological order of any behaviors that the child exhibited when the caregiver responded or when the dyad was reunited. The Infant Caregiver Project collected 137 Parent Attachment Diaries; however, only 57 corresponded to independent child-caregiver dyads, while the rest were repeated measures at other time-points following placement. The Parent Attachment Diary measure is Appendix A.

Based on the order of items identified in the checklist and confirmed by the narrative, each diary was coded to provide an average score across the three days for proximity-seeking/contact maintenance behaviors, calming behaviors, avoidant behaviors, and resistant behaviors. The first author of this manuscript scored each Parent Attachment Diary collected by the Infant Caregiver Project using the Coding Manual—Revised developed by Stovall, Dozier, and Lindheim, which is in Appendix B. Another undergraduate research assistant was trained and double-coded 23% of the diaries, and a one-way random effects intra-class correlation was calculated for the 3-day average scores for each attachment behavior scale. Intra-class correlation was .96

for secure behaviors, .77 for avoidant behaviors, and .91 for resistant behaviors. Coders were kept blind to other data.

Time Institutionalized

The number of months in institutional care was gathered from caregiver-report in a pre-adoptive history questionnaire.

Child Age at Placement

Child age at time of placement was also investigated as a predictor variable, calculated as the number of months between when the child was brought home and the child's birthdate (or best available estimate).

Chapter 3

RESULTS

Main Analyses

Time Institutionalized and Attachment Behaviors

Children's time in institutional care was correlated with attachment behavior scores. Longer periods of institutional care were associated with lower three-day average secure behavior scores, $r(57) = -.260, p = .05$, meaning that the more months a child spent in institutional care, the less likely they were to exhibit secure attachment behaviors in the home. Number of months in institutional care was not associated with three-day average avoidant behavior scores nor resistant behavior scores.

Table 2   *Intercorrelations of pre-adoptive risk and attachment behaviors*

	Institutional Care	Security	Avoidance	Resistance
Institutional Care	1.0			
Security	-.26*	1.0		
Avoidance	-.08	-.23	1.0	
Resistance	.02	-.21	.00	1.0

*p ≤ .05

Age at Placement and Attachment Behaviors

Older age at placement was associated with lower three-day average secure behavior scores, $r(71) = -.29, p = .01$, meaning that the older a child was at the time

they went home to their adoptive family, the fewer secure attachment behaviors they exhibited in the home. Age at placement was not associated with avoidant or resistant attachment behaviors.

Table 3   *Intercorrelations of age at placement and attachment behaviors*

	Age at Placement	Security	Avoidance	Resistance
Age at Placement	1.0			
Security	-.29*	1.0		
Avoidance	-.08	-.23	1.0	
Resistance	-.12	-.21	.00	1.0

*p $\leq$ .05

Relationship between Time Institutionalized and Attachment Behaviors, Controlling for Age at Placement

A partial correlation was performed to analyze the correlation between time in institutional care and 3-day attachment behavior scores when controlling for age at placement. The negative association between time in institutional care and the three-day average security scores was no longer significant when controlling for age at placement, $r(54) = -.17, p = .21$.

Chapter 4

DISCUSSION

The present study was intended to provide further evidence that children who spend time in institutional care as well as late-adopted children may struggle to signal their distress clearly to their adoptive caregivers. Older children as well as children who spent more time in institutional care exhibited fewer secure attachment behaviors than younger children and children who spent less time in institutional care. This is consistent with literature regarding the association between age at placement and struggle to form secure attachment (Van den Dries et al., 2008; Carlson et al., 2014). Previous findings regarding a negative association between preadoption adversity and attachment formation were also supported by this study (Smyke et al., 2010). This evidence can inform adoptive caregiver expectations of their children immediately following adoption. Parents may feel that their children are not signaling a need for them because of the low incidence of secure attachment behaviors throughout any given day. In reality, because of the preadoptive adversity that they faced, their children may not yet know that they can rely on their caregivers to respond consistently, so it is through consistent care and caregiver-initiated responses to distress that child-caregiver relationships can best develop.

