CHILD ATTACHMENT AT ADOPTION AND THREE MONTHS

by

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Dedication

Dedicated to my daughter Kate (Guo Chun Ying).

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Child Attachment at Adoption and Three Months

Abstract

by

LINDSEY GREY HOULIHAN

The early attachment of internationally adopted children is a complex process. Attachment is a physical, social and emotional bond between a child and a caregiver. This study was a single cohort retrospective longitudinal pilot study examining changes in attachment in children adopted internationally. A non-random consecutive order convenience sample of children adopted from an international adoption clinic in the United States was collected. Descriptive and bivariate statistics were used to describe and analyze the quantitative data. The sample (n=36) was comprised on 81.1% (n= 30) girls and 18.9% (n= 7) boys. The mean age at adoption was 17.58 months (SD= 6.72). The children were aged 12 to 36 months. China (43.2%), Russia (21.6%) and Guatemala (13.5%) were the top three countries for international adoption to the United States in the sample. Child attachment was measured by the Attachment Q-Sort (Waters & Deane, 1985). The children were measured within 30 days of adoption (Time 1) and 90 days later (Time 2). Pearson's correlation coefficient was used to examine the correlation between the independent variables (family functioning, parental stress and maternal responsiveness) with the dependent variable (child attachment). Standardized measures such as Family Adaptability and Cohesions Scales (FACES-II) (Olsen, 1985), the

Parental Stress Index – Short Form (Abidin, 1997) and the Maternal Behavior Rating Scales (MBRS) (Mahoney & Powell, 1987) were administered. A semi-structured interview with a parent (n=10) was conducted two years later to describe changes in attachment. These qualitative findings were displayed as case studies. The main findings of the study were very positive for adoptive families. The most positive findings were that child attachment increased from insecure to secure during the course of the study. The level of family functioning was very high as the adoptive families enter this critical transition period of family formation.

Chapter 1: Introduction

Problem Statement

International adoption doubled in the U.S. between 1991 and 2001. Almost 50% of children adopted were infants and 64% were female (Evan B. Donaldson Institute, 2009). International adoptions reached a peak in 2004 with a total of 22,884 adoptions have been on a steady decline since 2004 (Department of State, 2009). The numbers of children adopted internationally is still significant, totaling 17, 438 in 2008.

The majority of children adopted internationally arrive from institutions. Children who are adopted from institutions are at-risk for attachment disturbances and other developmental problems. Little is known about early attachment in adoption; this study examines the impact of family factors upon early attachment in adoption.

Attachment is a physical, social and emotional bond between a child and a caregiver. While bonding is described as the caregiver's feeling toward the child, attachment is a reciprocal relationship between the parent and the child that is built over time. Attachment is the foundation on which many aspects of later developmental, emotional, and behavioral growth and functioning are built (Boris, Fueyo & Zeanah, 1999; Gunnar, Bruce & Grotevant, 2002). Attachment theory states that based upon the parent-infant attachment relationship, children form cognitive mental representations or internal working models about the quality of close relationships, which they then carry forward into later relationships (Bowlby, 1969, 1982; Sroufe & Fleeson, 1986). Optimal attachment occurs when the caregiver provides a "secure base" for the child to seek a natural balance between comfort-seeking and protection as well as exploration, learning and independence (Bowlby, 1969; 1982).

Internationally adopted children are at risk for attachment problems due to pre-adoptive institutional care (Chisholm 1998; O'Connor, Rutter, Beckett, Kreppner, Keavney & the English Romanian Adoption Study Team, 1999, 2000). Institutional care has been associated with disturbances in attachment behavior in adoption (Chisholm, 1998; O'Connor et al., 1999, 2000) because children raised in institutions have fewer opportunities to develop healthy attachment to caregivers (Smyke, Dumitrescu and Zeanah, 2002). The lack of a secure attachment with a primary caregiver presents a significant risk factor for impairments in the development of later social relationships by negatively impacting the child's ability to be intimate and develop trust (Bowlby, 1951; Spitz, 1945).

International adoptees are at particular risk for later difficulties for multiple reasons related to their institutionalization. Such children who enter adoptive homes often display disturbed attachment behaviors that were fully adaptive in the context of their institutional placement but are not adaptive in the context of a family environment. The behavior may manifest itself in the form of intense crying, reliance upon aggressive behavior to get needs met, refusal to be picked up and comforted, being withdrawn, indiscriminate friendliness, or being superficially charming or sad. Adoptive parents may adeptly recognize unproductive attachment behaviors but often they are not skilled at dealing with the problems that arise due to this behavior. For example, a newly adopted child who does not respond to pain after hurting themselves may have learned that no one will come if they cry. A successful strategy for adoptive parents would be to promote attachment by immediately comforting the child physically and emotionally, even if the child shows no response.

Parents of post-institutionalized children often lack the knowledge and skills to intervene effectively when they experience disturbed attachment behavior, even though many elements of attachment disturbances are often malleable over time. Looking at the family from an ecological and systemic perspective, other factors within the family, such as parental stress and family functioning, might impact the attachment relationship as well as the child's pre-adoptive history. Parents who are stressed may not be able to respond appropriately, leaving the child to feel rejected or similar to how they felt in an institution. Parents who do not feel connected to each other or the child may not know how to respond to the child's signals for closeness to build a more secure attachment.

Attachment theory proposes that the quality of care giving from at least the primary care giver is key to attachment security. However, research to date suggests security of attachment is a problem for many internationally adopted children. For example, Markovitch, Goldberg, Gold, Washington, Wasson, & Krekewich (1997) found that only 30% of Romanian adoptees were securely attached to their adoptive families 12 months post-adoption. Chisholm (1998) found that only 37% of Romanian adoptees were securely attached three years post-adoption. Early institutionalization interrupts the parent-child bonding cycle which can result in attachment difficulties as well as delaying emotional, social, and physical development (Bowlby, 1951; Provence & Lipton, 1962; Spitz, 1945; Tizard & Hodges, 1977; Tizard & Rees 1974, 1975). The longer the children are institutionalized, the greater the risk for abnormal attachment behaviors (Chisholm, 1998; O'Connor et al., 1999, 2000).

International adoption concerns more than 40,000 children a year moving between more than 100 countries (Selman, 2000). Within the United States specifically,

many Americans have or will build families by adopting children from foreign countries. Domestic private infant adoptions in the United States have declined dramatically since the 1970's due to a variety of society factors; however, over this same period, the numbers of international adoptions have increased (Tessler, Gamache & Liu, 1999). International adoption may be a more viable choice than domestic adoption for many families, especially those who want to adopt an infant. Adoption from the United States public child welfare system is primarily of older children who are often minorities or part of a sibling group. The importance of identifying early attachment patterns in children who are adopted internationally is that early identification of attachment behavior disturbances may facilitate earlier referrals for intervention. This study will contribute to the knowledge base of attachment in post-institutionalized children by identifying those attachment behaviors that are open to change as well as those that are more impervious early in the adoption. Also, examining the influence of family characteristics on attachment will assist in identifying characteristics within the family environment that are most likely to affect positive attachment outcomes will bring a family system perspective to what is usually studied as an individual child phenomenon. The knowledge of which family contextual variables support or inhibit child attachment will aid clinicians who treat families with children who have attachment behavior issues. On the basis of such information, assessment and interventions can be developed to decrease parental stress or aimed at providing more support to couples.

The Purpose and Aims of the Project

The purpose of the study is to explore the influence of post-adoption experiences on early attachment in internationally adopted children. The overarching aims of the

project are as follows: (1) to describe the early child attachment relationship in children adopted internationally with their newly adoptive parents; (2) to describe the impact of maternal responsiveness on early parent-child relationships in the post-adoptive period; (3) to describe family functioning during the first few months of adoption; and (4) to examine the level of parental stress during the early stages of adoption.

The specific questions that will be asked by the project include the following:

- What does attachment look like 30 days, 90 days and several years after adoption?
- How does early attachment change over time in international adoption?
- What are the associations between family functioning and patterns of early attachment in adoptive children?
- What are the associations between maternal responsiveness and patterns of early attachment in adoptive children?
- What are the associations between parental stress and patterns of early attachment in adoptive children?

Chapter 2: Review of the Literature

Introduction

The number of international adoption in the United States, estimated to be over 215,000 children, demonstrates the need for increased research projects, policy changes and clinical services for this specialized population. The impact of early childhood institutionalization upon adopted children presents challenging issues for parents and professionals for many years after the adoption. The attachment of the children to their new parents is one of the most important initial priorities for children to accomplish for successful outcomes in adoption to occur throughout the life span.

History of International Adoption

Adoption was a process by which communities took responsibility for orphans primarily by assigning children new homes within a country. International adoption was ground-breaking because it sent children across borders and continents to live with new families. Americans began adopting children internationally just after World War II when many children were orphaned, abandoned or separated from their parents as a result of the war in Europe and Japan (Weil, 1984). International adoption began as a humanitarian effort where families in many nations, especially the United States, were moved by the situation of children impacted by war (Carro, 1995). The biggest surge in international adoption came after the Korean War and was attributed to the efforts of Harry and Bertha Holt from Oregon, who advocated for legislation that made international adoption possible in the United States (Tessler, Gamache & Liu, 1999).

Currently, industrialized nations that have a stable economy, later age for marriage, higher education for women, available birth control, legal abortion, and social

acceptance of single motherhood have a larger need for internationally adoptable children (Tessler et al., 1999). Examples of such countries include the United States, Western Europe, the Scandinavian country and Canada. On the other hand, countries that have less industrialized economies, high rates of poverty, high population growth, and few resources for placement of children in-country have large numbers of infants and children available for adoption. Examples of such countries include China, Russia, Ukraine, Ethiopia, and Guatemala. These countries may be experiencing social, military or political changes/upheaval (Tessler et al., 1999) and often low to moderate resource countries.

Some child advocates have expressed concerns about the circumstances that give rise to international adoption. They have indicated that specific social and economic forces have created a demand for international adoption and that the demand outweighs the supply, often creating unethical practices (Riban, 2007). International adoption has been criticized for what could be seen as the commodification of children or the manipulation of developing nations by economically more powerful nations (Groza, 1997). Furthermore, the line between legal adoption and child trafficking is seen by some as murky. For example, Guatemala has a population of thirteen million. In 2007, more than 4,000 children were adopted from Guatemala. Concerns have been reported that children are Guatemala's third leading "export" after coffee and sugar (Knop, 2009). Other concerns have been raised regarding the fees of international adoption. In certain cases, the cost for an adoption will be reduced if the child has certain physical heath or mental health issues, or if the child has been available for adoption for a lengthy period (Knop, 2009). This situation illustrates how children are treated as commodities by

lowering fees for adoption due to health problems or special needs. Some critics assert that the removal of the children from developing nations has represented another form of American *cultural imperialism* (Knop, 2009). They suggest that wealthy nations use their power to exploit women living in poverty in order to satisfy their own needs for adoption. Other critics have expressed concerns about social justice issues related to transracial adoption, child trafficking and cultural genocide (Engel, Phillips & Dellacava, 2007).

Even with these criticisms, international adoption remains very popular. The most exponential growth of international adoption has occurred over the past twenty years. Specifically, the number of children entering adoptive families through international adoption to the United States increased dramatically from 7,093 in 1990, rose from 17,718 in 2000, and reached a peak at 22,884 in 2004 (U.S. Department of State, 2005). In 2007, the top five leading adoption source countries were, in order: China, Guatemala, Russia, Ethiopia, and South Korea (U.S. Department of State, 2008). The number of orphan immigrant visas issued in 2007 ranged from 5,453 for children from China to 184 for children from Taiwan (U.S. Department of State, 2008). Globally, nearly 50% of the children adopted internationally are from Asia, over one third are from Eastern European countries, approximately 10% are from South or Central America, and the other 10% originate from a variety of geographic areas, including Africa and the Caribbean (See Figure 1).

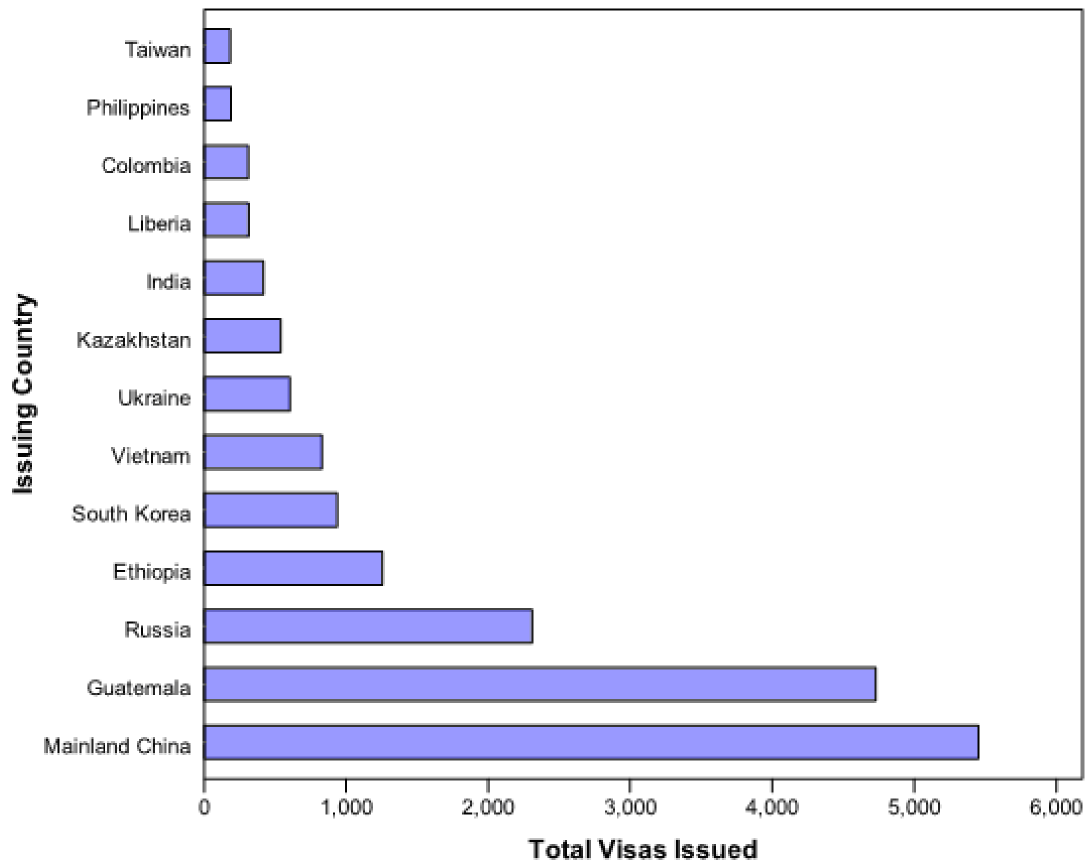

Figure 1. Immigrant visas 2007 by issuing country.

Recent statistics on international adoption also reveal differences by child gender and age. Notably, placement rates for females (56%) are slightly greater than those for males (44%) (Evan B. Donaldson Institute, 2004). China places primarily girls and adoptions from China have amounted to 25% of all international adoptions by Americans (U.S. Department of State, 2002), accounting for the greater percentage of female adoptions. This is an interesting trend both economically and culturally. Certainly the greater availability of female children has contributed to the rising numbers of female adoptions, but it has also been noted that there is a cultural shift to preferring to build families with girls instead of boys (Tessler et al., 1999). There is also a preference in

international adoptions for infants and younger children. Nearly half of all international adoptions are young children under the age of one (46%), while children ages 1-4 represent 43%, ages 5-9 represent 8%, and children over 9 years old represent 3% of international adoptions (Evan B. Donaldson Institute, 2004).

As mentioned earlier, the end of the Korean War (1950-53) brought about the start of the largest wave of international adoptions worldwide. Since the 1950's, South Korea has placed over 200,000 Korean children for adoption, including 150,000 to the United States and 50,000 to Canada, Australia and Europe (Tessler et al., 1999). For over fifty years, South Korea has not only maintained the longest standing international adoption program in the world but also provided the role model for other developing nations participating in international adoption of how to manage a program that is child-centered, within the framework on the Convention of the Rights of Children, and ethical (Tessler et al., 1999).

Korea's international adoption program was a consequent of war. The war brought great social, economic and political changes to Korea. Great numbers of children were abandoned postwar, many of them because they were multiracial after being fathered by American soldiers and not accepted in Korean society (Tessler et al., 1999). Not only was the nation itself divided into two distinct countries, but the effects of industrialization brought many young rural people into South Korea's urban centers. This move to the urban centers as a result of industrialization weakened traditional family structures. In addition, single motherhood was considered socially unacceptable and children were often placed into orphanages as a result of a single woman becoming pregnant (Chun, 1989). Korean women often had little choice but to place their children

in an orphanage for care rather than risk social censure (Tessler et al., 1999). At that time, South Korea did not have a social welfare system that included domestic adoption or assistance to single mothers. In particular, children who had been fathered by American military soldiers and ostracized due to their multi-racial status were eligible for adoption by American families (Register, 1991). The response to this issue was largely a Christian effort led by Western missionaries in collaboration with the Korean community (Register, 1991).

The tremendous growth of South Korea's competitive capitalist economy has vastly improved the conditions for children. International adoption is no longer considered the major solution for child placement (Tessler et al., 1999). In 1990, South Korea was the country from which most Americans adopted, representing over 30% of all international adoptions in the United States (Tessler et al., 1999). In contrast, adoptions from Korea in 2001 had fallen to 10% of total U.S. international adoptions (Tessler et al., 1999). International adoptions from South Korea reached a peak of over 6,000 children a year during the 1980's. This number has since decreased to yearly levels of under a thousand (Tessler et al., 1999). Korea plans to improve their domestic adoption program and promote the placement of older and special needs children for international adoption, which may also decrease the number of children adopted from Korea.

The next wave of international adoption arose in Southeast Asia. After the end of the conflict in Vietnam in the 1970's, an airlift began and families in the U.S. adopted children from Vietnam. "Operation Baby lift" evacuated and placed 2,000 children into adoptive families in the United States and 1,500 into adoptive families in Australia, Canada and Europe (Martin, 2000). The evacuation of children in the final days of the

Vietnam War led to debate over whether these actions had been in the best interest of the children or whether the children would have been better served by remaining in Vietnam. The largest concerns remained with the circumstances that led to the relinquishment of the children. It was reported that while children had been residing in orphanages, parents had not voluntarily consented to adoption (Engel et al., 2007). The chaos of the final days of the war raised issues about the ethics of adoption from Vietnam during this era. Specifically, ethical concerns were raised that the adoptions were not regulated by a governing body and that children were adopted without parental consent (Engle et al., 2007).

The number of adoptions from Vietnam peaked in 1974 and then adoptions dropped off, not resuming again until the late 1990's. Over four decades, parents from the United States have adopted 7,093 children from Vietnam (U.S. Department of State, 1958-2000).

The aftermath of war is not the only reason leading countries allow their children to be adopted internationally. Long-standing poverty as well as social and economic upheaval are crucial factors paving the way for the adoption of children from Central and Latin America. In the 1980's, parents in the United States began adopting from Peru, Chile, Paraguay, Honduras, Guatemala, Mexico, El Salvador and Columbia. The total number of adoptions from this region never approached the numbers from Asia or Russia but Central and South America have been steady sending counties for international adoptions. For instance, in 2007, Guatemala facilitated over 4,728 adoptions (U.S. Department of State, 2008), representing about 2% of live births in Guatemala (Bunkers

& Groza, in press). Adoptions from Central and South America have ebbed in the 2008 and 2009.

The next and current phase of international adoption begins with adoptions from Romania, Eastern Europe and the former Soviet Union. The first adoptions from Romania followed the December 1989 overthrow of Nicolae Ceausescu, Romania's dictator for 25 years. The media coverage was widespread regarding Romania's poorly staffed and poorly funded orphanages (Selman, 2000). The overcrowded orphanages were a result of failed government policies targeted at increasing the population and the widespread poverty led many Romanian families to forfeit their children (Selman, 2000). The sudden drop in adoptions from 1991 to 1993 was the result of a halt in international adoptions by Romanian officials due to corruption (Groza, Proctor & Guo, 1998); children were being brought and sold to the highest bidder. Decreased interest by American families also occurred due to public reports of developmental delays and severe behavioral problems in Romanian children, including attachment issues, as well as health concerns such as TB, Hepatitis, and HIV (Gailey, 2000).