The findings of this study also motivate the deinstitutionalization of child-care as early as possible. The lower prevalence of secure attachment behaviors as children grow older and spend more time in institutional care supports that the sooner a child can be removed from institutional care, the lower the risk will be of non-secure

responses to distressing scenarios. The urgency for deinstitutionalization of child care is consistent with previous research in which 49% of children who were randomly assigned to move out of institutional care into foster care displayed secure attachments to their caregivers while only 17% of children who remained in institutional care had attachment relationships categorized as secure (Smyke et al., 2010).

Limitations

Although there are strengths of the study, there are also limitations. The Parent Attachment Diary is a parent-report measure, and depends upon parents' appraisal and interpretations of situations and behaviors. Caregiver-reports are susceptible to validity issues in that parents' memories of events may be tainted by their moods at the time of report and because they may exhibit response bias by telling researchers what the parents believe they want to hear. Nonetheless, the measure seeks to maximize accuracy of the self-report from caregivers by asking for a narrative to corroborate the checked items on the list of behaviors as well as by asking for the measure to be completed at the end of each day, rather than waiting until more time has passed. In these ways the Parent Attachment Diary tries to elicit concrete examples of behaviors that are representative of child behaviors within the home.

Future Directions

This study provides evidence that, shortly following placement with an adoptive caregiver, the age of the child and the time spent in institutional care are significantly associated with secure attachment behaviors. Research regarding how pre-adoptive history (factors such as time institutionalized and age at placement) and experience with adoptive caregivers interact to predict attachment behavior is fairly

limited. Garvin, Tarullo, Van Ryzin, and Gunnar (2012) found that, among children who were adopted from institutional care, adoptive caregiver emotional availability during play- including trait sensitivity- improved social functioning. The effects of institutional care showed change based upon caregiver emotional availability such that children whose adoptive parents were more sensitive showed higher emotion understanding at 36 months than children whose parents were less sensitive. Additionally, initiation of joint attention (attempts to garner attention to share an experience) at 18 months predicted indiscriminate friendliness of post-institutionalized children at 30 months, but only for children whose adoptive caregivers were not very sensitive (Garvin et al., 2012). Because experience with adoptive caregivers changes the role of institutional care on functioning, the effect should be analyzed in greater depth.

If there is a time when maternal sensitivity and/or the caregiver's attachment state of mind would be more powerfully associated with child attachment behaviors than child age or time in institutional care are, when would that time be? The aim of attachment-based parenting interventions such as those developed and studied by Dozier et al. (2009) and Juffer, Bakermans-Kranenburg, and van Ijzendoorn (2005) is to alter behaviors of the caregiver in order to improve attachment security, so the association between caregiver sensitivity and secure attachment behaviors exhibited is integral to intervention success. Juffer et al. (2005) found that their intervention was successful in increasing maternal sensitive responsiveness and decreasing the prevalence of disorganized attachment. This finding supports that experience with adoptive caregivers can in a sense "overcome" the adversity a child may face before placement, but future research using the Parent Attachment Diary or a similar in-

home, recurrently collected measure is necessary to further investigate which factors influence the timing of change in attachment behaviors.

REFERENCES

Ainsworth, M. D. (1979). Infant-mother attachment, *American Psychologist, 34(10)*, 932-937. doi:0003-066X/79/3410-0932$00.75

Alpers, L. H., Johnson, D. E., Hostetter, M. K., Iverson, S., & Miller, L. C. (1997). Health of children adopted from the former Soviet Union and Eastern Europe. Comparison with preadoptive medical records. *JAMA, 278*(*11*), 922-4.

Beijersbergen, M. D., Juffer, F., Bakersman-Kranenburg, M. J., & van Ijzendoorn, M. H. (2012). Remaining or becoming secure: Parental sensitivity predicts attachment continuity from infancy to adolescence in a longitudinal adoption study, *Developmental Psychology, 48*(*5*), 1277-1282. doi:10.1037/a0027442

Bowlby, J. (1982). *Attachment. Volume 1*. New York: Basic Books.