In the early 1990's, the former Soviet Union and countries in Eastern Europe opened their doors to international adoption. The collapse of the former Soviet Union brought economic and social turmoil, resulting in increased poverty, rampant alcoholism, and a lack of family support that was mostly a result of the destruction of family and neighbor networks. As a result, many mothers left their children in institutions (Albers et al., 1997). The number of children in Russia who are placed in institutions rose from 49,000 in 1989 to 114,000 in 1999, tripling the number of children placed in out-of-home care (United Nations Children's Fund, 2001). When communism fell but the number of

children in institutions kept increasing, the child welfare systems turned to international adoption for a solution for the increasing number of abandoned children.

The issues in China are different. In China, government population control policies such as the one-child policy have contributed to the abandonment of infant girls. Cultural beliefs and economic necessity gave male children preferred status over female children. Due to the lack of social insurance for the elderly and the fact that inheritance rights were only bestowed upon males, China's female children often times had little social, economic or cultural value. The birth of a male child in China was called "big happiness" whereas the arrival of a female infant was termed "small happiness" (Tessler et al., 1999). Abandonment of children in China is a serious crime but no formal procedures exist for birthparents to voluntarily relinquish their children for adoption (Evans, 2000). The Chinese government has a social welfare policy that allows for in-country adoption; however, due to the one child policy and the current restrictions on domestic adoption, it is often difficult for Chinese families to adopt in China although such adoptions do exist both formally and informally (Evans, 2000).These factors have been instrumental in the government's decision to promote international adoptions for females (Tessler et al., 1999; Evans, 2000). Chinese adoptions have steadily increased since China implemented their international adoption laws in 1992. Currently, adoptions from China to the United States average 4,000 children per year (U.S. Department of State, 2007). Initially, the eligibility criteria were less restrictive for Chinese adoption for American prospective adopters, which encouraged older parents (ages 35 to 45) and single mothers. The process often took less than a year. The conditions could not have been more ideal for American adopters who had struggled with the restrictions of

domestic adoption agencies and the diminishing numbers of babies available for adoption in the United States. Approximately 45,000 Chinese children, primarily girls, have been adopted into families in the United States since 1992 (U.S. Department of State, 1992-2007). Second to Korean adoptions, Chinese adoptees comprise the largest group of children adopted by American families.

After decades of exponential growth, international adoption of children has begun to decrease in the past few years. Increased economic development and a rise in affluence in low resource countries, falling in-country birth rates, and political pressures often associated with rising nationalism have influenced low resource nations to re-examine their child welfare policies toward international adoption. Additionally, the Hague Convention on the Rights of Children and on Intercountry Adoption has influenced nations to tighten rules for international adoption. The trend is a slow decline in the number of international adoptions. As a result, adoptions internationally have dropped 10% in the top five receiving nations (the U.S, Spain, France, Italy and Canada) since the peak in 2004 (Margolis, 2008). After nearly tripling from 1990 to 2004, the change is most dramatic in the United States. The number of adoptions has been dropping for four years, falling from over 22,000 in 2004 to about 17,000 in 2007 (Margolis, 2008).

The decline in the number of international adoptions to the U.S. began in 2006. Countries began limiting the number of children available for international adoption. New regulations on prospective parents include limits on age, weight, history of mental illness, and family structure (i.e., new limitations on single mothers). The slowing of the referral process and the implementation of new regulations was immediately apparent

with the decrease in the number of children from China and Russia. Adoptions from China and Russia decreased nearly 20% from 2005 to 2006 (U.S. Department of State, 2007).

The trend toward limiting the children was also apparent in the number of children from South Korea, which had been the most stable and longest running program in international adoption. In this region of the world, 1,630 children were adopted from South Korea in 2005 and decreased to 1,376 in 2006, a decrease of 17% (Margolis, 2008). However, African nations continue to see a growing trend of international adoptions (Margolis, 2008). The AIDS epidemic has caused a dramatic rise in the number of orphaned children throughout much of the African continent.

The tightening of adoptions has been attributed to the Hague Convention on Intercountry Adoption. The United States signed the Hague Treaty in 1994 but it was not until 2000 that the nation passed the Intercountry Adoption Act of 2000 ratifying the tenets of the Hague and the full force of regulations were not implemented until 2007. The full title of the multilateral treaty is the Convention on Protection of Children and Co-operation in Respect of Intercountry Adoption. The treaty was drafted from the United Nations Convention on the Rights of the Child 1989. This United Nations treaty was the most comprehensive extension of human rights ever written to protect children. The Hague treaty puts forth best practice guidelines for adoption with the United States and close to seventy-five other nations. These guidelines have four primary goals: (1) the best interest of children is considered with each international adoption; (2) the prevention of abduction, exploitation, sale, or trafficking of children; (3) every child has the right to a permanent family, even when the family is in another country; and (4) adoption of

children between countries should be ethical and orderly ("Hague Adoption Convention", 2003). The U.S. Department of State is the central authority in this county that is responsible for coordinating the new system.

In contrast to the highly regulated domestic adoption in the United States, international adoption had largely been unregulated prior to the Hague treaty. Uniform standards have now been set regarding the amount of pre-parenting education that adoptive families must receive, the costs and fee structure disclosure of international adoption, and uniformity in adoption practice by the agencies and individuals approved to facilitate international adoption, including post adoption services. Countries that have ratified the Hague treaty work together to ensure that adoption is in the best interest of the child, as well as to prevent kidnapping, trafficking or sale of children. The treaty has been praised for promoting domestic adoption as a first choice over institutionalization or international adoption. Supporters of the treaty state that rules against baby selling will protect children and address critics who state that adoption exploits children. (Hague Adoption Convention, 2003; U.S. Department of State, 2006).

Critics of the Hague treaty, such as adoption agencies and international children advocacy groups, put forth that the policy has sabotaged its goals because many of the countries sending children abroad to be internationally adopted have been unable to financially afford the internal child welfare changes the treaty requires. While many believe that the implementation of the Hague treaty protects children, critics argue that bureaucracy prohibits permanency and children reside in institutions longer as a result. The fear of many adoption experts, particularly in the West, is that these rules may prove so rigorous that they will severely curtail international adoption as a vital escape route for

children in troubled regions. Whatever the outcome, the Hague treaty may have positive and negative effects for all parties involved in international adoption and will require further research.

The history of international adoption reveals both the benefits of international adoptions and potential problems that may result. One of the benefits of international adoption is that it remains a vital route for children to leave institutionalized care. Critics of international adoption have stated that it denies dignity to children by treating them as commodities and birth parents may be exploited when poverty, war and overpopulation are reasons for the relinquishment of their children. Critics have also raised the issue that international adoption has depleted low resource nations of their most precious economic, social and cultural natural resource—their children. The Hague Treaty attempted to address these concerns regarding international adoption and has begun to show an impact. There is a noticeable decrease in the amount of children available for adoption in recent years (see Figure 2) and there is a new emphasis on developing child welfare systems in low resource nations to promote domestic adoption. The question of whether the changes in the current state of international adoption will encourage domestic adoption or whether children will remain in institutions longer as a result is yet to be answered. Further research, policy changes and clinical interventions needs to be conducted regarding children adopted internationally from institutions and placed into a family environment.

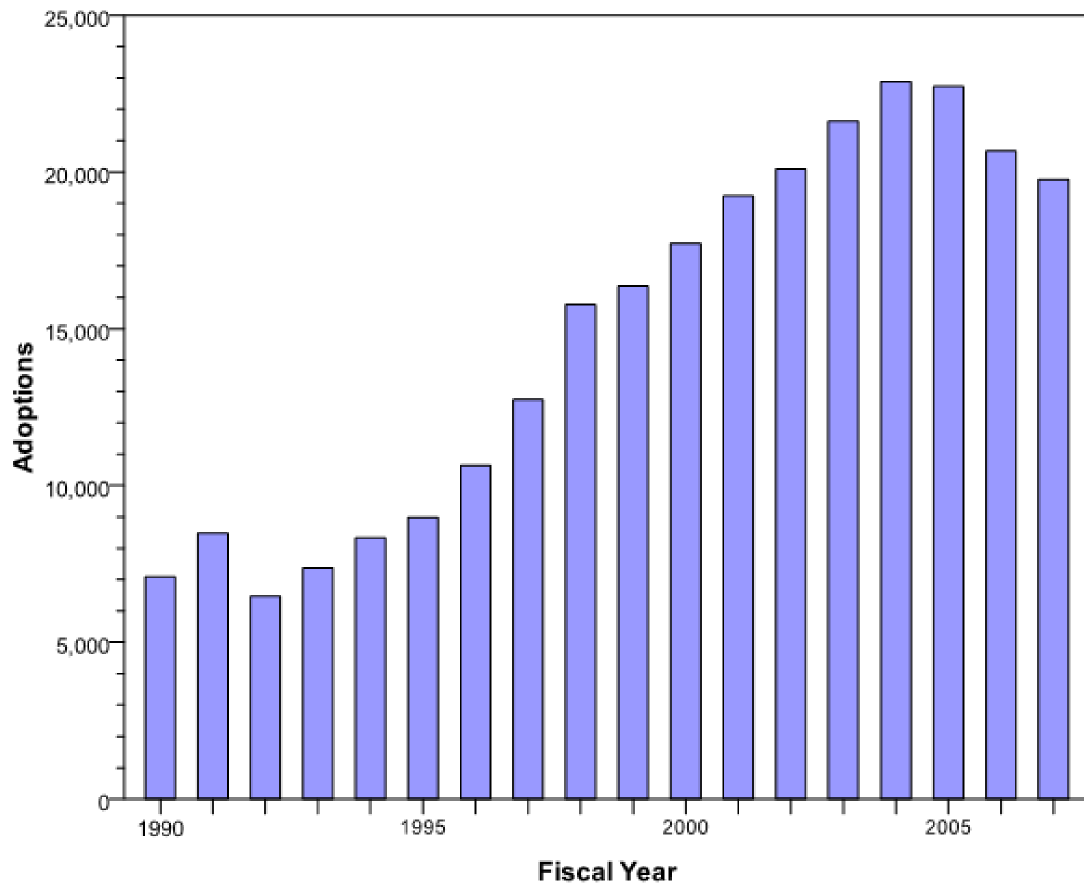

Figure 2. World total adoptions for fiscal years 1990-2007.

The history of international adoption sets a context for this project. The next section will discuss the negative long-term effects of institutionalization upon children who are adopted internationally.

Effects of Institutionalization: Early Studies

Universally, it is widely recognized that institutions have a negative effect on children. Early studies on children living in institutions concluded that the impact of institutionalization was an unchangeable negative condition. Spitz (1945) conducted research in American orphanages and stated that children suffered long-term effects because of separation from a primary attachment figure while residing in institutions. He

found that despite adequate nutrition and clean surroundings in an infant home, children suffered from a lack of stimulation emotionally, socially and physically, and many children died. Spitz coined the term *hospitalism* to describe the physical and psychological characteristics of infants housed in institutions. Specifically, children in orphanages failed to meet developmental milestones such as sitting up or walking and they had poor physical health. He found a drastic drop in infants' *developmental quotients* (DQ) over the first few months of life in institutions. The developmental quotient was a norm used to express aspects of a child's development as measured by the Gesell Development Schedules. It measured development in a wide range of areas—including motor and language development**,** adaptive behavior, and personal-social behavior—both qualitatively and quantitatively. The results of the test are expressed first as developmental age (DA) and then converted into developmental quotient (DQ). Spitz found that by the end of the second year of living in institutions, infants' DQs had dropped to a low of 45 compared to a norm average DQ of 100. Spitz concluded from his study that the damage inflicted on children during their first year of life was irreparable. In the United States, Spitz's work had an immediate effect upon policies regarding children in hospitals. Because his work suggested that social isolation and lack of interaction were more detrimental than the idea of the family spreading germs, families were encouraged to visit their children in the hospital (Fadem, 2004). Spitz's research stated that maternal care is a necessary component to normal and healthy child development.

Similar to Spitz, Goldfarb (1943) conducted research with children in orphanages in England. Goldfarb (1943) studied fifteen children who had been reared in institutions

for the first three years of their lives and were subsequently placed in foster care. He compared these children to a group of children who had been in foster care since early infancy. Goldfarb found that the institution group, even in adolescence, was delayed intellectually relative to the foster care group. They displayed significantly greater problem behaviors, were socially less mature, and appeared emotionally removed in terms of their capacity to form relationships. Goldfarb claimed that early institutional rearing resulted in developmental gaps that were not overcome once children were placed in more stimulating and loving environments. He stated that, given his findings, "babies should be kept out of institutions" (Goldfarb, 1947, p. 457).

Clearly, this early work suggested that institutionalized children would be irreparably damaged as a result of such experience. This work has been criticized, however, largely because of methodological limitations (Longstreth, 1981; Pinneau 1955). Critics reported that much of this early literature provided scant details regarding not only conditions in orphanages but also the assessments used to evaluate children. Other criticism includes lack of randomized trials, no matched groups, no comparison to biological families, and lack of standardized measures.

Tizard and colleagues (1977, 1989) conducted research in the United Kingdom on children who were institutionalized that addressed the limits of these early studies. In contrast to Goldfarb's earlier work in which he claimed that previously institutionalized children would be unable to form subsequent attachment relationships, Tizard et al.'s found that recovery from institutionalization was possible for children who were adopted. However, it is important to note the children in Tizard and colleagues' sample had not

experienced the same extreme deprivation as the children in Goldfarb's sample. Tizard et al.'s more positive outcomes may be partially the result of less severe deprivation.

Tizard (1977) focused upon the amount of individual and consistent care giving offered to children who had spent the first two years of their lives in high-quality institutions in the U.K. In these institutions, child-to-caregiver ratios were 3:1 and the children experienced adequate social interaction and good nutrition. However, the lack of consistent maternal care was notable. The caregivers were discouraged from forming intimate relationships with the children and did not work consistent shifts to provide consistent care to any individual child. Even though children had their basic needs met, the lack of a consistent caregiver to provide individual attention had a negative impact upon children’s development, especially in the area of socio-emotional growth.

Hodges and Tizard (1989) demonstrated that the effects of lack of early maternal deprivation could be reversed. In their longitudinal study over 16 years, Hodges and Tizard followed the development of 65 children who had been in orphanages from an early age. The care provided was of good quality but like the previous study by Tizard (1977) caregivers were discouraged from forming attachments with the children. By age 4, 24 children were adopted, 15 returned to their biological homes, and the remainder of the children stayed in institutions. These became the three experimental groups. They were also compared with a control group who had spent all their lives in their biological families. The children were assessed at 2, 4, and 8 years old. They used various self-report measures, psychometric tests with children, and interviews with parents, children, and teachers.

At 4 years of age, none of the institutionalized children had formed attachments but by 8 years of age those who were adopted had formed good attachments. Additionally, adopted children showed better social and intellectual development than the children returned to their biological families. The children returned to their families showed more behavioral problems and the attachments were weaker. All of the children who had spent early years in institutions displayed attention-seeking from adults and showed some difficulties in their social relationships with peers. Interviews with the children at 16 found that the adopted children still had good attachments that compared favorably with the control children. Children returned to biological families reported less secure attachments, although children raised in the institution had the most unstable relationships. When the children were 16 years old, the majority of the adoptive mothers felt that their child was deeply attached to them. In contrast, only a half of the reunified children were described as deeply attached. Some of the methodological limitations include the use of interviews and questionnaires, both of which can produce answers that are affected by social desirability.

Hodges and Tizard (1989) argued that their findings demonstrate that children who are deprived of close and lasting attachments to adults in their first years of life can make such attachments later, although this does depend on the adults concerned and how much the adults nurture such attachments. The findings offer an explanation for why the adopted children were more likely to overcome some of the problems of early institutional upbringing better than the children reunited with their biological families or those in institutional care. Also, the financial situation of the adoptive families was often better; they had on average fewer children to provide for and the adoptive parents were

particularly highly motivated to have a child and to develop a relationship with that child. The biological parents in Hodges and Tizard's sample seemed to have been more ambivalent about their child living with them, although what this means is not clear.

In summary, these early studies indicated that the impact of early deprivation on child development was detrimental to institutionalized children. Institutions are a poor placement for children because their needs are not met in a timely and sensitive manner. Children in deprived environments often emerge with global developmental delays in physical growth, cognitive development and socio-emotional development. Although a risk factor for less normal development, results of studies show that institutionalization does not condemn a child for a lifetime of psychopathology as originally predicted. The negative impact of institutionalization is greater when coupled with risk factors in the post-institutional environment (Gunnar & Grotevant, 2000).

All the findings about the negative effects of institutions lacked an overall theoretical framework for understanding the outcomes. This changed with the development of attachment theory by British psychoanalyst John Bowlby (1951, 1969, 1982, 1988).

History of Attachment Theory

Bowlby (1951, 1969, 1982, 1988) developed the major theoretical foundations of attachment theory to account for infant social and emotional development and adjustment. Bowlby theorized attachment was a life-span construct. In his original work, Bowlby (1951) stated that separation from and lack of maternal care was a factor called *psychological deprivation*. His study of orphanage children stated that children who lived in the care of institutions were deprived of the kind of care necessary for

healthy emotional development. Bowlby interviewed the children and their families who attended the London Guidance Clinic for disturbed children. He compared the backgrounds of 44 juveniles with criminal charges with the background of 44 typically developing children. His findings suggested that 32% of the delinquent youth were diagnosed as having *affectionless psychopathy* or lack of a moral conscience. Most of these youth had experienced maternal separation for at least one week before the age of 5. Bowlby concluded that the separation in early childhood led to long-term negative behaviors and particularly adversely affected emotional development. According to Bowlby, attachment is an organized, self-regulated, and mutually interacting behavior system between parent and child (Karen, 1994). In instances where caregivers are perceived as emotionally available, children develop a sense of others as emotionally available and consistent. In turn, the children view themselves as cared for, and they view intimate relationships as positive. In contrast, when care giving is inadequate, children develop a sense of others as unresponsive and unavailable, experience themselves as unlovable, and enter intimate relationships with ambivalent or negative feelings. Bowlby theorized that repeated interactions with the caregiver change as the child develops and matures; thus, the sequence of interactions rather than one event are responsible for how children develop attachment.

As an outcome of these interactions, children begin to have feelings about the self and ideas of others in intimate relationships. Bowlby termed these expectations the *internal working model*. The internal working model is a framework through which the child assesses their relationship with their primary attachment figure. The internal working model consists of expectations concerning the availability of the caregiver when

the child turns to them for support. For the child, these expectations also translate into a sense of the self as either lovable or unlovable. For instance, the child who experiences sensitive and consistent care develops a secure attachment and sees themselves as worthy. Bowlby theorized that repeated interactions with the caregiver change as the child develops and matures over time. While early attachment consists of seeking security and availability, attachment past infancy develops into the internal working models.

Ethological theory influenced the concepts of attachment developed by Bowlby (Bowlby, 1969, 1973, 1998) and expanded by Ainsworth (1973). Ethology is defined as the study of animal behavior focusing upon adaptation in the naturalistic environment (Hinde, 1989). Lorenz (1952) described the social behavior of geese during early critical periods where the young formed lasting relationships with an animal caregiver. Imprinting, as Lorenz labeled the term, was a biologically-based behavior that ensured protection and survival of the species. Bowlby (1969), who first applied this idea to the infant-caregiver bond, was inspired by Lorenz's (1952) studies of imprinting in baby geese. Bowlby's view of attachment from an ethological perspective suggested that children were biologically predisposed to seek a relationship with a caregiver, contradicting Freud's theory that the driving force in child-parent relationships was based upon the need for food or other innate drives (Bretherton, 1992). Subsequent animal studies further refined Bowlby's thinking.

Animal research on monkeys was conducted to study the impact of attachment experiences upon young non-human primates (Harlow & Zimmerman, 1959). Among the most well known experiments on the subject were those of Harlow in the 1950s and

1960s. Harlow, an animal learning theorist, believed in the universal human need for contact. Harlow admired Spitz (1945), who showed that infants raised in orphanages without care physically and emotionally deteriorated and, and in many cases, died. Harlow's famous wire/cloth "mother" monkey studies demonstrated that the need for affection created a stronger bond between mother and infant than did physical needs such as food (Blum, 2002; Harlow, 1959). In 1957 Harlow began his experiments with rhesus monkeys. The monkeys were more mature at birth than humans and had a range of emotions, including needing to be nursed. The monkeys had a choice between the wire mother and the cloth mother. Both mothers were the same size and had an electric light in them so they were warm. Although the wire mother had food, the baby monkey rarely stayed with this mother and preferred cuddling with the cloth monkey, particularly if they were scared. When the cloth monkey had the bottle, they did not visit the wire monkey at all. The outcome for the monkeys raised in this environment was that they developed peculiar behaviors in adulthood. These behaviors included rocking back and forth, clutching themselves, excessive aggression and atypical patterns of sexual behaviors (Blum, 2002).

Ainsworth was an American developmental psychologist known for her work in early attachment relationships. Ainsworth's fieldwork empirically supported the more theoretical work of Bowlby by developing a coherent description of the creation and impact of intimate relationships between parents and children. Ainsworth met Bowlby at the Tavistock Clinic in London while investigating the effects of maternal separation on child development. In 1954, she left the Tavistock Clinic to do field research in Africa where she carried out her longitudinal field study of infant-mother interaction.

Ainsworth (1963, 1967) conducted a longitudinal study in Uganda during the mid-1950s of early mother-child interactions in a naturalistic setting. Her extensive observations of the children (ages 1-24 months) and mothers was conducted for 2 hours a day for 9 months. One focus of Ainsworth's study was the examination of maternal sensitivity to infant cues (Bretherton, 1992). Three categories of attachment emerged from her Ugandan study. Babies that were securely attached were easily comforted and cried little. Insecurely attached infants cried a lot and were not easily soothed. A third category showed little differential behavior towards the mother compared to other people (Bretherton, 1992). It seemed that the level of security of attachment was correlated with maternal sensitivity. Secure children had mothers who were more sensitive to their needs whereas insecure children had mothers who were less sensitive.

In 1963, Ainsworth tried to replicate her studies on 26 parent-child pairs in the United States in urban Baltimore (Bretherton, 1992). Ainsworth conducted naturalistic observations beginning before the babies were born. Each visit lasted 4 hours and each family accumulated over 72 hours of observations, ending when the child was 54 weeks old. Data were collected in narrative form at 5 minute increments and was later transcribed from a tape recording. Data was organized and analyzed for all families separated by 4 month blocks of time. An important aspect of Ainsworth's methodology was that she analyzed behavioral patterns in a context rather than simply the frequency of discrete behaviors (Bretherton, 1992). Differences were observed in how sensitive and responsive mothers were to their children. Mothers who smiled more and enjoyed their babies had babies who cried less and relied on reading the mother's face as a source of communication (Bretherton, 1992).

On the basis of Ainsworth's research, the attachment of children was categorized into three groups. Each of these groups reflects a different kind of attachment relationship with the caregiver. *Secure attachment* is displayed when a child will explore freely while the mother is present, will engage with strangers, will be visibly upset when the mother leaves, and will be happy to see the mother return. Secure attachment can be seen as the most adaptive attachment style. *Anxious-ambivalent insecure attachment* is demonstrated when a child engages in anxious exploration and wariness of strangers, even when the mother is present. When the mother departs, the child is extremely distressed but the child will be ambivalent when she returns. The child is also resentful of the separation and may also be resistant when the mother tries to engage the child. This style of attachment develops from a mothering style that has been described as relying solely upon the terms set by the mother. *Anxious-avoidant insecure attachment* is demonstrated when a child will avoid or ignore the mother. The child will show little emotion when the mother departs or returns. This style of attachment develops from a mothering style that is more disengaged and distant. The child's needs are frequently not met and the child comes to believe that communication of needs has no influence on the mother. Ainsworth's research concluded that the majority of the relationships were secure, although some were tense and uncomfortable. The primary component that provided security was the maternal sensitivity and responsiveness to the child's cue afforded by the mother.

Main and Solomon (1985) proposed another additional category of attachment from the typology Ainsworth developed and called it *disorganized-insecure attachment*. Children with a disorganized-insecure attachment style show a lack of clear attachment

behavior. The child feels both comforted and frightened by the parent. Children with disorganized-insecure attachment exhibit actions and responses to caregivers are often a mix of behaviors, including avoidance or resistance. These children are described as displaying dazed behavior, sometimes seeming either confused or apprehensive in the presence of a caregiver. Main and Solomon (1985) suggested that inconsistent behavior on the part of parents might be a contributing factor to disorganized attachment. In later research, Main and Hesse (1990) further argued that parents who act as figures of both fear and reassurance to a child contribute to a disorganized-insecure attachment style. Another one of the key contributions from Ainsworth was the outline of concepts that provide insights into parental components that contribute to secure attachment behavior (Grossmann, Grossmann & Waters, 2005). Ainsworth (1969) developed a method to evaluate maternal sensitivity and responsiveness called the Maternal Sensitivity Scale. The main components consisted of a mother's sensitivity to an infant's signals, awareness of signals, accurate interpretation of signals, and provision of a prompt appropriate response. The first component represented maternal sensitivity or insensitivity to a child's signals. The second component centered on cooperation or interference with the child's behavior. The third component focused upon acceptance or rejection of the child. The fourth component was directed towards accessibility or ignoring of the child's signals.

Ainsworth developed a method of measuring attachment known as the Strange Situation Procedure (SSP). The SSP is the standard protocols for assessing individual differences in infant and toddler attachment in child development research. The SSP is a laboratory procedure used to assess child attachment style for children between the age of

9 and 18 months. The procedure consists of a series of separations and reunions between the mother and the child, as well as the introduction of a stranger. These interactions are observable and coded (Ainsworth, Blehar, Waters, & Wall, 1978). The infant's behavior upon the parent's return is the basis for classifying the infant into one of three attachment categories: secure, anxious-avoidant, or anxious-ambivalent. Criticism of the SSP is that the scientific assessment of attachment security occurs in a laboratory rather than the home environment. This setting is stressful and involves separating children from their caregivers for a brief period of time.

The Attachment Q-Sort (AQS; Waters & Dean, 1985) was developed as an alternative to the SSP. It can be used at home without the separations of a child from a parent and is less stressful on the child. The evaluation consists of several hours of observation and 100 cards that describe specific behaviors of children; children must be between 12 and 48 months of age and be mobile. The cards are sorted into nine piles from "most descriptive of the child" to "least descriptive of the child." The results are compared to a criterion sort from an attachment expert and a score for attachment security is computed as a continuous variable. van Ijzendoorn, Vereijken, Bakermans-Kranenburg, & Riksen-Walraven (2004) conducted a meta-analysis of 139 AQS studies including 13,835 children. They stated that the AQS assessment scores had convergent validity with the SSP, making it a useful tool for evaluating attachment security in children. They also stated the AQS may be useful in measuring cross-cultural or clinical populations to gain greater detail on secure attachment behaviors.

Clinical practice offers a different typology than research. In the DSM-IV-TR, the revised fourth edition of the American Psychiatric Association's Diagnostic and

Statistical Manual of Mental Disorders, attachment disturbances are currently categorized as *reactive attachment disorder* (RAD). RAD is divided into two categories: disinhibited and inhibited attachment disorders. Zeanah et al. (2004) describe the criteria for *disinhibited* RAD (i.e., disinhibited attachment disorder) as (1) not having a discriminated, preferred attachment figure; (2) not checking back after venturing away from the caregiver; (3) lack of reticence with unfamiliar adults and (4) a willingness to go off with relative strangers. In comparison, the criteria for DSM-IV *inhibited* RAD include (1) absence of a discriminated, preferred adult; (2) lack of comfort-seeking for distress; (3) failure to respond to comfort when offered, (4) lack of social and emotional reciprocity, and (5) emotion regulation difficulties. It is interesting to note that Zeanah et al. found that these two disorders were not completely independent and that a few children may exhibit symptoms of both types of the disorder. The World Health Organization's International Statistical Classification of Diseases and Related Health Problems (ICD-10) has diagnostic criteria similar to the DSM-IV-TR but has divided it into two slightly different categories: reactive attachment disorder and disinhibited disorder of childhood.

Boris and Zeanah (1999) proposed a new categorization for attachment disorders. The first new category is *disorder of attachment*, in which a young child has no preferred adult caregiver. This category parallels RAD in its inhibited and disinhibited forms, as defined in DSM-IV-R and ICD-10. The second new category is *secure base distortion*, where the child has a preferred familiar caregiver but the relationship is such that the child cannot use the adult for safety while gradually exploring the environment. The third new category is *disrupted attachment*. Disrupted attachment is not covered under

ICD-10 and DSM criteria; it reportedly results from an abrupt separation or loss of a familiar caregiver to whom attachment has developed. This categorization may demonstrate more clinical accuracy overall than the current DSM and ICD classifications, but further research is required.

The main theoretical constructs of attachment theory are portrayed in Figure 3 by the researcher who devised the classification system or source of diagnosis.

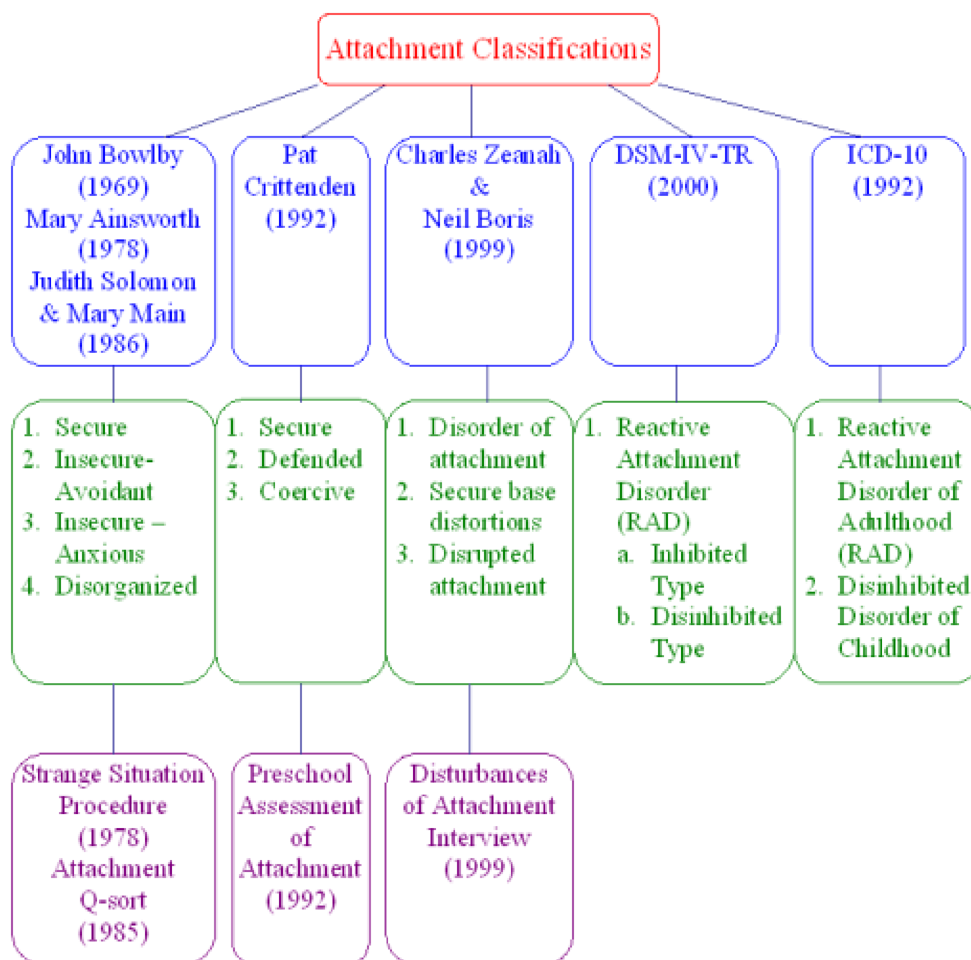

Figure 3. Attachment classifications.

An important final emphasis in regard to current attachment theory is the role of maternal responsiveness. The premise behind maternal responsiveness is that caregivers who are consistently available both physically and emotionally, who are sensitive to their child's signals for attention, and who are immediately receptive and accepting of the child's distress tend to have securely attached children. *Maternal responsiveness* can be defined as how immediate, appropriate and sensitive the actions of a mother are towards a child. Maternal responsiveness is one of the primary factors that have been thought to impact child attachment (Ainsworth, 1978). The majority of studies on attachment include some measure of parental sensitivity or responsiveness to infants' signals of distress. A review of 13 studies on maternal sensitivity and infant attachment as well as a more recent review of 66 studies found a low to moderate effect of maternal sensitivity on attachment (deWolff & van IJzendoorn, 1997; Goldsmith & Alansky, 1987).

One of the main reasons that maternal responsiveness is important is that responding to the children's signals sensitively and consistently creates trust, which is one of the major outcomes of attachment. Responsive mothers learn to read the child's cues, learn to think like the child or "speak for the child" (Juffer, Bakermans-Kranenburg, Van IJzendoorn, 2008). Some mothers intuitively know how to do this but others do not. Yet responsive mothers can become even more responsive and less responsive mothers can learn how to be more responsive (Juffer et al., 2008). Little is known about which strategies are effective for facilitating this process in parenting.

Attachment and International Adoption

Most children adopted internationally start life in an institution and institutions have negative effects on children. One serious negative effect is attachment problems. It

is critical to understand the relationship of attachment problems to children adopted internationally.

O'Connor et al. (2000) conducted a longitudinal study over 6 years in the U.K. that included 152 children adopted from Romania and 52 adoptees from the U.K. At ages 4 years and 6 years, a group of 152 children adopted from Romania before the age of 42 months were compared with 52 children adopted soon after birth in the U.K. There were 111 Romanian children adopted into their homes before they were 24 months old and all of the U.K. children were adopted before this age. The method of assessing attachment was a semi-structured interview with the parent created by the authors as well as socio-emotional and cognitive data collected using standardized instruments. Approximately 20% of children had attachment disturbances. Results revealed a close association between the length of time in an institution and the severity of attachment disturbances. Attachment disturbances remained stable in attachment disturbances and demonstrated minimal decrease over the 2 year follow-up period. Overall, while all children demonstrated remarkable resilience, children adopted under the age of 2 had the best outcomes (O'Connor et al., 2000).

Research in the Netherlands also examined the attachment of infants who were adopted internationally. Juffer and Rosenboom (1997) observed 80 mothers and their children from Sri Lanka, South Korea and Columbia; dyads were examined in their homes at 6 and 12 months after adoption. The children were all adopted transracially and were placed into adoptive homes before the age of 6 months. At 12 and 18 months the Strange Situation was administered to evaluate the mother-child relationship. Attachment classifications were coded with the Ainsworth categories. Results indicate

that 74% of the children had a secure attachment. There were no differences regarding the birth country or the presence of biological children already in the family.

In Canada, Chisholm (1998) conducted a longitudinal study examining indiscriminate behavior patterns and attachment of children adopted from Romania. Attachment security was assessed by a measure adapted from the Attachment Q-sort (Waters & Deane, 1985) and a videotape of a separation and reunion episode based upon the Strange Situation. The videotaped episodes were coded with the Preschool Assessment of Attachment (PAA; Crittenden, 1988-94). Chisholm examined 46 children who had been adopted after spending at least 8 months in a Romanian orphanage (RO). Two comparison groups consisted of Canadian-born children (CB) who were not adopted (n = 46) and Romanian children (RC) adopted into Canadian families before the age of 4 months (n = 37). The three groups were all matched within one month of age and sex. The children who were adopted had been placed with their adoptive families for at least 26 months. The average age of children at the time of the adoption was 19 months.

Chisholm found that RO children scored significantly lower on the security of attachment measure than did the CB and RC groups. The RC children's security of attachment did not differ from the CB children. The authors found that the primary difference in attachment patterns between the RO and CB groups was the ambivalent attachment behavior exhibited by RO children. Although RO, RC and CB parents did not differ on their parent attachment scores (e.g., parent levels of commitment to the parenting role), it was only in the RO group that parent attachment was correlated significantly with the child's attachment score. Although even low scores on parent attachment may be good enough for CB and RC children, the RO children may require a

higher level of parental commitment in the form of more emotional warmth and a greater ability to read children's cues. The researchers hypothesize that the uncommunicative behaviors and behavioral problems exhibited by RO children may have made it more difficult for their parents to respond to them in ways appropriate for the development of secure attachment. The researchers note that the RO children's attachment security scores were unrelated to both their age at adoption and the length of time they had been in their adoptive families. RO children's lower scores on security of attachment are attributed to the extended period of neglect and social deprivation they experienced while institutionalized.

One confound of these studies is that children all left one country to be adopted into another country. To control for this confound, Smyke et al. (2002) examined three groups of children living in Bucharest, Romania in 1999. The first group was 32 toddlers living in a large institution in Bucharest receiving standard care. The second group was 29 toddlers living in the same institution in a pilot cottage designed to create more consistent care and reduce the number of adults caring for each child. The third group was 33 toddlers residing with their biological family who had never been institutionalized. The presence of attachment disorders and other behavioral problems was assessed by caregiver/parent report using the Disturbances of Attachment Interview (DAI). The outcome was that children living on the typical institutional unit had significantly more signs of disordered attachment than children in the other two groups. Both the emotionally withdrawn and the indiscriminately social patterns of attachment disorder were apparent in the institutionalized children. Results also revealed that mixed patterns of attachment are more typical than more formerly reported.

Taken as a whole, the studies suggest adopted children who come from institutions are more at-risk for attachment problems. Yet these studies do not systematically study attachment in context of the post-adoption environment.

Contextual View of Attachment

Ecological Perspective

Bronfenbrenner's (1979) ecological perspective evaluates child development in context of the person, the environment, and the continuous interaction of the two. This interaction constantly evolves and develops the other two components. The key is that all the systems work together to influence how a person develops. Bronfenbrenner saw the child's experience "as a set of nested structures, each inside the next, like a set of Russian dolls" (Bronfenbrenner, 1979, p. 22). Bronfenbrenner's model includes the macrosystem, exosystem, mesosystem, and microsystem. These levels describe influences as intercultural, community, organizational, and interpersonal or individual. Traditionally many research theorists have considered only a dichotomy of perspectives, focusing on either the micro level (individual behavior) or macro level (cultural influences).

Bronfenbrenner (1979) reached beyond the confines of the mother-child relationship and examined the broader social context that impacts human relationships. Attachment theory states that the primary foundation of secure attachment is the caregiver. Bronfenbrenner expanded this perspective to include the psychological profile of the mother as well as the degree of support for her in other social and emotional realms (Belsky, 1999).

Building from the Bronfenbrenner framework, an ecological perspective on adoption is outlined in Figure 4; it applies only to adoptive families. The microsystem

consists of the adoptive family. The child has his or her microsystem that he or she brings the pre-adoptive history including their experience with the birth parents and any other pre-adoptive experience. The merging of the child microsystem with the parent(s) microsystem creates the new adoptive family system microsystem. The mesosystem includes the community, schools, and neighborhood as well as service providers such as adoption agencies, early intervention, post-adoption services and health care providers. The macro system is the other social and economic institutions including policy and research.