Carlson, E. A., Hostinar, C. E., Miliner, S. B., & Gunnar, M. R. (2014). The emergence of attachment following early social deprivation. *Development and Psychopathology, 26*, 479-489. doi:10.107/S0954579414000078

Child Welfare Information Gateway (2016). *Intercountry Adoption Statistics 2015*. Washington, DC: US Department of Health and Human Services, Children's Bureau.

Dale, M., & Theie, S. (2014). Similarities and differences between internationally adopted and nonadopted children in their toddler years: Outcomes from a longitudinal study, *American Journal of Orthopsychiatry, 84*(*4*), 397-408. doi:10.1037/ort0000010

Dozier, M., Lindheim, O., Lewis, E., Bick, J., Bernard, K., & Peloso, E. (2009). Effects of a foster parent training program on young children's attachment behaviors: Preliminary evidence from a randomized clinical trial, *Child and Adolescent Social Work Journal, 26*(*4*), 321-332. doi:10.1007/s10560-009-0165-1

Dozier, M., Zeanah, C. H., Wallin, A. R. (2012). Institutional care for young children: Review of literature and policy implications, *Social Issues and Policy Review, 6*(*1*), 1-25. doi:10.1111/j.1751-2409.2011.01033.x

Garvin, M. C., Tarullo, A. R., Van Ryzin, M., & Gunnar, M. R. (2012). Postadoption parenting and socioemotional development in postinstitutionalized children. *Development and Psychopathology*, *24*, 35-48. doi:10.1017/S0954579411000642

Johnson, D. E. (2000). Long-term medical issues in international adoptees. *Pediatric Annals*, *29*, 234-241.

Juffer, F., Bakersman-Kranenburg, M. J., & van Ijzendoorn, M. H. (2005). The importance of parenting in the development of disorganized attachment: evidence from a preventive intervention study in adoptive families. *Journal of Child Psychology and Psychiatry*, *46:3*, doi:10:1111/j.1469-7610.2004.00353

Main, M., & Solomon, J. (1986). Discovery of an insecure-disorganized/disoriented attachment pattern In Yogman M. and Brazelton T. B. (Eds.), Affective development in infancy (pp. 95-124). Norwood, NJ: Ablex.

Pace, C. S., Zavattini, G. C., & D'Alessio, M. (2012). Continuity and discontinuity of attachment patterns: A short-term longitudinal pilot study using a sample of late-adopted children and their adoptive mothers, *Attachment & Human Development*, *14.1*, 45-61, doi:10.1080/14616734.2012.636658

Smyke, A. T., Zeanah, C. H., Nelson, C. A., Fox, N. A., & Guthrie, D. (2010). Placement in foster care enhances quality of attachment among young institutionalized children. *Child Development*, *81.1,* 212-223. doi:0009-3920/2010/8101-0014

Sparling, J., Dragomir, C., Ramey, S. L., & Florescu, L. (2005). An educational intervention improves developmental progress of young children in a Romanian orphanage. *Infant Mental Health Journal*, *26*(*2*), 127-142. doi:10.1002/imhj.20040

Stovall-McClough, K. C., & Dozier, M. (2004). Forming attachments in foster care: Infant attachment behaviors during the first 2 months of placement, *Development and Psychopathology*, *16*, 253-271. doi:10.1017/S0954579404044505

The St. Petersburg-USA Orphanage Research Team (2008). The effects of early social emotional and relationship experience on the development of young orphanage children. *Monographs of the Society for Research in Child Development*, *73*(*3*), vii-295. doi:10.1111/j.1540-5834.2008.00483.x

Van de Dries, L., Juffer, F., van IJzendoorn, M. H., & Bakersman-Kranenburg, M. J. (2008). Fostering security? A meta-analysis of attachment in adopted children, *Children and Youth Services Review, 31*, 410-421.