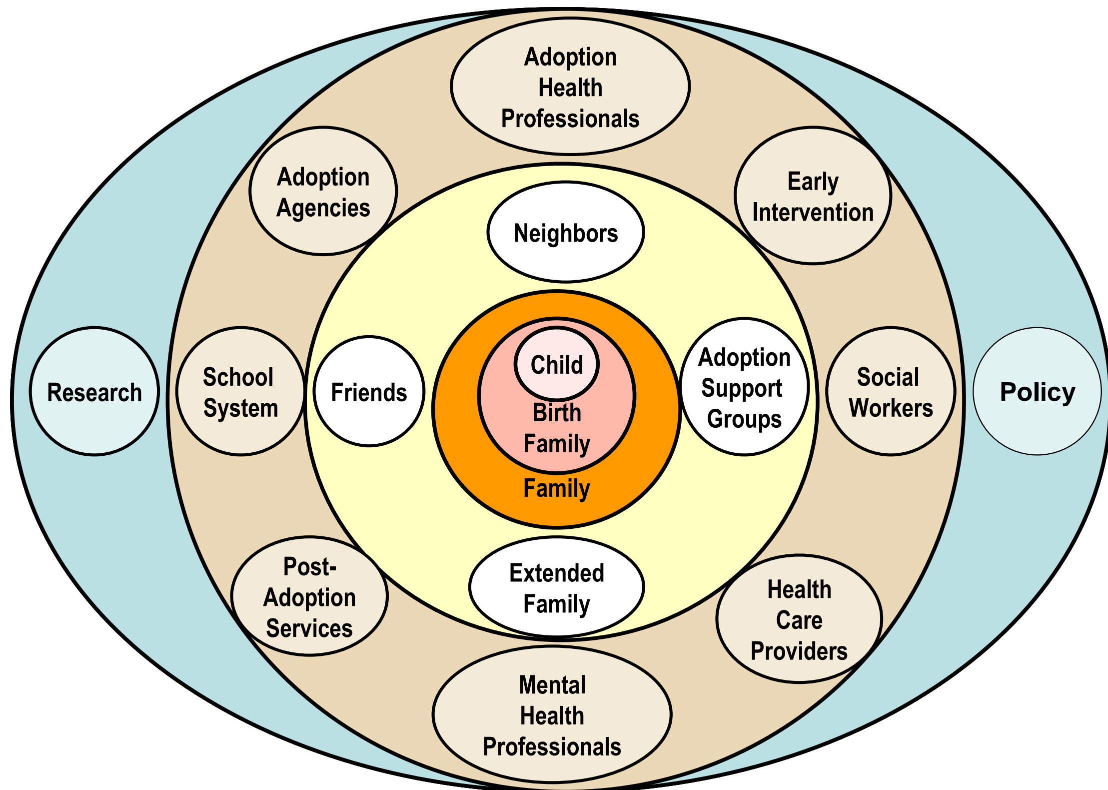

Figure 4. An ecological perspective of adoption.

Family Systems

Two core premises in social work are that families exist in every age and culture and that no other human group can nurture a child socially, emotionally and economically as well as a family. Examining the family from an ecological perspective, a helpful framework would be to look at the family as a system. A systems approach to human development focuses on the relationships within the family as well as the social environment's influence on family functioning. Viewing the family as a system provides us with a perspective to study children within the context of their family relationships.

Systems theory can also be utilized as a framework for conceptualizing and thinking about attachments in a family. Family interaction patterns and cycles influence attachment. The circular causality (via the feedback loops) in a family system influences reciprocity and mutuality. Byng-Hall (1999) reported links between family therapy concepts and attachment research. Both approaches emphasize the importance of care giving, communication, joint problem-solving and reciprocity in relationships. Relevant to a discussion of family functioning is Byng-Hall's depictions of family organizational styles as connected or engaged.

Borrowing from General Systems Theory, Walsh (1982) provided a conceptual framework for normal family functioning. Walsh viewed normal behavior in the context of systems interacting in a circular process influenced by multiple systems. The definition of normal varies over time and social contexts. It also varies with both internal and external demands that necessitate adaptation over the life cycle of the family. Influenced by Erikson (1959), Walsh viewed family functioning as developing over time, tackling appropriate developmental tasks, and involving a lifelong process of adaptation,

growth, and mastery of change. Walsh also called for empirically-based models to provide a more solid foundation for evaluating family development, functioning, and competence.

The underpinning concepts in General System Theory (von Bertanlanffy, 1968) provide much theoretical support for Olson, Sprenkle & Bell's (1983) Circumplex Model of Marital and Family Systems. Borrowing from Systems Theory, the Circumplex Model views the family as a system with interactions between subsystems and system boundaries between family members producing variations in functioning of families (White, 1996). Also, General Systems Theory states that change occurs along the life span, and families need organizing principles to adjust to these changes. Lastly, a feedback loop between the family and the wider social environment influences the development of the family over time (White, 1996).

Olson, Sprenkle and Russell (1979) developed the Circumplex Model to explain differences in family functioning. *Family functioning* may be defined as the interactions with family members that involve physical, emotional or psychological activity. The model states that a balance between two major constructs called adaptability and cohesion within the family underpins healthy family growth and development. *Family cohesion* is defined as the closeness that family members feel towards each other. *Family adaptability* is defined as competence in the families' ability to make appropriate changes in the family structure as the family grows, as in the case of adding a new family member with adoption. Family cohesion most resembles attachment and is about feeling connected to the family. Family adaptability is about the process of negotiation within a family in regards to roles and rules (White, 1996). A balance within the range of

cohesion and adaptability produces the most optimal level of functioning. The contextual framework supporting the parent-child relationship can also have an important impact. The level of support, whether direct or indirect, has a systemic impact upon the adoptive family attachment relationship. A third concept, communication, is the vehicle by which adaptability and cohesion are expressed. The Circumplex Model provides the theoretical framework for the Family Adaptability and Cohesion Evaluation Scale (FACES II) for assessing the overall functioning of the family (Olson, Sprenkle & Russell, 1983).

All family systems have resources and stressors. Several stressors to the family are said to put adoptive families in jeopardy of adoption instability, which ultimately impacts child outcomes and attachment. *Parental stress* may be defined as physical and emotional strain caused by the responses to pressure from parenting. Rosenthal, Schmidt and Conner (1988) stated that parental expectations are often unrealistic regarding their children. The majority of parents who adopt internationally are middle class to upper middle class with high educational standards and achievement-oriented plans for raising children. Children adopted from institutions may have severe behavioral, emotional or developmental issues that can challenge and deflate parental expectations about having a family if parents are not properly prepared. This can be a stressor to the family system.

Another stressor for adoption families is the diminished capacity for families to be flexible and allow change. The formation of an adoptive family consists of the combination of the child with the pre-adoptive history and the family system that existed before the child (Groze, 1996). The integration of the child into the adoptive family system resembles a model similar to blended families (Carter & McGoldrick, 2005). A family that is too rigid or inflexible has the risk of not allowing this integration to take

place and placing the adoption at risk. A rigid family is also less likely to promote secure attachment (Olsen et al., 1983).

An additional resource or stressor is the parent-child relationship (Belsky, 1984). While many focus on what the child brings to the parent-child relationship, Belsky (1999) asserts that the psychological well-being of the parent contributes directly to the parent's ability parent children with difficult characteristics. Parenting is stressful. Stress can be normative as a result of having to develop skills to effectively parent children at different ages, particularly for first time parents who learn from experience. Yet there are non-normative sources of stress such as that which comes from parenting a child with behavior problems. Judge (2003) investigate parent stress associated with behavior of children with a history of institutionalization. The sample included 109 mother-father pairs and 124 children adopted from Eastern European countries. Stress was measured by the Parental Stress Index (Abidin, 1997). Judge (2003) found child behavior problems were associated with higher levels of parental stress and that there were significant differences between fathers and mothers. In a later study, Judge (2004) investigated parental stress and attachment in children adopted from Eastern European orphanages. Children with more insecure attachment had more behavioral problems and parents experienced more stress as a result; high levels of parental stress negatively impacted the quality of attachment.

Other adoption researchers have found similar findings. Brodzinsky, Smith & Brodzinsky (1998) found parents who have lower levels of stress are better equipped to respond appropriately to the child's social, emotional, cognitive and behavioral signals seeking attachment with the parent. High levels of parental stress are correlated with

disturbances of attachment in adopted children (Teti, Nakagawa, Das & Wirth, 1991; Chisholm, 1998). Mainemer (1998) found children adopted from Romania caused parents more stress than children domestically adopted. Also, children who had been institutionalized for longer periods of time created more stress for families.

In summary, children who have been institutionalized and adopted internationally are at risk for attachment problems due, at least in part, from their pre-adoptive history of institutionalization. The history of international adoption has demonstrated that rising numbers of children are being adopted from institutions (Tessler et al., 1999). Research on institutionalization has also revealed that even when the basic needs of children are met in an orphanage, they suffer from a lack of a sensitive and responsive caregiver with whom they can attach (Bowlby, 1951; Provence & Lipton, 1962; Spitz, 1945; Tizard & Hodges, 1977; Tizard & Rees 1974, 1975). Early research suggested that effects of institutionalization were damaging and permanent (Goldfarb, 1943; Spitz, 1945). However, as theory and methodology have advanced, more recent research on institutionalization has indicated that the effects of orphanage life are malleable and often amenable to change (Juffer & Rosenboom, 1997), at least for many children. Children come to their newly adoptive families with different effects of institutionalization (van IJzendoorn, 2006). Families are not always certain how to read and respond to children's cues to help facilitate attachment with children who have been raised in institutions.

Little is known about the post-adoption factors that affect attachment for children coming from institutional care beyond maternal responsiveness. The purpose of the current study is to view attachment from an ecological perspective, including the effects of the family system in post-adoption attachment. This study broadens the scope of

attachment beyond maternal responsiveness through the addition of other family system variables such as level of family functioning and parental stress. The study hypotheses are presented below.

Hypotheses

1. Most children will show secure attachment within the first 30 days of placement.
2. Increased length of time in adoptive families is associated with an increased level of secure-based attachment in newly formed internationally adoptive families.
3. A higher rate of maternal responsiveness is associated with an increased level of secure-based attachment in newly formed internationally adoptive families.
4. A higher level of family functioning is associated with an increased level of secure-based attachment in newly formed internationally adoptive families.
5. A low level of parental stress is associated with an increased level of secure-based attachment in newly formed internationally adoptive families.

Chapter 3: Methodology

This dissertation was a pilot study that analyzed data analyzed from part of a larger study conducted by the team of the Adoption Health Service at Rainbow Babies & Children's Hospital. The larger study consisted of Principal Investigator Anna Mandalakas, M.D. and Co-Investigators Gary Feldman, M.D., Lindsey Houlihan, MSSA, LISW, and Najla Golebiewski, B.A. The larger study was supported by a grant from the Shubert Center for Child Development at Case Western Reserve University. This dissertation study was developed out of the larger study by this researcher for the purpose of completing dissertation requirements.

Subjects

The Adoption Health Service is an adoption specialty clinic in Northeastern Ohio. The Adoption Health Service supports families throughout the adoption process by providing pre-adoptive education and counseling, review of medical information, and post-adoption support and medical services. The goal of the clinic is to optimize health outcomes for internationally adopted children by providing comprehensive, high-quality care within a child-centered approach.

The sample was collected by a consecutive, non-probability sampling of all the children who were eligible and presenting to the Adoption Health Service for a post-adoption visit from 2002 to 2004. All families were screened for eligibility criteria, which included the following: (1) having an adoptive child aged 12-36 months and (2) having internationally adopted this child within the past 30 days. Exclusion criteria included children who had been hospitalized post-adoption and who were assessed as under the cognitive age of 9 months. Children were also excluded from recruitment if

they have been in the United States for more than 28 days before presenting to the Adoption Health Service. The selected age range of 12-36 months was chosen because it is the age where young children begin to develop secure attachments (Ainsworth, 1978; Bowlby, 1973). Additionally, the age range matched the age limit of the Attachment Q-sort for valid results; the Q-sort was the major assessment tool for the project.

In 2002, when recruitment for the current study began, a total of 106 children were seen by the Adoption Health Service for a post-adoption clinic visit. In 2003, a total of 114 children were seen for the post-adoption visit. In 2004, 107 children were seen by the clinic. It is important to examine these totals in relation to the recruitment efforts of the study. The age range of 12 to 36 months comprised 80% of the children seen at the Adoption Health Service during the 2002 to 2004 period. A total of 37 children (N = 37) were enrolled in the study out of a potential 262 children. The sample was smaller than the potential pool due to several factors, such as families making the initial appointment after the 30 day cut-off, families feeling overwhelmed by a research study so soon after the adoption, and families being reluctant to participate as a result of having attachment concerns about their children. Selection bias impacted the recruitment and the outcome of results.

The recruitment of subjects began when the families returned to the United States and contacted the Adoption Health Service for a post-adoption visit by telephone. The majority of families scheduled their clinic appointment within 2 weeks after returning home. The post-adoption visit consisted of a physical examination by a development pediatrician and a nurse, a developmental evaluation assessed by parent self-report

questionnaires and pediatrician exam, and an assessment of attachment by the physician and nurse. The visit typically lasted 2 hours.

Recruitment of families was conducted in two ways. The families were contacted either by telephone prior to the visit or in-person at the initial appointment. The families that were contacted by telephone had been asked by the intake coordinator if they would be interested in participating in the study. If the families were recruited at the initial visit, they were given a written outline describing the project as well as an oral explanation, and were then asked if they would be interested in participating in the study. If families were willing to participate, a time and date were arranged within a week for the researcher to conduct the data collection at the parent's home.

The sample was recruited in three separate time periods. The first data collection point (Time 1) consisted of 37 children who had been adopted within 30 days. The second wave of data (Time 2) was collected 90 days after the first home visit. All families of the 37 children who were recruited for the first wave were contacted by letter and by telephone. The second wave recruited 24 children. The attrition rate was 35% from the first data collection point to the second data collection point. None of the parents who were contacted by telephone refused to participate, but if several follow up telephone calls were not returned, the recruitment was stopped with the family.

For the third data collection, 37 families were sent a letter asking if they wanted to participate in the final phase of the study. Ten families responded that were interested in participating for an additional home visit consisting of a 1 to 2 hour qualitative semi-structured interview conducted 2 years post-adoption. The interview consisted of

questions regarding parents' perceptions of attachment early in the adoption and how it had progressed over time.

Research Study Design

A longitudinal prospective single cohort design was utilized for the study. Cohort studies are defined as research on a group experiencing some event in a selected time period and studying them at intervals through time. A longitudinal study involves repeated observations of the same items over long periods of time. Longitudinal studies are often used in the social sciences to study developmental trends across the life span. In this study, the use of a longitudinal design allowed analysis of changes between Time 1 and Time 2.

The dependent variable in the current study was a child-related endogenous factor of patterns of attachment. The independent variables were exogenous family-related factors of parental stress, family functioning, and maternal responsiveness. Two variables (parental stress, family functioning) were measured by valid and reliable parent self-report measures (the Parental Stress Index--Short Form and the Family Adaptability and Cohesion Scales). The maternal responsiveness variable was measured by recording a short videotape of parent-child free play and applying the Maternal Behavior Rating Scale (described below).

The study provides a professional contribution in several ways. First, this was a longitudinal study that will allow us to see changes over time in early attachment. Second, this study examined a model including both pre-adoptive and post-adoptive family environment factors for understanding changes in attachment patterns over time.

The data collection process was conducted by the researcher and an assistant. It involved home visits to the families' home within 30 days of adoption. The geographic area covered the northern half of Ohio from Cleveland to Columbus. Families were contacted by telephone to set up the home visit. The families were mailed the Parental Stress Index-Short Form and the Family Adaptability and Cohesion Scale-II to complete before the visit. The researcher gave an orientation to the family that included the parameters of the study and a written consent for involvement in research. To administer the Attachment Q-sort according to the protocol, a minimum of a 2 hour observation of the child was undertaken. In addition, a 10 minute videotape of parent-child free play was made to assess the quality of maternal responsiveness according to the Maternal Behavior Rating Scale. A second visit was scheduled 90 days from the first visit. The same procedures were followed as outlined above during the second visit.

A semi-structured qualitative interview was conducted with 10 parents two years after the first visit. The purpose of the interview was to examine their recollections of early child attachment and their reports of current attachment.

Table 1 shows the summary of the measures used in the data collection.

Table 1

Summary of Variables in Data Collection

Type	Variable	Measure	Timing Post-Adoption		
	Quantitative Data		30 days	90 days	2 years
Dependent	Attachment Behavior	Attachment Q-Sort (AQS)	X	X	
Independent	Family Outcomes	Family Adaptability and Cohesion Evaluation Scale (FACES-II)	X	X	
		Maternal Behavior Rating Scale (MBRS)	X	X	
		Parental Stress Index-Short Form (PSI-SF)	X	X	
Control	Child Pre-Adoption History	AHS Medical Chart	X	X	
	Qualitative Data				
n/a	n/a	Semi-structured Interview			X

Quantitative Measures

Dependent Variable

One measure was used to assess attachment, the dependent variable in this study. This instrument focused upon measuring secure and insecure attachment by using secure-based behavioral traits.

The Attachment Behavior Q-Sort. The Attachment Behavior Q-Sort (AQS; Waters and Deane, 1985) consists of 90 items designed to describe children's behavior observed during periods of interactions with primary caregivers. The items were developed to provide a comprehensive picture of the child's use of the parent as a secure base (i.e., the appropriate balance between proximity seeking and exploration behaviors). The AQS was completed by two trained observers after a 2 hour home visit with the family. The observers arrange the 90 behavioral items from "least descriptive" to "most descriptive" using a forced distribution format (Vaughn, 1985; Waters & Dean, 1985). The AQS measures attachment as a continuous variable from -1.0 to 1.0, with lower scores (below 0.4) indicating insecure attachment and higher scores (above 0.4) indicating secure attachment. The scores are entered into a computer program that compares the child's scores against a criterion sort. This criterion sort was put together by having experts sort the Q-set items to describe the hypothetical most securely attached subject. The AQS can be used for children aged at least 12 months who demonstrate object permanence and mobility. The upper range for children is 5 years. The AQS has been used in previous studies in the United States and Canada with preschool age children (Pederson et al., 1990; Posada et al., 1995, Symons et al., 1997). It was

appropriate for the children in this study who were between the ages of 12 and 36 months at the first visit (Time 1).

The AQS has demonstrated adequate to strong reliability and validity in previous studies. In Waters and Dean's (1985) original study, the AQS demonstrated satisfactory reliability. The alpha coefficients ranged from .77 to .91. In a meta-analysis conducted by Van IJzendoorn et al. (2004), the reliability and validity of the AQS was tested in a series of meta-analyses on 139 studies with 13,835 children. The observer AQS security score showed convergent validity with the Strange Situation Procedure (SSP) security ($r = .31$) and excellent predictive validity with maternal sensitivity measures ($r = .39$). It is considered an excellent measure for secure attachment and less obtrusive than other measures.

Independent Variables

Three variables, maternal responsiveness, family functioning, and parental stress, were used to measure potential family factors affecting attachment.

Maternal Behavior Rating Scale. The Maternal Behavior Rating Scale (MBRS; Mahoney, 1986; 1992) is a global rating scale consisting of 12 items that have been reported in the literature on child development as being significant factors in parenting that promote child development (Mahoney, 1986). The scale assesses four dimensions of parenting: responsiveness, affect, achievement and directiveness. It is an observational measure that is coded by raters based on a 5 minute videotaped interaction between mothers and their young children.

The MBRS has been shown to be a reliable and valid measure. The reliability of the MBRS has been estimated by the percentage of agreement between the raters for a

sample of videotapes (Mahoney, 1986). Greater than 90% agreement (within one point) occurred for each one of the items (Mahoney, 1986). Exact agreement ranged from 61% for Pace to 93% for Responsiveness. Cohen's Kappa's ranged from .49 to .71, with an average of .66 (Mahoney, 1998). The validity of the MBRS has shown that the scale is sensitive to characteristics of parenting that are statistically related to the developmental functioning of children (Mahoney, 1998). Increases in mothers' responsiveness have been associated with significant improvements in children's social interaction, including attachment and is sensitive to the effects of parent-mediated interventions (Mahoney, 1998).