Appendix A

PARENT ATTACHMENT DIARY

Parent Attachment Diary

Date: _____   Parent Code: _____

Age of Child: _____   Child Code: _____

Directions: for each question, try to answer as honestly as possible. There are no "right" or "wrong" answers. Please remember that neither your name nor your child's name should be any where on this form. This form will be identified by a code number and will only be seen by research staff. This diary works best when filled out each night. If, for some reason, you are not able to fill it out one night, you may fill it out first thing in the morning. Please do not fill it out any later.

I filled this diary out: ❏ at the end of the day
                          ❏ first thing the next morning

For questions 1-3 try to think of a SPECIFIC INCIDENT THAT OCCURRED TODAY. Do not use the same incident for more than one question.

1. **Think of one time today when your child got physically hurt and answer the following: (this includes anything like falling down, scraping a knee, bumping into something, etc.)**

   Describe this situation in 2-3 sentences (and be sure to include how you responded to

   your child): _____

   _____

   _____

   _____

   _____

   _____

   _____

   A. What did your child do to let you know he/she was hurt? NUMBER YOUR CHILD'S REACTIONS, IN ORDER. ONLY PUT A NUMBER IF THE BEHAVIOR OCCURED.

   ___   looked at me for assurance

   ___   went off by him/herself

   ___   acted as if nothing was wrong

   ___   acted angry/frustrated (ex. Stomped feet, kicked legs)

   ___   called for me

   ___   looked at me briefly then looked away and went on

   ___   came to me

   ___   signaled to be picked up or held, reached for me

   ___   cried

   ___   did not indicate he/she wanted or needed me

   ___   cried and remained where he/she was, did not signal for me

   ___   moved closer to me (but actual contact did not occur)

   ___   other(s) _____

2

B. After you responded to your child, what did your child do next? NUMBER YOUR CHILD'S REACTIONS, IN ORDER. ONLY PUT A NUMBER IF THE BEHAVIOR OCCURED.

___   was soon calmed or soothed

___   pushed me away angrily or in frustration

___   continued to play, did not notice me

___   stomped and/or kicked feet

___   hit or kicked at me

___   remained upset, was difficult to soothe

___   turned from me angrily or in frustration

___   did not indicate he/she needed my help

___   ignored me

___   became quiet and then fussy again

___   turned away when picked up or made contact

___   sunk into me or held on to me until calmed down

___   did not easily let me hold him/her but remained upset (ex. arched back, put arm
      in between us

___   held on to me or went after me if I tried to put him/her down or go away

___   turned, walked, or crawled away from me as if nothing was wrong

___   other(s) _____

3

2. Think of one time today when your child was frightened or afraid of something. (this should not include dropping child off, leaving child, or any other separations)

Describe this situation in 2-3 sentences (and be sure to include how you responded to

your child): _____

_____

_____

_____

_____

_____

_____

A. What did your child do to let you know he/she was hurt? NUMBER YOUR CHILD'S REACTIONS, IN ORDER. ONLY PUT A NUMBER IF THE BEHAVIOR OCCURED.

___ looked at me for assurance

___ went off by him/herself

___ acted as if nothing was wrong

___ acted angry/frustrated (ex. Stomped feet, kicked legs)

___ called for me

___ looked at me briefly then looked away and went on

___ came to me

___ signaled to be picked up or held, reached for me

___ cried

___ did not indicate he/she wanted or needed me

___ cried and remained where he/she was, did not signal for me

___ moved closer to me (but actual contact did not occur)

___ other(s) _____

4

B. After you responded to your child, what did your child do next? NUMBER YOUR CHILD'S REACTIONS, IN ORDER. ONLY PUT A NUMBER IF THE BEHAVIOR OCCURED.