In this study, videotapes were coded by two master's students in social work. They were trained by the researcher of this project for a total of 20 hours until they had an interrater agreement of 90%.

Family and Adaptability and Cohesion Scales II. The Family Adaptability and Cohesion Scales II (FACES-II) is a 30 item parent self-report measure of family functioning that measures dimensions of cohesion and adaptability. The cohesion dimension refers to the emotional bonding within a family; adaptability dimension refers to the family's capacity to change. All items are scored on a five point Likert type scale (1 – Almost never, 2 – Once in a while, 3 – Sometimes, 4 – Frequently, 5 – Almost always). Scores for the cohesion dimension are classified into four categories, ranging from very low (disengaged), to low to moderate (separated), to moderate to high (connected), to enmeshed (high). Scores for the adaptability dimension are classified into four categories, ranging from very low (chaotic), to low to moderate (flexible), to moderate to high (structured), to high (rigid). Olson and his team have consistently

asserted that the results should be viewed as curvilinear – that is to say that optimal functioning exists among families who achieve moderate rather than extreme scores on the two dimensions (Olson, 1991).

The FACES-II has been used in a large number of projects and clinical evaluations (Olson, 1989). In relation to reliability, Cronbach's alpha is high (cohesion .87, adaptability .78) for the subscales. The test-retest reliability coefficient is in the .80 range for each dimension (Olsen, 1991). The validity of the FACES-II is shown through hundreds of research studies demonstrating positive linear relationships between FACES-II cohesion and adaptability dimensions and various family outcomes. In a number of studies, FACES-II has demonstrated the ability to discriminate between extreme, mid-range and balanced families in several problem areas (Corcoran, 1987). It has also been used in research on a variety of different ethnic groups.

Parental Stress Index—Short Form. The Parental Stress Index is a 36 item parent self report that was designed to assist in identification of parent-child systems under stress, problematic parenting and emotional pathology in children. It yields a Total Stress score and has 3 subscales: parental distress, parent-child dysfunctional interaction, and difficult child. The scoring is on a 5 item Likert type scale (1 – Strongly Disagree, 2 – Disagree, 3 – Not Sure, 4 – Agree, 5 – Strongly Agree). The PSI-SF can be used with parents of children as young as 1 month and fits within the scope of this study. It is written at a fifth grade level and has been translated into 20 different languages.

The PSI-SF is a briefer version of the Parenting Stress Index (PSI; Abidin, 1997), a widely used and well-researched measure of parenting stress. The PSI-SF has 36 items compared to the original 120-item PSI. Items are identical to those in the original

version. The PSI was designed for the early identification of children with behavioral and emotional problems, parents who are at-risk for dysfunctional parenting, and parenting and family characteristics that fail to promote normal child development and functioning. The PSI was guided by a theoretical model of the determinants of dysfunctional parenting (Abidin, 1997), which suggests that parental stress was a function of salient child characteristics, parent characteristics, and situational variables related to the role of being a parent.

The PSI-SF is both a reliable and valid instrument. Estimates of test-retest reliability assessed over a 6 month interval yielded stability coefficients of .84 (Total Stress), .85 (Parental Distress), .68 (Parental-Child Dysfunctional Interaction) and .79 (Difficult Child) (Abidin, 1997). Internal consistency coefficients (Cronbach's alpha) for these subscales were .91, .87, .80, and .85, respectively. The PSI has demonstrated clinical effectiveness by identifying parents who are experiencing stress due to parenting. In studies using the PSI, higher levels of stress have been associated with lower levels of attachment (Chisholm, 1998; Chisholm, Carter Ames, & Morison, 1995).

Qualitative Measure

Semi-Structured Interview

A semi-structured interview was conducted with families approximately 2 years post-adoption regarding the process of attachment in adoption. The purpose of the interview was to explore how the attachment process had changed during the early years of adoption. The interviews were conducted in the home of the families. Ten families were selected for the qualitative interview.

The overall theme of the semi-structured interview was centered on the early family formation regarding attachment between parent and child during the beginning stages of the adoption.

The interview was focused with stem questions:

- Tell me about your experience adopting a child?
- Describe your early attachment to your child? How did it change in the first few months? What is it like now?
- What worked to facilitate attachment? What did not work? What would have helped?
- What elements did your child bring that made it easier or more difficult in the early stages of attachment?
- What elements did you bring that made it easier or more difficult in the early stages of attachment?
- Describe the moment when you first felt like your child was attached to you.
- Describe the moment when you first felt like you were attached to your child.

The interview was conducted in the parent home. The interview took about 1.5 to 2 hours. Notes were taken during the interview.

Data Analysis

Child and maternal characteristics were described using univariate statistics including means, standard deviations, medians, and ranges for continuous data and using frequency and proportions for categorical data. Both cross-sectional and longitudinal analyses are employed to address the hypotheses. Mean scores for items in the AQS,

PSI-SF, FACES-II and the MBRS are displayed for cross-sectional as well as longitudinal analysis.

Pearson's Correlation was used to evaluate the linear relationship between the dependent variable (attachment) and the independent variables (family functioning, parental stress and maternal responsiveness). The correlation between two variables reflects the degree to which the variables are related. Pearson's correlation reflects the strength of linear relationship between two variables. The assumption is that both variables (often called X and Y) are interval/ratio and approximately normally distributed, and that their joint distribution is bivariate normal. Pearson's Correlation Coefficient is usually signified by *r* (rho), and can take on the values from -1.0 to 1.0. Where -1.0 is a perfect negative (inverse) correlation, 0.0 is no correlation, and 1.0 is a perfect positive correlation.

The reliability and inter-rater reliability of the measures is also discussed as it related to the measures related to the study.

Training

The researcher and a research assistant were trained to administer the Attachment Q-sort. They attended a five day training that consisted of education regarding attachment theory, coding with the Q-sort method, entering data and comparing it to the criterion sort, and conducting practice home visits. Two students were trained to code the Maternal Behavior Rating Scale tapes. All raters were reliable with 80% agreement for both the Attachment Q-sort and the Maternal Behavior Rating Scale.

Data Management

All of the data from the questionnaires and the observation measures were stored in a computerized database at the Adoption Health Service at Rainbow Babies and Children's Hospital. Double data entry was used with form-configured screens. Data was run with outliers to determine whether they influenced the data. The data was backed up on a weekly basis. Computer access was restricted through a password to study personnel. The data files were indexed by numbers so that no personal information could be revealed. The personal information data was maintained in separate files that were accessible only to a research assistant working at the Adoption Health Service.

Institutional Review Board

The research project followed the protocols for authorization by the Institutional Review Board (IRB). Since the project is a joint venture between the Adoption Health Service and the Mandel School of Applied Social Sciences, the IRB application and reviews were handled by the Adoption Health Service and submitted to the IRB at Rainbow Babies and Children's Hospital. At this time, all necessary authorizations and reviews have been submitted and approved on a timely basis.

Chapter 4: Results

The purpose of this chapter is to discuss data analysis. Descriptive statistics are used to present the characteristics of the internationally adopted children and their parents. Child and family characteristics are described using means, standard deviations, medians, and ranges for continuous data, and frequency and proportions for categorical data. The independent and dependent variables are subjected to tests of reliability when possible. The five research hypotheses will be addressed with univariate and bivariate statistical procedures.

Reliability Analysis for Measures

Parental Stress Checklist—Short Form

The reliability of the PSI-SF was calculated utilizing Cronbach's alpha. For Time 1, the total PSI-SF scale had an alpha of .907 (M = 152.62, SD = 14.61). The Parental Distress subscale had an alpha of .784 (M= 49.56, SD = 5.63). The Dysfunctional Interaction scale had an alpha of .890 (M = 53.79, SD = 5.85). The Difficult Child scale had an alpha of .825 (M = 49.44, SD = 6.13).

For Time 2, the total PSI-SF scale had an alpha of .910 (M = 145.92, SD = 14.72). The reliability for the subscales at Time 2 produced mixed results. The Parental Distress subscale had an alpha of .872 (M = 51.88, SD = 6.13). The Dysfunctional Interaction subscale produced the lowest reliability, with an alpha of .523 (M = 51.88, SD = 6.13). The Difficult Child had an alpha of .869 (M = 51.07, SD = 7.43).

Maternal Behavior Rating Scale

The reliability for the MBRS was calculated utilizing Cronbach's alpha. The alpha for the scale for Time 1 was .882 and the alpha for Time 2 was .791. Both time periods demonstrated good reliability.

Regarding the inter-rater reliability of the MBRS, Table 2 displays the scores between raters for each of the subscales at Time 1 and Time 2.

Table 2

Inter-rater Reliability for MBRS Subscales at Time 1 and Time 2

MRBS Subscale	Inter-rater Reliability	
	Time 1 (n = 37)	Time 2 (n = 25)
Expressiveness	.50	.49
Enjoyment	.48	.06
Warmth	.33	.27
Sensitivity to Child's Interest	.17	.17
Responsiveness	.15	.07
Achievement Orientation	.26	.22
Inventiveness	-.20	-.15
Praise	.07	.11
Effectiveness	-.33	.22
Pace	.29	.00
Acceptance	.35	.39
Directiveness	.14	-.08

Inter-rater reliabilities for each subscale were quite poor. In subsequent analysis, we averaged scores on the MBRS and used the average score between raters to test the hypothesis. This rationale was taken for two reasons: (1) we would get very different effects with the same scale since the inter-rater reliability was poor, and (2) the average score probably was a better measure of what was happening than the score from any one rater.

Child Characteristics

The sample of internationally adopted children (n = 37) was comprised of 81.1% (n = 30) girls and 18.9% (n = 7) boys. Children's mean age at adoption was 17.58 months (*SD* = 6.72). The mean length of stay in the orphanage was 13.07 months (*SD* = 7.90) and 100% of the sample reported being in an institution prior to adoption. Within these institutions, the caregiver-to-child ratio was 8:1 on average. All children in this sample were internationally adopted into the United States. China (43.2%), Russia (21.6%) and Guatemala (13.5%) were the top three countries of origin. Table 3 presents the complete list of countries of origin for the sample.

Table 3

Country of Origin for Adoptees in the Sample

Country of Origin	Percent	n
China	43.20%	16
Russia	21.60%	8
Guatemala	13.50%	5
Kazakhstan	5.40%	2
Azerbaijan	2.70%	1
Bulgaria	2.70%	1
India	2.70%	1
Philippines	2.70%	1
Mongolia	2.70%	1

Parent Demographics

The family composition of the sample included 33 (89%) couples and 4 single mothers (11%). Most (66%, n = 23) of the parents were first-time parents. Of the adoptive parents, 25% (n = 9) had one other child in the family, with equal percentages having another biological or adopted child. The adoptive parents in this sample were middle-aged. The mean age for mothers in the study was 40.17 years old (SD = 6.10); the mean age for fathers was 41.4 years old (SD = 7.02). The sample of parents was predominately Caucasian (94%, n = 66), with one Asian couple, one mother who was of Indian descent, and one father who was African American. The parents enrolled in the

study had high levels of education. Fifty percent of the mothers ($n = 7$) reported having a bachelor's degree and 43% ($n = 6$) had attained post-bachelor's study. Thirty-five percent of the fathers ($n = 4$) had achieved a bachelor's degree and 53% ($n = 6$) achieved post-bachelor's study.

The mothers provided the majority of primary care for their adoptive child. Forty-one percent ($n = 12$) of the mothers reported staying home full-time to care for their children. An equal percentage (41%, $n = 12$) returned to work full time and an additional 18% ($n = 4$) returned to work part-time. During the first 3 months after the adoption, 21% ($n = 7$) of the mothers took 8 to 12 weeks off from work. Some mothers (15%, $n = 5$) were able to stay at home with their child for 2 to 4 weeks. Twenty-four percent of mothers ($n = 8$) were able to stay at home for 4 to 8 weeks and another 24% ($n = 8$) were able to stay at home for 12 to 16 weeks. Only one mother (3%) returned to work immediately. Over 75% ($n = 20$) of the fathers returned to work immediately after returning home from the adoption. A small percentage of fathers (15%, $n = 4$) stayed at home with their child for 2 to 4 weeks before returning to full time employment. One father (3%) reported staying at home for 12 to sixteen weeks and one father (3%) reported staying at home indefinitely with the child.

Working parents made choices for child care arrangement while they were employed. Of the children who received care from providers other than the parents, 40% ($n = 11$) had an in-home provider, 10% ($n = 3$) were enrolled in a daycare center, and 7% ($n = 2$) had care at a friend or relative's home. Thirty-one percent ($n = 9$) of the children in out-of-home care were in care for over 40 hours per week and 17% ($n = 5$) were in child care between 30 and 40 hours a week.

Item Analysis

Family Adaptability and Cohesion Scales II (FACES-II)

Table 4 presents the means and standard deviations for each FACES-II item at Time 1 and Time 2. Overall, scores showed little variability from Time 1 to Time 2.

Table 4

Means and Standard Deviations for FACES-II Items at Time 1 and Time 2

Item	Mean ± SD	
	Time 1	Time 2
Family members are supportive of each other during difficult times.	5.00±0.000	4.67±0.485
In our family, it is easier for everyone to express their own opinion.	4.35±0.745	4.39±0.608
It is easier to discuss problems with someone outside the family than with other family members.	2.00±1.038	1.78±0.808
Each family member has input regarding major family decisions.	4.36±1.082	4.33±1.085
Our family gathers together in the same room.	4.57±0.456	4.67±0.486
Children have a say in their discipline.	2.17±1.030	2.35±1.115
Our family does things together.	4.79±0.426	4.50±0.514
Family members discuss problems and feel good about solutions.	4.00±0.104	4.17±0.618
In our family, everyone get his or her own way.	1.79±0.699	1.83±0.786

Item	Mean ± SD	
	Time 1	Time 2
We shift household responsibilities from person to person.	2.85±0.987	2.89±1.079
Family members know about each other’s close friends.	4.79±0.426	5.83±0.383
It is hard to know what the rules are in our family.	1.64±1.151	1.22±0.548
Family members consult each other on personal decisions.	4.71±0.611	4.44±0.784
Family members say what they want.	4.50±0.655	4.50±0.618
We have difficulty thinking of things to do as a family.	1.43±0.756	1.56±0.922
In solving problems, the children’s suggestions are followed.	2.45±1.360	2.53±1.125
Family members feel very close to each other.	5.00±0.000	4.89±0.323
Discipline is fair in our family.	3.54±0.766	4.88±0.322
Family members feel closer to people outside the family than to other family members.	1.07±0.267	1.11±0.323
Our family tries to find new ways of dealing with problems.	3.43±0.776	3.22±0.732
Family members go along with what the family decides to do.	4.23±0.725	4.28±0.752
In our family, everyone shares responsibilities.	4.21±1.188	4.22±0.808
Family members like to share their free time with each other.	4.36±0.735	4.33±0.840

Item	Mean ± SD	
	Time 1	Time 2
It is difficult to get a rule changed in our family.	2.38±1.044	2.35±0.996
Family members avoid each other at home.	1.29±1.069	1.00±0.000
When problems arise, we compromise.	4.00±1.109	4.25±0.575
We approve of each other's friends.	4.71±0.825	4.67±0.686
Family members are afraid to say what is on their minds.	1.43±0.646	1.28±0.575
Family members pair up rather than do things as a family.	1.54±0.776	1.62±0.967
Family members share interests and hobbies together.	4.44±0.514	4.17±0.707

Parental Stress Index – Short Form (PSI-SF)

Table 5 presents the means and standard deviations for each PSI-SF item at Time 1 and Time 2. Higher scores on the PSI-SF are interpreted as greater parental stress. In general, scores were higher at Time 2 than at Time 1.

Table 5

Means and Standard Deviations of PSI-SF Items at Time 1 and Time 2

Item	Mean ± SD	
	Time 1	Time 2
Parenting Distress Subscale		
I often have the feeling I cannot handle things well.	3.89 ± 0.81	4.31 ± 0.48
I find myself giving up more to meet my child's needs.	3.37 ± 1.25	4.00 ± 1.15
I feel trapped by my responsibilities as a parent..	4.21 ± 0.53	4.38 ± 0.72
I have been unable to do new and different things.	3.44 ± 1.25	3.94 ± 1.39
I feel like I am almost never able to do things that I like to do.	3.74 ± 1.24	4.19 ± 0.83
I am unhappy with the last purchase of clothing.	4.26 ± 0.81	4.25 ±1.06
There are quite a few things that bother me about my life.	4.47 ± 0.51	4.69 ± 0.60
Having a child has caused more problems in my relationship with my spouse.	4.26 ± 0.93	4.56 ± 0.63
I feel alone and without friends.	4.26 ± 0.93	4.56 ± 0.51
When I go to a party, I usually expect not to enjoy myself.	4.58 ± 0.51	4.50 ± 0.73
I am not as interested in people as I used to be.	4.32 ± 0.89	5.00 ± 0.00
I don't enjoy things as I used to do.	4.25 ± 0.81	4.94 ± 0.25

Item	Mean ± SD	
	Time 1	Time 2
Dysfunctional Interaction Subscale		
My child rarely does things for me that make me feel good.	4.74 ± 0.45	4.94 ± 0.50
Most times I feel like my child does not like me.	4.68 ± 0.48	4.69 ± 0.48
My child smiles at me much less than I expected.	4.47 ± 0.84	4.94 ± 0.25
I get the feeling that my efforts are not appreciated very much.	4.47 ± 0.61	4.69 ± 0.48
When playing, my child doesn’t giggle or laugh.	4.53 ± 0.77	5.00 ± 0.00
My child doesn’t seem to learn as quickly as most children.	4.05 ± 1.07	4.88 ± 0.34
My child doesn’t seem to smile as much as most children.	4.37 ± 0.89	4.88 ± 0.34
My child is not able to do as much as I expected.	4.37 ± 0.68	4.81 ± 0.40
It is very hard for my child to get used to new things.	4.32 ± 0.95	4.67 ± 0.62
I feel like I am not very good at being a parent.	4.63 ± 0.50	4.50 ± 0.82
I expected to have closer and warmer feelings for my child than I do and it bothers me.	4.58 ± 0.51	4.81 ± 0.75
My child does things that bother me just to be mean.	4.58 ± 0.61	4.62 ± 0.72
Difficult Child Subscale		
My child seems to cry or fuss more than most children.	4.37 ± 0.60	4.44 ± 0.61
My child generally wakes up in a bad mood.	4.11 ± 0.84	4.69 ± 0.48

Item	Mean ± SD	
	Time 1	Time 2
I feel like my child is very moody and easily upset	3.53 ±1.12	4.31 ± 0.87
My child does a few things that bother me a great deal.	4.11 ± 0.81	4.31 ± 1.01
My child reacts strongly when something happens.	3.53 ±1.12	3.50 ± 1.32
My child gets upset easily at the smallest things.	4.11 ± 0.81	4.06 ± 0.93
My child's eating and sleeping was much harder to establish.	3.37 ± 1.38	3.88 ± 1.20
Getting my child to do something is much harder to establish.	3.16 ± 1.01	3.44 ± 0.81
Count the number of things which your child does to bother you.	4.94 ± 0.25	4.79 ± 0.43
There are some things that my child does that bother me a lot.	4.00 ± 1.00	4.27 ± 1.22
My child turned out to be more of a problem that I expected.	4.63 ± 0.50	4.80 ± 0.41
My child makes more demands on me than most children	4.47 ± 0.70	4.47 ± 1.06

Maternal Behavior Rating Scale (MBRS)

Table 6 presents the means and standard deviations for each MRBS item at Time 1 and Time 2. Mahoney, Powell & Finger (1986) reported that the normative average

range of scores for maternal responsiveness is from 2.78 to 3.75, which is similar with the results found in this sample.

An examination of the items of the MBRS suggests an increase in scores from Time 1 to Time 2 for eight items (expressiveness, enjoyment, warmth, sensitivity to child interest, responsively, achievement orientation).