___ was soon calmed or soothed

___ pushed me away angrily or in frustration

___ continued to play, did not notice me

___ stomped and/or kicked feet

___ hit or kicked at me

___ remained upset, was difficult to soothe

___ turned from me angrily or in frustration

___ did not indicate he/she needed my help

___ ignored me

___ became quiet and then fussy again

___ turned away when picked up or made contact

___ sunk into me or held on to me until calmed down

___ did not easily let me hold him/her but remained upset (ex. arched back, put arm in between us

___ held on to me or went after me if I tried to put him/her down or go away

___ turned, walked, or crawled away from me as if nothing was wrong

___ other(s) _____

5

3. **Think of a time today when you and your child were separated—preferably where your child became upset or distressed. (This can include leaving to go out, going to another room, dropping the child off, etc. This does not include putting the child to bed.)**

Describe this situation in 2-3 sentences (and be sure to include how you responded to

your child): _____

_____

_____

_____

_____

_____

_____

A. How did your child respond to the separation? NUMBER YOUR CHILD'S REACTIONS, IN ORDER. ONLY PUT A NUMBER IF THE BEHAVIOR OCCURED.

___ cried, screamed, or yelled

___ acted as if nothing happened

___ called after me

___ wanted to be picked up or held

___ hit, kicked, or pushed me

___ went off by him/herself

___ came after me

___ held on to me, wouldn't let go

___ was happy to keep doing what he/she was doing

___ acted angry or frustrated (ex. Stomped feet, kicked legs)

___ was upset but did not indicate that he/she wanted or needed anyone

___ whimpered or cried briedfly and kept going, did not look at me

___ other(s) _____

6

**B. What was your child's immediate reaction when he/she saw you again?
NUMBER YOUR CHILD'S REACTIONS, IN ORDER. ONLY PUT A NUMBER IF
THE BEHAVIOR OCCURED.**

___   greeted me (ex: smiled, said my name, said hello)

___   stomped and/or kicked feet

___   signaled to be held and/or picked up

___   hit, kicked me

___   cried and remained where he/she was

___   cried, screamed

___   came to me

___   brought me a toy or other object

___   turned away as I picked up or made contact

___   if upset, was easily soothed and calmed by me

___   sunk into me or held on to me until calmed down

___   did not easily let me hold him/her but remained upset (ex. Arched back, put arm
in between us)

___   whimpered quietly to him/herself (may have looked at me briefly)

___   wanted to be held, fussed and wanted to get down, then wanted to be picked
right back up again

___   continued doing what he/she was doing before (didn't notice me)

___   looked at me briefly then looked away, did not smile or greet me

___   started to approach me then turned and wondered somewhere else

___   if upset, was NOT easily soothed and/or calmed by me

___   other(s) _____

Appendix B

PARENT ATTACHMENT DIARY: CODING MANUAL—REVISED

Attachment Diary: Coding Manual--Revised
K. Chase Stovall, Mary Dozier, and Oliver Lindhiem
Department of Psychology, University of Delaware

Introduction to the Revised Coding Manual:

Several significant changes have been made to revised Attachment Diary. Researchers who have been using the older version of the Attachment Diary should thoroughly familiarize themselves with the revisions to the diary. It is our expectation that the revisions will result in improvements in the reliability and validity of the measure.

Overview of the Revisions:

In the revised version, parents are asked to indicate the sequence of the child's behavior by numbering, in order, behaviors that were performed by the child. This is in contrast to the older version, in which parents were simply asked to indicate whether or not the behavior occurred by placing check marks by the behaviors. The older version often resulted in seemingly inconsistent data, with parents, for example, indicating that the child both ignored the mother, and that the child came to the mother. The revised diary provides the coder with the sequencing of the child's behavior and will aid in coding.

In the revised Attachment Diary, we also eliminated the reporting and coding of parent behavior. This was done for both empirical and theoretical reasons. In our research, we have found that asking parents to report on their own response to their child's distress has not resulted in data with discriminant or predictive validity. As a result, in all our published papers we have analyzed and presented results for the child's behavior only. The revision to the coding manual is also consistent with the coding of the Strange Situation (Ainsworth, Blehar, Waters, and Wall, 1978) in which the parent's behaviors are not coded.