Table 6

Means and Standard Deviations of MRBS Subscales at Time 1 and Time 2

MRBS Subscale	Mean ± SD	
	Time 1	Time 2
Expressiveness	3.16±0.764	3.45±0.623
Enjoyment	3.37±0.585	3.61±0.446
Warmth	3.24±0.608	3.46±0.518
Sensitivity to Child Interest	3.23±0.434	3.57±0.409
Responsiveness	3.27±0.450	3.44±0.375
Achievement Orientation	3.00±0.529	3.16±0.459
Inventiveness	2.83±0.415	3.16±0.277
Praise	2.81±0.569	3.13±0.472
Effectiveness	2.53±0.389	2.93±0.494
Pace	3.23±0.450	3.04±0.274
Acceptance	3.47±0.485	3.74±0.401
Directiveness	3.38±0.477	3.22±0.384

Child Attachment

Hypothesis: Most children will show secure attachment within the first 30 days of placement.

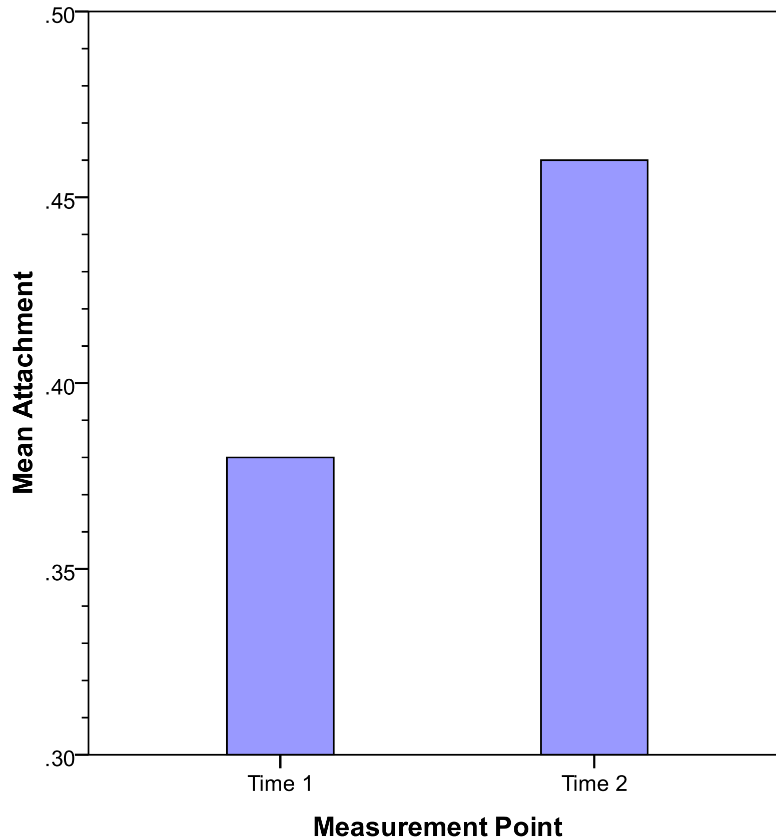

Figure 5. Mean Attachment Q Sort scores at time 1 and time 2.

As shown in Figure 5, at Time 1 the mean score for attachment was 0.38 (*SD* = 0.19). Although the cut-off score for secure attachment is 0.40, it should be noted that the sample children had been recently institutionalized, and therefore reaching a score of 0.38 is very positive. However, if results are interpreted strictly, they suggest that the children demonstrate insecure attachment. However, if a more liberal interpretation is taken, such results may imply that within the first 30 days of adoption children show

what could be seen as secure attachment. Observations of families suggest the latter approach should be taken. This means the hypothesis that most children will show secure attachment within the first 30 days of placement is supported.

Hypothesis: Increased length of time in adoptive families results in increased levels of secure-based attachment in newly formed adoptive families.

As shown in Figure 5, the score for child attachment was higher at Time 2 (M = 0.46, SD = 0.27) than at Time 1, and was also above the 0.40 cut-off score for secure attachment. At Time 1, 41% (n = 14) of the children scored as insecurely attached and 59% (n = 22) scored as securely attached. In contrast, at Time 2, 20% (n = 5) of the children scored as insecurely attached and 80% (n = 20) scored as securely attached. The results support the hypothesis that the increased length of time in adoptive families results in increased levels of secure-based attachment in newly formed adoptive families.

Child Observations

The overall adaptation of children to their new families appeared very positive during the visits within the first 30 days and even more positive during the visit 90 days later. In all cases, children appeared to be developing a relationship with their parents. However, one of the hallmarks of secure attachment is that children track with their eyes the movement of the parents. It was observed was that many children would glance superficially at the parents but often did not react if the parent left the home. In some cases, children did not seem to care if the parent left the room. In rare cases, the child would become extremely distressed if the parent left the room and would run screaming and crying to reach the parent. Another hallmark of attachment was the reaction to the researcher, an apparent stranger, as we entered the house for the home visit. A child with

a secure attachment would look to the parent or cling to the parent for safety when being approached by a stranger. The insecurely attached children often did not seem to differentiate between the stranger and the parent. This lack of differentiation is another concern for parents, as they often remarked that their children did not know the difference between them or a stranger. Differentiation is also another important characteristic in the formation of attachment.

Parent Observations

All of the parents in this study (n = 68) travelled overseas to adopt their children and remained in-country for approximately 2 weeks to facilitate the adoption. During this time, parents remained in a hotel room with their child while completing administrative tasks related to the adoption such as court proceedings, meetings with government officials, medical assessments by an U.S. Embassy-approved physician, or visits with the child prior to placement.

Parents reported being very excited about meeting their children but had different expectations about the early days of adoption. Upon meeting their child for the first time, many parents reported negative behaviors such as child distress, lethargy, crying, screaming, not eating or sleeping, not being consoled by the parent's attempts to provide comfort, and lack of interest in toys or interacting with parents. All parents (n = 20) interviewed in the semi-structured interview were able to identify that this was an adaptive behavioral response to the new situation, which they said they had learned from pre-adoptive training about institutionalized children. However, some parents were still caught off-guard by this experience and had anticipated a more positive welcome. All parents reported feeling overwhelmed and unsure of how to address the needs of their

children. These feelings were compounded by the fact that they were in a foreign environment.

On a positive note, parents unanimously agreed that that the close proximity and isolation away from their normal routine at home created a perfect set of circumstances to begin the family bonding and attachment process. According to parent reports, within a few days after meeting their new families, most children began smiling, had fewer feeding problems, and began to show increased energy and interest in their new parents. At the time of the first data collection, parents were very sure that their children were well on the way to becoming securely attached. However, at the 2 year follow-up, most parents reported that initially their children were not attached. One parent described their child's reaction as "survival behavior." Another reported that their child's behavior resembled attachment at a very early stage because many of the behaviors associated with the institution were still pronounced. Children often had stereotypic behaviors related to institutionalization such as rocking, head banging, hand gazing and thumb sucking. All families reported that these behaviors decreased and eventually disappeared over a short time. One of the most interesting findings of the study was parents' reports of the length of time it took children to become securely attached to their parent. Most reported that attachment was beginning at 6 months post-adoption but took between 8 months to a year.

Parents reporting feeling attached to their children and enthusiastically described their children as exhibiting improved smiling and looking for them as time passed. However, parents also described a child behavior called indiscriminate friendliness, indicating a lack of differentiation between a caregiver and a stranger. Parents at both

data collection times commonly said that they were sure the child might go off with a stranger. One mother wept as she told me, "It breaks my heart that she doesn't know I am her mother. I waited so long for this." Her child was almost 3 years old when adopted. During the interview 2 years later, this family reported secure attachment.

Family Functioning

Hypothesis: A higher level of family functioning promotes an increased rate of secure-based attachment in newly formed internationally adoptive families.

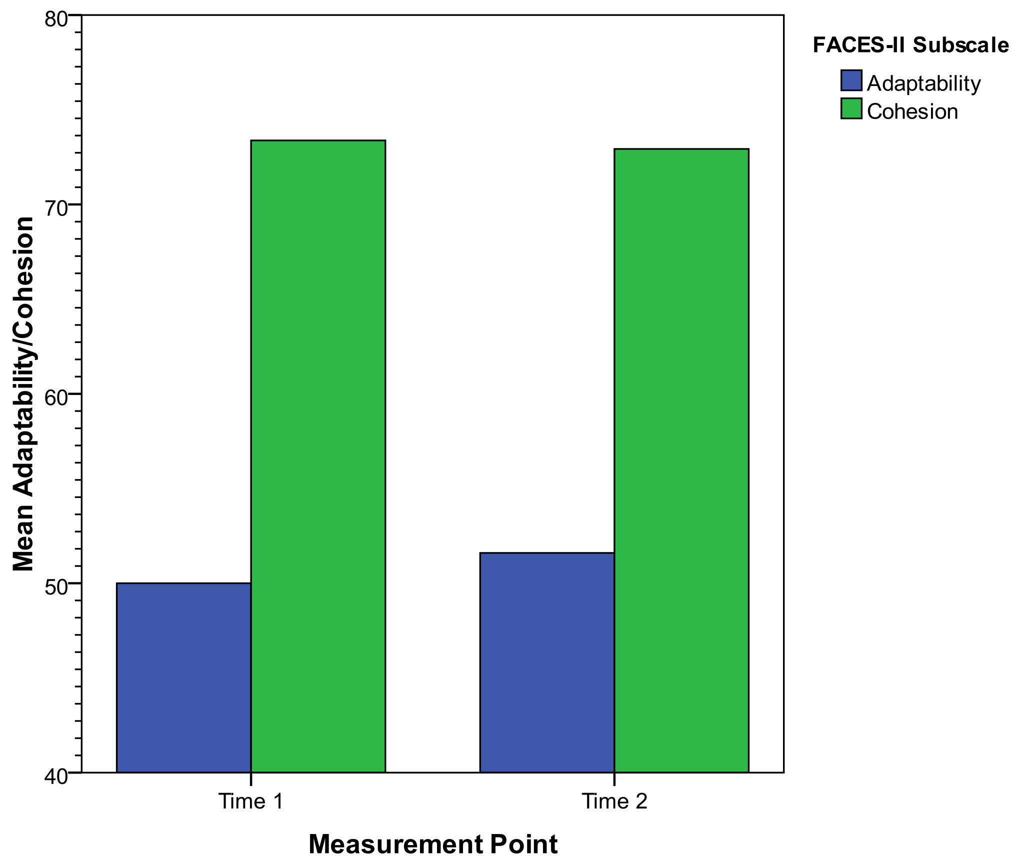

Figure 6. Mean FACES-II subscale scores at time 1 and time 2.

As demonstrated by Figure 6, the scores of the subscales Cohesion and Adaptability remained relatively stable from Time 1 to Time 2. The Cohesion subscale

was used as a proxy to measure family attachment. Cohesion mean scores decreased from 73.38 (*SD* = 12, *n* = 13) at Time 1 to 72.93 (*SD* = 10, *n* = 16) at Time 2. The Adaptability subscale measured family adjustment to change. The subscale mean scores increased from 50.00 at Time 1 (*SD* = 11, *n* = 11) to 51.60 at Time 2. (*SD* = 10, *n* = 15). Changes in adaptability and cohesion were not statistically significant. The results indicate that both dimensions of adaptability and cohesion remain stable between the time periods without much variability in the score.

Based on their scores on the FACES-II adaptability and cohesion dimensions, families may be classified into different categories of functioning. The categories of cohesion in the FACES-II include Chaotic, Connected, Very Connected, and Enmeshed. Table 7 displays the percentage of families who fell into each cohesion category at Time 1 and Time 2.

Table 7

Percent Scoring in Each FACES-II Cohesion Category at Time 1 and Time 2

Cohesion Category	Percent in Category	
	Time 1	Time 2
Very Connected	76.90%	80.00%
Connected	23.10%	20.00%

Results indicate that the majority of families are cohesive and most families fall into the category of Very Connected. The mid-range category of cohesion called

Connected had a small decrease (nearly 3%) from Time 1 (n = 3) to Time 2 (n = 2). The next category called Very Connected increased the same 3% from Time 1 (n = 10) to Time 2 (n = 11), indicating that one family was moving towards feeling more connected over time. The categories of Chaotic and Enmeshed were not included in the table because none of the families displayed scores for those categories at either time point.

The categories of adaptability in the FACES-II include Rigid, Structured, Flexible, and Very Flexible. Table 8 displays the percentage of families who fell into each adaptability category at Time 1 and Time 2.

Table 8

Percent Scoring in Each FACES-II Adaptability Category at Time 1 and Time 2

Adaptability Category	Percent in Category	
	Time 1	Time 2
Rigid	9.60%	0.00%
Flexible	63.20%	73.30%
Very Flexible	18.20%	20.00%
Structured	0.00%	6.70%

Results indicate that the majority of families are moderately adaptable and most families fall into the category of Flexible. The categories of Flexible and Very Flexible had scores over 90% for the families at both times in the study. The category of Flexible

increased from Time 1 (n = 6) to Time 2 (n = 11). On a positive note, the one family that had a Rigid score at Time 1 decreased to a mid-range score of Structured at Time 2.

Correlations

An evaluation was made of the linear relationship between family functioning and attachment. The subscales of cohesion and adaptability were tested using Pearson's correlation for Time 1 and Time 2. Results are presented in Table 9.

Table 9

Correlations between AQS and FACES-II Subscales at Time 1 and Time 2

Scale	Correlation with Attachment Q Sort (AQS)	
	Time 1[‡]	Time 2[‡]
FACES-II Cohesion	r = .007, p = .984 (n = 11)	r = .061, p = .830 (n = 5)
FACES-II Adaptability	r = .526, p = .146 (n = 9)	r = .017, p = .953 (n = 15)

[‡] Each measure was administered at both Time 1 and Time 2. Correlations reported in this table are for measures taken within in each time point, rather than across time points.

The correlations were not statistically significant and demonstrated no linear relationship between family functioning and attachment. The hypothesis that higher levels of family functioning would be correlated with an increased rate of secure-based attachment in newly formed internationally adoptive families was not supported.

Parental Stress

Hypothesis: A low level of parental stress promotes an increased level of secure-based attachment in newly formed internationally adoptive families.

As displayed in Figure 7, the level of parental stress increased from Time 1 to Time 2. The mean score for Time 1 was 152.62 (*SD* = 14.60, *n* = 16) and it increased at Time 2 to 160.92 (*SD* = 14.73, *n* = 13). At both Time 1 and Time 2, several parents had high enough stress to be referred for an assessment and counseling (see Yeh, Chen, Li & Chuang, 2001).

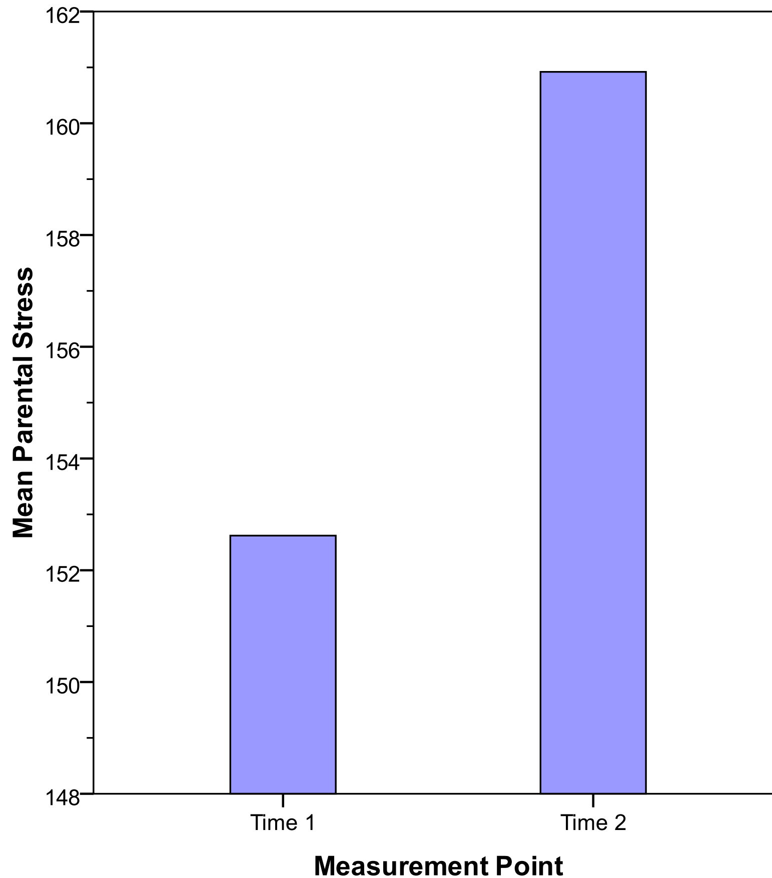

Figure 7. Mean Parental Stress Index-Short Form scores at time 1 and time 2.

Among the PSI-SF subscales (see Figure 8), the mean score for Parental Distress at Time 1 was 49.55 (SD = 5.16, n = 18) and it increased slightly at Time 2 to 51.87 (SD = 6.13, n = 16). The mean score for Dysfunctional Interaction at Time 1 was 53.79 (SD = 5.85, n = 19) and it increased to 57.93 (SD = 2.31, n = 15) at Time 2. The mean score for Difficult Child at Time 1 was 49.44 (SD = 6.13, n = 16) and increased slightly to 51.07 (SD = 7.44, n = 14) at Time 2. It is noteworthy that the mean scores for each subscale from the PSI-SF were above the clinical threshold of stress. The three subscales each had scores that scored within the 85 – 99+ Percentile, which is in the Clinically Significant range.

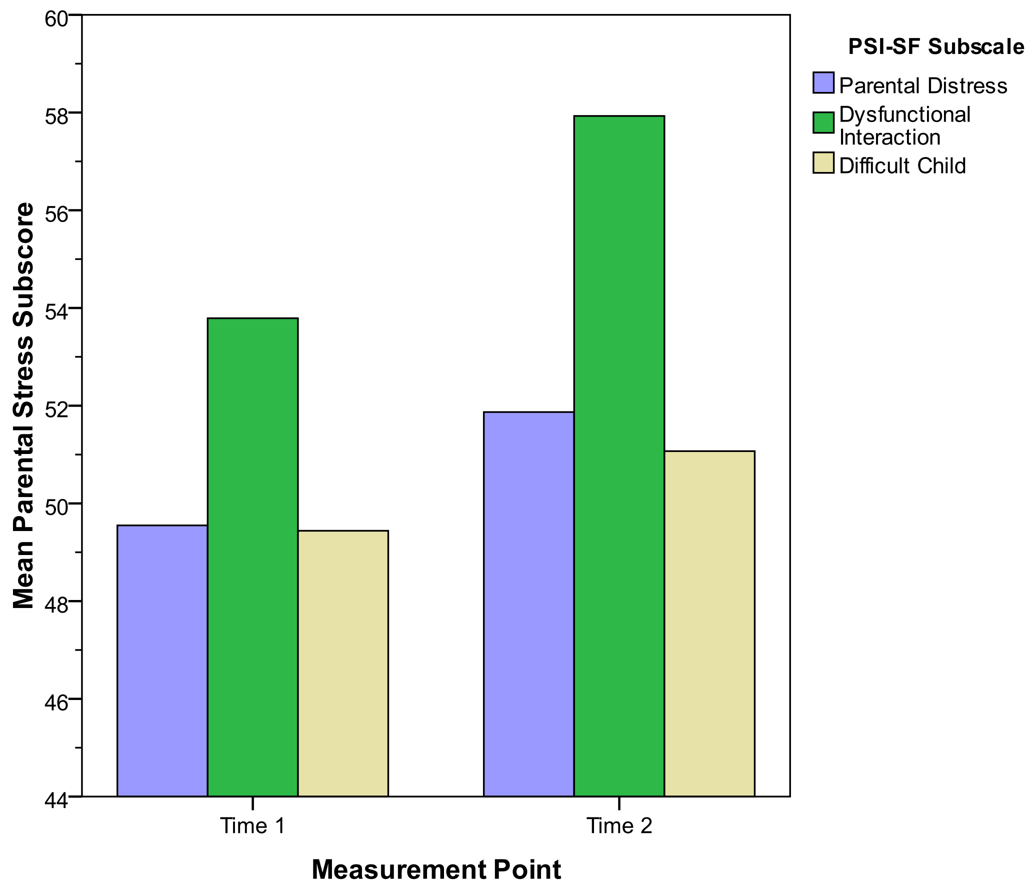

Figure 8. Mean Parental Stress Index-Short Form subscale scores at time 1 and time 2.

Correlations

An evaluation was made of the linear relationship between parental stress and attachment using Pearson's correlation. The correlations are displayed in Table 10.

Table 10

Correlations between AQS and PSI-SF Total and Subscales at Time 1 and Time 2

Scale/Subscale	Correlation with Attachment Q Sort (AQS)	
	Time 1‡	Time 2‡
Parental Stress Index—Short Form (PSI-SF) Total	r = .194, p = .525 (n = 13)	r = -.157, p = .607 (n = 13)
PSI-SF Parental Distress	r = -.157. p = .526 (n = 15)	r = -.265, p = .321 (n = 16)
PSI-SF Dysfunctional Interaction	r = -.024, p = .931 (n = 16)	r = -.082. p = .770 (n = 15)
PSI-SF Difficult Child	r = .711**, p = .006 (n = 13)	r = -.026, p = .930 (n = 14)

‡ Each measure was administered at both Time 1 and Time 2. Correlations reported in this table are for measures taken within in each time point, rather than across time points.
**Correlation is significant at the <0.01 level (2-tailed)

Most of the correlations were not statistically significant. The only significant relation was between the difficult child subscale and attachment ($r = .711$, $p < 0.01$). This correlation does not follow attachment theory's suggestion that attachment will become less secure when children behave in ways that are difficult for parents; rather, the correlation suggests that as children become more difficult, secure attachment increases. The hypothesis that low levels of parental stress would be correlated with an increased level of secure-based attachment in newly formed internationally adoptive families was not supported.

Maternal Responsiveness

Hypothesis: A higher rate of maternal responsiveness promotes a higher rate of secure-based attachment in early attachment for internationally adoptive families.

As displayed in Figure 9, maternal responsiveness had a very small increase from Time 1 to Time 2. The mean for the MBRS at Time 1 was 40.33 ($SD = 4.58$, $n = 37$) and at Time 2 the score was 40.35 ($SD = 2.96$, $n = 25$).

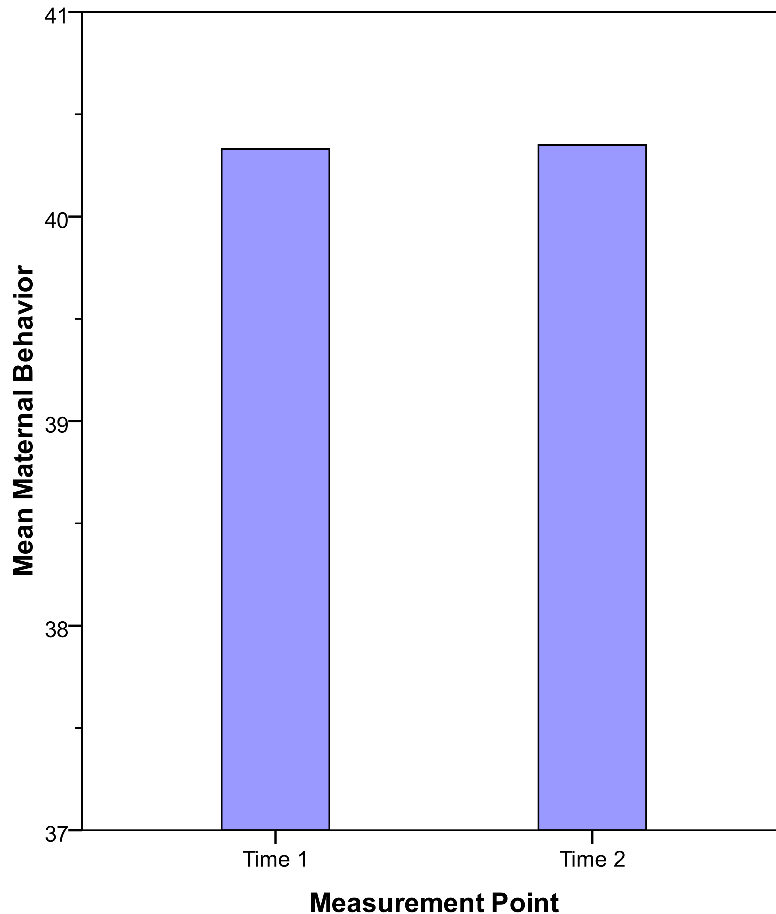

Figure 9. Mean Maternal Behavior Rating Scale scores at time 1 and time 2.

As shown in Figure 10, only small changes were observed within the subscales for the Maternal Behavior Rating Scale and none were statistically significant. A small change occurred with the score for the Responsiveness subscale but the change was minimal from Time 1 ($M = 9.02$, $SD = 1.02$, $n = 37$) to Time 2 ($M = 9.93$, $SD = 1.05$, $n = 25$). The change in the score for the Affect subscale also showed a very small increase from Time 1 ($M = 16.07$, $SD = 2.21$, $n = 37$) to Time 2 ($M = 17.44$, $SD = 1.52$, $n = 25$). The score for the Achievement subscale did not show much change from Time 1 ($M = 5.81$, $SD = 0.962$, $n = 37$) to Time 2 ($M = 6.30$, $SD = 0.711$, $n = 25$), but there was a slight

increase. Finally, the score for the Directiveness subscale showed a very small decrease from Time 1 (M = 6.60, SD = 0.809, n = 37) to Time 2 (M = 6.30, SD = 0.479, n = 25).

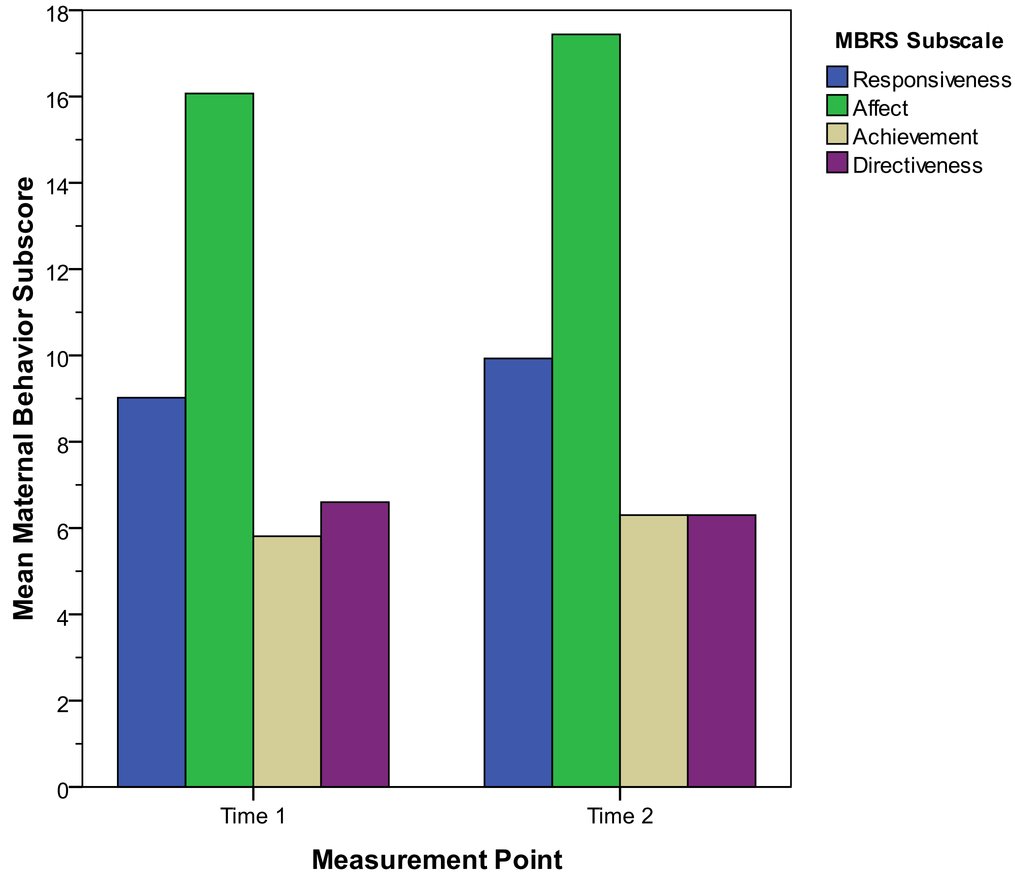

Figure 10. Mean Maternal Behavior Rating Scale subscale scores at time 1 and time 2.

Correlations

Table 11 displays the Pearson's correlations between attachment and MBRS total and subscale scores at Times 1 and 2.

None of the correlations were statistically significant and no linear relationship was demonstrated between maternal responsiveness and attachment. The hypothesis that higher rates of maternal responsiveness would be correlated with a higher rate of secure-

based attachment in early attachment for internationally adoptive families was not supported.

Table 11

Correlations between AQS and MBRS Total and Subscales at Time 1 and Time 2

Scale/Subscale	Correlation with Attachment Q Sort (AQS)	
	Time 1[‡]	Time 2[‡]
MBRS Total	r = .117, p = .509 (n = 34)	r = .100, p =.702 (n = 17)
MBRS Responsiveness	r = .171, p = .334 (n = 34)	r = -.123, p = .617 (n = 19)
MBRS Affect	r = .035. p = .843 (n = 34)	r = -.052, p = .832 (n = 19)
MBRS Achievement	r = .121, p = .496 (n = 34)	r = -.023, p = .927 (n = 19)
MBRS Directiveness	r = .160, p = .365 (n = 34)	r = .221, p = .395 (n = 17)

[‡] Each measure was administered at both Time 1 and Time 2. Correlations reported in this table are for measures taken within in each time point, rather than across time points.

Other Correlations

A series of analyses were conducted using Pearson's Correlation Coefficient to test whether a linear relationship existed between the dependent variable (attachment) and demographic variables or other independent variables (family function, parental stress, maternal responsiveness). The results are displayed in Table 12.

Table 12

Correlations between Change in AQS from Time 1 to Time 2 and Demographic Variables

Demographic Variable	Correlation with Change in AQS
Gender	r = -.320, p = .128 (n = 24)
Age at Adoption	r = -.167, p = .436 (n = 24)
Orphanage Stay	r = -.098, p = .699 (n = 24)
Number of Years Together	r = -.062, p = .894 (n = 7)
Mother Education	r = .395, p = .259 (n = 10)
Father Education	r = -.161, p = .679 (n = 9)
Length of Stay at Home Mother	r = .185. p = .411 (n = 22)
Length of Stay at Home Father	r = -.005, p = .985 (n = 19)

Demographic Variable	Correlation with Change in AQS
Mother Hours Employed	r = .262, p = .278 (n = 19)
Father Hours Employed	r = -.117, p = .624 (n = 20)
Hours Daycare	r = -.377, p = .112 (n = 19)
Number of Children Living in Home	r = -.402, p = .057 (n = 23)
Mother's Age	r = .565*, p = .018 (n = 17)
Father's Age	r = .617*, p = .014 (n = 15)

*Correlation is significant at the <0.05 level (2-tailed)

Only two variables were significantly associated with changes in attachment between Time 1 and Time 2. The mother's age ($r = .565$, $p < 0.05$) and the father's age ($r = .617$, $p < 0.05$) were both statistically significant for positive relationships with changes in child attachment.

The majority of other correlations in the study were not significant. It is interesting to note that a majority of the correlations were negative in direction as well as not significant.

Summary

This chapter summarized the analysis of the data for the pilot study. Descriptive and bivariate statistics as well as a semi-structured interview were used to describe and interpret longitudinal data related to attachment in international adoption. The majorities of adoptive parents in the sample were over age 40, educated, and married first-time parents. A small percentage was single mothers or had other children in the home. Four measures (Attachment Q-sort, Family Adaptability and Cohesion Scales, Parental Stress Index-Short Form and Maternal Behavior Rating Scale) were analyzed using descriptive statistics to display means and standard deviations of items at Time 1 and Time 2. The scores for attachment, level of family functioning, parental stress and maternal responsiveness increased slightly from Time 1 to Time 2. Pearson's Correlation was used to evaluate the linear relationship between the dependent variable (attachment) and the independent variables (family functioning, parental stress and maternal responsiveness). The majority of the correlations were not statistically significant. There were five hypotheses in this study and two were supported. The two hypotheses that were supported involved the increase in attachment over time.

Chapter 5: Discussion and Implications

This prospective longitudinal single cohort pilot study examined the early attachment of internationally adopted children to their new adoptive parents. Children aged 12-36 months were assessed within 30 days of adoption (n = 37) and 90 days later (n = 25). Quantitative measures were utilized to evaluate the relationships of attachment to maternal responsiveness, family functioning and parental stress. None of these measures were significantly correlated. The only hypothesis supported was that internationally adopted children demonstrate secure attachment quickly. A qualitative semi-structured interview was conducted approximately two years later with a smaller subset of the original sample (n = 10) to further evaluate child attachment. Findings suggest that attachment is a process occurring over time and that most families felt children were securely attached within a year. The implications of the results for theory, practice, policy and research will be discussed in this chapter.

Child Attachment

Hypothesis 1: Most children will show secure attachment within 30 days of placement.

Hypothesis 2: Increased length of time in adoptive families results in increased levels of secure-based attachment in newly formed adoptive families.

Results did support Hypothesis 1. More than half (59%) of the children were rated as securely attached within 30 days of placement and the clear majority of the children (80%) were rated as securely attached 90 days post adoption. Not only did the percent of securely attached children increase over time but mean attachment scores changed from insecure at 30 days post-adoption to secure at 90 days post-adoption. This

suggests that attachment becomes more secure as children spend more time with their adoptive families, and that most internationally adopted children are able to develop a secure attachment to their adoptive parents within 30 to 90 days of placement.

Results for these hypotheses are subject to limitations of the measure used to measure attachment, the Attachment Q-Sort (AQS). After each visit, the research assistant and I entered our data for the attachment score. We were often surprised at how high the scores were at the first visit within 30 days. We suspected that some of the AQS items that were coded as secure attachment were not truly indicative of secure attachment behaviors in our sample. For instance, the children in this sample often stayed in very close proximity to their adoptive parents. Certainly this is a good sign but exploration, another sign of healthy attachment, was limited. It appeared to us that the children stayed very close to parents as a survival mechanism for protection. In addition, some child behaviors that we encountered were not coded using the AQS items. For instance, a typical response to strangers is for the child to run for the parents or cling to the parent, both of which are hallmarks of attachment. However, one child approached the researchers wiggling on her stomach and hiding her face. It looked to us like she wanted to approach us but made the gesture in a bizarre way. Disorganized attachment behavior was one of the names that crossed my mind regarding this little girl. The mother had a brother who was a psychiatrist and he told his sister that her daughter had "an attachment disorder." However, according to the AQS, this child scored as securely attached. The AQS was a good tool to use but it did have practical drawbacks. The semi-structured qualitative interview conducted approximately two years later provided rich information about early attachment in international adoption.

Maternal Responsiveness

Hypothesis 3: A higher rate of maternal responsiveness is associated with an increased level of secure-based attachment in newly formed internationally adoptive families.

Contrary to hypothesis 3, results did not show significant correlations between maternal responsiveness and rates of secure-based attachment at Time 1 or Time 2. This result was surprising but may have been related to rating and sampling issues. Specifically, sample size was small at each time point and the low number of observations may have made it difficult to detect a statistically significant correlation. Additionally, parents in this study were highly educated professionals who had undergone an adoption assessment, and therefore may have been preselected for positive parenting behaviors. Methodologically, this may have lead to a restricted range in maternal responsiveness (little variability in scores) that attenuated correlations with attachment and reduced the chances of finding a significant correlation. On the other hand, clinically, the high level of maternal responsiveness by adoptive mothers in this study is quite encouraging for internationally adopted children. Results suggest that mothers were responding appropriately and sensitively to their child's needs, although this did not appear to be related to secure child attachment. Inter-rater reliability was quite poor and this affected results.

Evaluating maternal responsiveness as it related to child attachment during the study was interesting and informative. The Maternal Behavior Rating Scale (MBRS) provided an opportunity to observe maternal behavior as they played with toys with their children. On the first visit, many mothers were very controlling during the play. They

would pick the toys and attempt to engage the children. The tone taken by mothers was often didactic. Many placed an emphasis on learning, such as colors or numbers, instead of starting with simple relationship-building with the child. In addition, most of the children were delayed developmentally, so the games or interactions the mothers initiated were often beyond the scope of the child's developmental age. Most children did not respond well to this type of play and often left the interaction. This appeared to make the mothers anxious or frustrated, and the pace of the play would increase, further alienating the child from engaging in the play.

Although the MBRS was only a 5-minute videotape of free play between mother and child, it was also supplemented by extra-maternal observations conducted during the 2-hour visit at both home visits at adoption and 90 days later. Even though these observations were not video recorded for the study, patterns of behavior were noted and recorded by the researcher. In many cases, by the second visit, mothers were more familiar with the children and seemed more at ease in play. The pace of play was more relaxed and the play was more reciprocal. Both mother and child appeared to be enjoying the play more. Overall, mothers appeared to be responsive and sensitive care givers. Mothers still missed some opportunities to enhance attachment in post-institutionalized children, such as emphasizing eye contact, letting the child lead the play interaction for engagement, and responding immediately to attachment activating behaviors, such as the child falling and hurting themselves or responding inappropriately to strangers (including me). Mothers likely would have benefited from interventions providing instruction in these strategies in order to enhance their already strong parenting skills in adoption.

During the semi-structured interview several years later, many mothers described the challenges they experienced in promoting sensitive and responsive parenting with their adopted children. The children were not newborns and often were already mobile and walking. Mothers found that parenting an older child was different since they did not have the newborn experience to bond with their children. Mothers also reported that communication with their child was a challenge in the beginning, but the children displayed remarkable progress in their receptive language. Children's expressive language often lagged behind and many children required early intervention services for speech and language, including the introduction of sign language. All parents reported that they found these support and intervention services helpful. Mothers reported that their child's sleep was another challenge to responsive parenting in the initial days and weeks after the adoption. Many of the children had never slept alone or in a crib, so parents needed to re-evaluate how the family was going to adjust to this issue. Mothers reported that child care was also a challenge for both parents. During the initial phases of the adoption, most parents tried to take time off from work and limit the number of people in the child's life to strengthen the attachment. One mother stated that she had to stay at the special needs child care facility for weeks because her child would scream for hours after she left, so she and her husband both re-arranged their work schedules to help her child adjust to the center. Finally, parents expressed continuing worry about how to evaluate the difference between adoption-specific issues and normal child development issues. This lack of clarity made it difficult for parents to understand how to respond sensitively to their adoptive children.

Family Functioning

Hypothesis 4: A higher level of family functioning is associated with an increased level of secure-based attachment in newly formed internationally adoptive families.

In the study, the mean scores reveal that the level of family functioning is high during 30 and 90 days after adoption. This indicates that families are feeling connected and attached during this period. Items that indicated family closeness ranked high in mean scores for Time 1 and Time 2. Items that showed poor family functioning had the lowest scores. Overall, scores showed little variability from Time 1 to Time 2 and suggest that family functioning was positive and stable during the early adoption time period.

During the course of the semi-structured interview, all of the mothers cited infertility as the primary reason for adoption. Dreams of a family became a longer journey than each mother had anticipated. Stories of assisted reproductive procedures ranging from artificial insemination to in vitro fertilization strained families financially and emotionally. Eight of the mothers were married and reported having to educate their spouses about adoption before the agreement was reached. The married women felt their spouses were fully invested in the process before and after the adoption. The two single mothers reported having to educate family members about adoption but they also felt supported once this discussion had been resolved within the family. The navigation through this crucial stage of family formation—that is, letting go of the dream of the biological child and envisioning a new dream of a child entering their family through adoption--displays the strengths of these families with cohesion and adaptability.