Several minor changes have also been made to the Attachment Diary. First, we eliminated the child response "acted cool or aloof" which was coded as avoidance in the older version of the Attachment Diary. This seemed to be a confusing phrase for our respondents and did not differentiate avoidant infants from secure infants. Second, "cried" (Items 1 and 2—Part A) and "cried, screamed, or yelled" (Item 3—Part A), should not be coded as proximity seeking behavior in the absence of any other behavior that is also considered as proximity seeking. Third, we eliminated the code "Calmed or Soothed by Own Actions." Finally, parents are also asked to describe each situation before numbering the child's behaviors. We hope that this will reduce the number of respondents who do not provide narrative accounts for each incident.

Coding Manual:

The Attachment Diary was developed to assess individual differences in infants' attachment behaviors. The coding is based primarily on Ainsworth et al.'s (1978) observations of children in the Strange Situation. We strongly recommend that coders are formally trained to code the Strange Situation before coding the diary. We will be happy to send a set of 20 coded diaries to interested researchers, for the purpose of establishing reliability with our lab.

In the diary, parents are asked to recall three attachment relevant incidents that typically occur in any given day: times when the child is physically hurt, frightened, and separated from the parent. For each incident, parents report the sequences of the child's behaviors. For incidents regarding the child's being hurt or frightened, parents indicate the child's initial help-seeking behavior (part A), and the child's response to the parent's behavior (part B). For incidents involving separations, parents report the child's reactions to the separation and the reunion. In addition to completing all three items, parents are asked to write a short narrative describing each incident.

This coding manual presents our procedures for coding child behaviors. Procedures for coding incidents involving the child being hurt and frightened are identical and are presented first (Diary Items 1 and 2), followed by procedures for coding incidents involving the child being separated from parent (Item 3).

Coding of child behaviors is based primarily on items endorsed on the checklist, but verified by written narrative. Parents' narrative descriptions should be consistent with the items they endorse on the checklist. If the narratives are consistently not relevant to the particular incidents or if narrative and checklist do not correspond, retrain the parent or eliminate this parent's data.

In any given day, children can show from 0-6 proximity seeking/contact maintenance behaviors, 0-3 successful calming behaviors, 0-6 avoidant behaviors, and 0-6 resistant behaviors. When data are missing for one or two diary items, we prorate the data for that day. Data are then converted to standardized scores (standardized across all children), providing scores for proximity seeking/contact maintenance, successful calming, avoidance, and resistance for each day.

Coding Child Behaviors

Child behaviors are coded for proximity seeking/contact maintenance, ability to be soothed, avoidance, and resistance. Some of the child behaviors, if checked by themselves, may be difficult to categorize. In these cases, the narrative provided by the parent is often helpful. Please use this manual and your training in the Strange Situation as your guide for coding.

Coding Child Initial Behaviors when Hurt or Frightened (Items 1 and 2 - Part A)
Checklist responses will usually be coded as indicated below:

Proximity Seeking/Contact Maintenance
looked at me for reassurance
came to me
signaled to be picked up or held, reached for me
moved closer to me (but actual contact did not occur)
called for me

Avoidance
did not indicate he/she wanted or needed me
acted as if nothing was wrong
whimpered or cried briefly and kept going, did not look at me
went off by him/herself
looked at me very briefly then looked away and went on

2

<u>Resistance</u>

acted angry or frustrated (e.g., stomped feet, kicked legs)
cried and remained where he/she was, did not signal for me

<u>Considerations when coding items 1 and 2 - Part A</u>
1. <u>Differentiating avoidance and resistance</u>. Pay attention to the 'hotness' or 'coldness' of the child's behavior. Hotness suggests resistant behavior, while coldness suggests avoidant behavior. For example, a child who turns from the mother would be coded as resistant if he/she did so in an angry way but would be coded as avoidant if he/she did so in a cold or I-don't-need-you sort of way. It should be very rare that a child gets coded for both avoidant and resistant behavior in the same section (part A, part C) of a question.

2. <u>Proximity seeking in resistant children</u>. Resistant children often show proximity seeking behavior. For instance, a child may seek out the mother, want to be held, and then fight to get down. In this case, the child would get scored for both proximity seeking behavior AND resistant behavior.

3. <u>Proximity seeking and avoidance</u>. If the child's initial response is to seek proximity to the caregiver, any avoidance that occurs later should not be scored. If, however, the child first avoids the mother and later seeks proximity, the child will receive a score for both avoidance and proximity seeking.

<u>Coding Child Subsequent Behaviors When Hurt or Frightened (Items 1 and 2 - Part B)</u>

<u>Ability to be Calmed or Soothed by Caregiver</u>

was soon calmed or soothed
sunk into me or held on to me until calmed down

<u>Contact Maintenance</u>

held on to me or went after me if I tried to put him/her down or go away
sunk into me or held on to me until calmed down

<u>Avoidance</u>

turned away when picked up or made contact
ignored me
turned, walked, or crawled away from me as if nothing was wrong
did not indicate he/she needed my help
continued to play, did not notice me

<u>Resistance</u>

remained upset, was difficult to soothe
stomped and/or kicked feet
did not easily let me hold him/her but remained upset (e.g., arched back, put arm in between us)
pushed me away angrily or in frustration
hit, kicked at me
became quiet and then fussy again
turned from me angrily or in frustration

3

Considerations when coding Items 1 and 2 - Part B
1. If someone else responds to the child (a teacher, sibling, etc.), then treat part B as missing data. Of interest is the ability to be soothed BY THE RESPONDENT.

Coding Child Initial behaviors When Separated (Item 3 - Part A)

Proximity Seeking/Contact Maintenance
went after me
held on to me, wouldn't let go
called after me
wanted to be picked up or held

Avoidance
was upset but did not indicate that he/she wanted or needed anyone
went off by him/herself
whimpered or cried briefly and kept going, did not look at me
acted as if nothing was wrong (coded as "was not distressed" if marked alone)
was happy to keep doing what he/she was doing (coded as "was no distressed" if marked alone)

Resistance
acted angry or frustrated (e.g., stomped feet, kicked legs)
hit, kicked, or pushed me

Considerations when coding Item 3 - Part A
In part A of item 3, the parent may indicate that the child was not distressed by the separation. Because children are sometimes left with familiar people or alternative caretakers, they may indeed not be distressed by the separation. Avoidant behavior is indicated only by the child showing in some way that he or she is upset, but then avoiding the parent and not seeking out comfort from other people.

Coding Child Behavior at Reunion (Items 3 - Part B)

Ability to be Calmed or Soothed by Foster Parent
if upset, was easily soothed and calmed by me when I came back
sunk into me or held on to me until calmed down

Proximity Seeking/Contact Maintenance
greeted me (e.g., smiled, said my name, said hello)
came to me   .
brought me a toy or other object,
signaled to be held and/or picked up
sunk into me or held on to me until calmed down

4

<u>Avoidance</u>

turned away as I picked up or made contact
crawled or walked away when he/she saw me
whimpered quietly to him/herself (may have looked at me briefly)
started to approach me then turned and wandered somewhere else
continued doing what he/she was doing before (didn't notice me)
looked at me briefly then looked away, did not smile or greet me

<u>Resistance</u>

pushed me away angrily
cried, screamed
stomped and or kicked feet
did not easily let me hold him/her but remained visibly upset (e.g., arched back,
  put arm in between us)
wanted to be held, fussed and wanted to get down, then wanted to be picked right back up again
cried and remained where he/she was
acted as if he/she was angry with me
hit, kicked me
if upset, was NOT easily soothed or calmed by me