Parental Stress

Hypothesis 5: A low level of parental stress is associated with an increased level of secure-based attachment in newly formed internationally adoptive families.

Hypothesis 5 was not supported; there was no significant correlation between parental stress and secure-based attachment at either Time 1 or Time 2. The failure to detect a significant correlation between child attachment and parental stress may be related to the small sample size used in this research and the small number of families in the sample that returned the Parental Stress Index-SF at Time 1 (n = 16) or Time 2 (n = 13). The low number of observations at each time point reduced the power of finding significant relations between the variables. Although there was not a significant relation, it is interesting to note that the level of parental stress increased from Time 1 to Time 2, and child attachment also increased during this time. The generally high levels of parental stress reported in this study suggest that adoptive parents experience considerable stress in the early period after international adoption but that this is not related to secure child attachment.

Families often felt unprepared by the challenges of parenting post-institutionalized children. Regardless of whether they returned to the work force or remained at home, all mothers reported a change of lifestyle from working full time to being a mother. Stress was reported by women in relation to the isolation of being alone with child, being a first time mother, and most importantly, not knowing how to differentiate between developmentally normal behavior and behavior problems related to the adoption or prior institutionalization. Since the majority of mothers were first time parents, they did not have a reference point for normal child development to which they

could compare their adoptive child. This lack of clarity appeared to cause much stress to parents. For instance, one mother worried that her child's temper tantrum was "rage against the adoption." She described not being able to derive much enjoyment from her dream of being a mother because she was so anxious about doing the wrong thing. She also stated that she was comparing her son to her friends' children of the same age in areas such as motor skills, language and behavior, and that she felt isolated in her concerns. She experienced enhanced stress and feelings of inadequacy as a mother due to her son's perceived lagging in crucial areas. She reported that having professionals at the adoption clinic to talk to helped her immensely through providing education and consultation about adoption as well as normal child development. Since this helped to normalize her fears and gave her a conceptual framework to manage her anxiety, it helped her to cope and become more playful with her child.

Theoretical Implications

A theory offers ideas and a set of assumptions and concepts that explain a certain phenomena being observed. Theory should give meaning and clarity to what otherwise would be specific and isolated events (Chess & Norlin, 1988). The value of theory is that it helps understand data within a larger framework understand how environment affects people's behavior and predict the likely result of an intervention (Corcoran & Fischer, 2000). The framework used in this study was a multi-theoretical model that combined attachment theory and family systems theory with an ecological perspective. According to Bronfenbrenner's (1979) ecological perspective, the interaction of the child maturing in their own family, community and society supports or thwarts children's development and attachment to one or more adults. From this perspective, attachment is not just

viewed as the relationship between the mother and the child, but as part of a larger relational system. Similarly, family systems theory considers the way relationships within the family and between the family and social environment influence individual development and family functioning (Connard & Novick, 1996). The Circumplex Model (Olsen et al., 1989) was used because it is grounded in family systems theory. The level of family functioning was examined through the Circumplex concepts of cohesion (family attachment) and adaptability (family adjustment to the stress of the adoption). In adoption, three issues are important to assess: what the child brings, what the parent brings, and the context surrounding the child and family (Belsky, 1984). This study attempted to examine maternal responsiveness, family functioning, and parental stress early in the adoption process in relation to attachment. The lack of significant relations between these variables should not discourage this line of inquiry as this information may be valuable to both researchers and clinicians looking to facilitate attachment for families adopting internationally. This study indicated that adoptive parents experience a great deal of stress early in the adoption. Therefore, it seems that parents and could benefit from additional support as they transition to becoming a parent.

Results also showed that internationally adopted children adapted quickly to their new families. Many children were classified as securely attached at 30 days post-adoption, with a wide majority classified as securely attached by 90 days post-adoption. These results help add to attachment theory. Attachment theory states that for children born to biological parents, the foundation for attachment begins at birth. According to attachment theory, one hallmark of attachment, the ability to differentiate between caregivers and strangers, does not begin until age eight months. The trajectory of

traditional attachment theory does not account for children who are adopted or in foster care, who may attach to caregivers in a different way and during a different time frame. The children in this study seemed primed to bond and begin a secure attachment with their adoptive families within a relatively short period of time after placement. Perhaps it is time to rethink concepts related to attachment, particularly for adopted children.

A related area of discussion regarding attachment theory is the concept of indiscriminate friendliness. Indiscriminate friendliness refers to when children are not wary of strangers and approach all people as if they were familiar caregivers. It is often thought of as a survival mechanism for getting attention and needs met in institutions. Chisholm (1998) reported that internationally adopted children displayed more behaviors related to indiscriminate friendliness than did children who remained with their biological parents. Similar to Chisholm's (1998) findings, many of the parents in the current study reported that their internationally adopted children were initially very friendly to strangers. However, many parents also described a decrease in this behavior as children had been living longer in their adoptive homes, and also as attachment to the parents increased. Traditional theories have not yet been developed that address the issue of indiscriminate friendliness adequately. Findings from the current study may help add to theory in this area by suggesting that indiscriminate friendliness is initially common among internationally adopted children but often wanes as children spend more time with and become more securely attached to their adoptive family.

Policy and Practice Implications

Children who have been raised in institutions begin life disadvantaged physically, social and emotionally. Attachment has been described as the foundation for social and

emotional development. Adoption is an intervention that provides children with a family to which they can attach, and this can mitigate the damage created by living in an institution. The findings in this study demonstrate this early process of change in child attachment from insecure to secure-based attachment. Results suggest that most internationally adopted children are able to develop secure attachments relatively quickly after adoption. Yet results must be qualified by the age of children at adoption. Prior research has suggested that age of adoption may be a major predictor of later developmental outcomes (O'Connor, 2000). Early age at adoption can be linked to facilitating secure attachment and changing insecure attachments formed in the institutions. In this study, children were relatively young (aged 1-3 years). Even in this study, children who were placed when over the age of two had more needs than did children who were placed when they were one year old. Thus, results do not imply that older children would be able to develop secure attachments to their adoptive families as rapidly as did children in this study.

Governments need to be informed regarding the negative consequences of keeping children in institutions for a long period of time as well as how easily most children can recover if placed quickly with an adoptive family. In many countries children are at least a year old before they are identified for international adoption. The process of facilitating the adoption can take months and, in some cases, years to complete. As a policy issue, governments and adoption agencies should have a goal of more timely placement since research has suggested that age of adoption is a critical factor in promoting positive child development outcomes, including attachment (O'Connor et al,. 2000).

Apparent throughout the study was the need for more specialized post-adoption services for families. Many adoption agencies provide some post-adoption services but often these are limited. In most cases, post-adoption reports are required by countries from which the children were adopted. In such cases, adoption agency social workers conduct a home visit or make a phone call to follow up on how the child is adapting to their new home. Families that are struggling or feeling ambivalent about their parenting or the child may be reluctant to disclose this information to social workers. In the qualitative interviews, a few mothers revealed mixed or negative feelings early in the adoption and felt they did not have a venue in which they could discuss their true feelings. The mothers stated they felt as though they would be judged by physicians, social workers and adoption professionals. Further, they felt as though non-adoptive relatives and friends did not understand the struggles the mothers felt were specific to the adoption, such as children's indiscriminate friendliness to strangers, sleep problems, and post-institutionalized behavior (i.e., head banging, hoarding, hyperactivity, and developmental delays in areas such as speech and language and motor skills).

In some cases, families were referred to early intervention services and greatly appreciated this professional support. As a policy stance, the younger a child is identified, the earlier he or she may begin specialized services and potentially benefit from these services. Early intervention that serves children under the age of three may include assessment and treatment for developmental delays (e.g., motor skills, speech, and language comprehension) as well as for behavioral issues (e.g., hyperactivity). Not all children need these services but the earlier children are adopted and identified as

candidates for services, the earlier they may begin to receive assistance to help them catch up developmentally.

A policy recommendation is for internationally adopted children to receive a thorough and detailed medical evaluation to identify medical needs and identify gaps in development, behavior and attachment within 30 days of placement. Children recently adopted often have a variety of treatable infectious diseases such as scabies or gastrointestinal parasites. Appropriate secondary screening is also important for diseases such as HIV or TB. Families adopting from Russia and Eastern European countries are often concerned about Fetal Alcohol Syndrome. Although initially concerned with medical issues, parents shifted their concerns to behavioral and developmental issues with a few years of the adoption. This suggests that policies for post-adoption services should take a holistic and long term approach to meet the physical, emotional and psychosocial needs of internally adopted children and their families. Already in place are the recommendations of the American Academy of Pediatrics regarding evaluation of internationally adopted children (Albers, Johnson, Hostetter, Iverson & Miller, 1997). Adoption agencies, local pediatricians, family practice physicians, and adoption specialty clinics need to continue to work collaboratively to assess, diagnose and treat health and developmental issues related to international adoption.

Outcomes in this study reveal that most families were adjusting well to the adoption. Since most families do not require clinical intervention, informal and formal social support systems may be beneficial to families to help families understand adoption-specific issues. Adoption agencies could create policies that help families connect with such support systems, such as routinely referring families to local adoption

support groups. Other policy measures for informal support could include the formation of organized play groups or creation of a buddy system for new adoptive parents.

One of areas in which more policy development would be beneficial to parents would be in pre-adoption education. One of the most beneficial policy tools for adoption is the pre-parenting classes offered by adoption agencies and adoption clinics. Now mandated by The Hague Convention on Intercountry Adoption, pre-parenting education for international adoption must cover topics such as attachment, effects of institutionalization, and medical issues in international adoption. Parents must receive 15 hours of pre-adoption education; however, this appears insufficient to address the needs of many internationally adopted children. Furthermore, the impact of the adoption upon parents is a subject not covered in the classes. For married couples, the issue of how parenting will impact the couple relationship is not addressed. For women in particular, little attention is paid to how being a mother changes one's life. Such education may be particularly relevant given the fact that the majority of women in this study were older, first time professional parents, most leaving the work force for a period of time, and juggling motherhood and work responsibilities. In addition, the needs of post-institutionalized children appear require more attention in pre-adoption and post-adoption education than is currently given

Clinical Implications

One of the implications from the study is that most families do not require intervention services to enable secure attachment of children who were recently adopted internationally; rather, this process seems to occur naturally over time. However, both quantitative and qualitative findings suggest that parents may need assistance in

managing stress in the early post-adoption period, and that such stress may be manifested in anxiety and depression. In this study, women who were older first time mothers experienced a great deal of stress in parenting internationally adopted children, primarily because they were having difficulty discerning whether their adoptive child's behavior was developmentally normal or was problematic behavior related to the adoption that might impact the child's ability for secure attachment. In addition, women were often transitioning between the roles of working professional and mother for the first time. The majority of women felt isolated, anxious and overwhelmed with the stress of motherhood. One mother stated that she felt ambivalent about her child for up to a year after the adoption. She felt alone and ashamed that bonding to her child was a slow process, and that disclosing this to her adoption social worker was not appropriate. She recommended that families receive post-adoption support in the form of home-based interventions to help parents receive the education and counseling they might need during the initial period after the adoption. Based on the experience of this mother, it may be important for clinicians working with adoptive parents to let adoptive parents know that it is normal and expectable to experience some stress and ambivalence after adoption. It may be helpful for clinicians to specifically invite parents to discuss their negative as well as positive feelings about the adoption and parenting.

Some families may need more intensive post-adoption intervention services for attachment. Findings from this study suggest the utility of a home-based intervention model focusing upon providing parental support to reduce anxiety, and also providing relationship-based interventions for parents to incorporate into their daily routines and play with their child. The first therapeutic goal would be to increase parental competence

and enjoyment of parenting through providing education and interventions that increase parental confidence. The second goal would be to increase child attachment through reducing anxiety in parents and focusing upon strengths in the parent-child relationship. Juffer, Bakermans-Kranenburg,Van IJzendoorn (2008) describes the successful implementation of one of the few evidence-based parenting intervention programs for adoptive parents, Video-feedback Intervention to Promote Positive Parenting (VIPP). VIPP videotapes parental behavior in order to enhance parents' sensitivity to their children's signals. It is a brief and focused parenting intervention program that has been successful in a variety of clinical and non-clinical groups and cultures (Juffer, Bakermans-Kranenburg,Van IJzendoorn, 2008). Providing clinical interventions in the home environment captures the essence of social work practice of examining the individual in the social environment, and would appear to be a useful clinical intervention for adoptive parents in this sample.

Limitations and Suggestions for Further Research

The first suggestion for future research in this area would be to revise the measures related to attachment. Using multiple measures to capture attachment would strengthen the design of future studies and help to improve confidence in attachment classifications. In addition to the Attachment Q-sort, I would also recommend another measure such as the Disturbances of Attachment Interview (DAI) (Smyke & Zeanah, 1999). This measure has been used with both domestic and international adoptees to identify levels of abnormal attachment behavior. It is a semi-structured interview that is videotaped and coded, and is designed to be administered by clinicians to caregivers. It includes 12 items that cover the major hallmarks of child attachment behavior, such

looking for a preferred adult, seeking comfort when distressed, responding to comfort, social and emotional reciprocity between child and parent, emotional regulation, checking back after moving away from the care giver, appropriate wariness with unfamiliar adults, willingness to go off with relative strangers, self-endangering behavior, excessive clinging, vigilance/over compliance and role reversal. Zeanah has previously used this measure to evaluate children currently residing in institutions and children in foster care. This measure would provide further information on the continuum of attachment behaviors in future studies of internationally adopted children. While the current study focused on categories of attachment, it is also important to describe the specific maladaptive attachment behaviors exhibited by internationally adopted children. Qualitative findings in the current study identified indiscriminate friendliness as one such behavior, but it may be useful for future studies to more systematically examine the range of maladaptive attachment behaviors using instruments such as the DAI.

At the same time, it should be noted that one critique of international adoption research is that it has focused upon the more negative attachment behaviors of children. While this may be useful in helping clinicians and researchers identify specific clusters of behavior related to attachment disorders or disturbances, little of the research has focused upon positive outcomes and strengths of the families and children. One of the goals of this research study was to examine these issues early in the process of international adoption. The results in this study show that most parents provide their children with a structured environment that is also flexible and adaptable. The family dynamics revealed themselves to be very connected and cohesive. This shows high levels of family functioning among this sample of internationally adopting families.

An additional area to focus upon in attachment research is the role of fathers. The majority of the research studies in attachment are only conducted upon the mother-child dyad. One of the most influential aspects of fathers is the quality of the relationship that they have with the mother of children The impact of father's has impact on psychological well-being and social behavior even from birth, Children who have an involved father are more likely to be emotionally secure, be confident to explore their surroundings, and, as they grow older, have better social connections with peers. These children also are less likely to get in trouble at home, school, or in the neighborhood (Lamb, 2002).

One of the strengths of the study was that it was designed as a pilot study. Through designing this project as a pilot study, the researcher was able to test the instruments and protocol on a smaller scale. Lessons learned in this study can help direct the design of future, larger scale studies. Another strength of the current study was its longitudinal design. By the very nature of their field of study, child development researchers are concerned with change that occurs over time, making longitudinal studies the methodology of choice for such investigations. A longitudinal design provides the best information about the continuity of behavior or lack of it over time. It allows for individual tracking of patterns of behavior, as well as trends of development, within a similar group. The drawbacks of longitudinal methods are that they are costly and time consuming. Additionally, repeated measures may result in participants becoming wise to the method, or allow them to practice their responses, thereby contaminating results. The longitudinal design in this study afforded us the opportunity to see if change occurred over time in the scores for attachment, maternal responsiveness, family functioning and

parental stress. This was a much stronger design that if we had chosen to study the children cross-sectionally at 30 days of adoption or 90 days after adoption.

There are limitations to this study. The study was exploratory and no causal inferences can be made for the results of the pilot study. The sample size was small (n = 37), and at each time point, response rates were modest. This small number of participants precluded conducting more advanced statistical tests such as multivariate analysis. Another one of the limitations was that sampling was non-random and so no generalizations can be made about the findings on a larger scale. The weakness of using the convenience sample was it did not protect against bias. In a future study, the sampling method should be expanded to include multiple sources of sample recruitment, such as recruitment from adoption agencies, support groups, and the internet, as well as referrals from adoption specialty clinics, pediatricians and family physicians.

Another of the limitations of the study was selection bias. Bias affects research because it results in the subjects in the sample being unrepresentative of the population of interest. The information is interpreted from a source which contains bias. The non-consecutive non-random convenience sampling method in this study produced bias that influenced the outcome of the results. Specifically, the respondents were self-selected and eager to participate in the study. A limitation was that children who were experiencing attachment issues at adoption were not likely enrolled in the study by their parents. Nonrespondent bias occurs when those who do not respond to a survey differ in important ways from those who respond or participate (Heckman, 1979).

Many of the families who were referred to the study decided not to participate because they were having attachment difficulties with their children. The families who

did participate were experiencing very positive attachment experiences with the child. For future large scale studies, I suggest a pre-test post-test design with three groups of participants. The first group would consist of internationally adopted children. The second group would consist of domestically adopted children. The third group would consist of children who were never adopted and live with their biological parents. All three groups would be age matched. The inclusion of these additional groups would strengthen the design by including controls to which internationally adopted children could be compared.

Internal validity is the approximate truth of the causal inference that is made within a study (Trochim, 1999). Campbell & Stanley (1963) outline the nine sources of threats to internal validity, and some of these were present in this study. First, the children may change in the course of the study or between repeated measures of the dependent variable due to the passage of time (maturation), thereby confounding results. History also could have impacted the children due to outside events influencing the changes in attachment between the two time points. Repeated testing of the dependent variable may impact the results as participants become familiar with the measures. The reliability of the instruments used to test the dependent variable may change during the course of an experiment. In a longitudinal study, the phenomenon of regression to the mean demonstrates that subjects with extreme scores on a first measure of the dependent variable tend to have scores closer to the mean on a second measure.

External validity refers to the approximate truth of conclusions the involve generalizations. In this study, threats to external validity existed. The use of a nonrandom sample was a threat, so a future study would be focused toward strengthening

the sampling technique. Another limitation was the considerable dropout rate. Future studies should include incentive procedures to keep participants in the study, particularly over longer follow-up periods.

Summary

The main findings of the study were very positive for adoptive families. One of the most positive findings was that child attachment increased from insecure to secure during the course of the study. This is encouraging and helpful news to families adopting internationally since attachment is thought to be the foundation of later social and emotional development. Another positive finding from the study was that the level of family functioning was very high as the adoptive families enter this critical transition period of family formation. The families in the study were healthy and were adaptive to their new roles as parents. Children who are adopted internationally are able to live in a permanent family. Adoption is an intervention that is good for children.

Appendix

Case Studies

I. Dhani (India)

(1) Child history prior to adoption

Dhani was 20 months when she was adopted by her parents from India. She was living in an orphanage for 20 months. No birth history was available.

(2) Adoptive family information

After many years of infertility and disappointment, Alex and Jacques decided to adopt internationally. Alex was of Indian descent, and so the decision to adopt from India was a logical decision for the couple. Alex was relieved to finally be a mother. She had a twin sister, Anna, who had been married around the same time as Alex and had recently delivered twins. Anna was very anxious about not being able to be a mother at the same time as her sister.

Alex and Jacques were both successful doctors. Jacques was very interested in becoming a father and was very protective of his wife's infertility issues. The trip to India was difficult, but Alex's mother was able to accompany her and stay with Dhani for three months until the adoption was final. Alex made a trip back to the United States and returned with Jacques for the finalization of the adoption.

(3) Attachment pattern over time.

Alex recalled how she shared in the first research visit how she thought Dhani was "very attached" to her. Her reflection on this now was that Dhani was not attached to her at all, and that both mother and child were terrified of each other. Alex stated that Dhani's behavior towards her was one of survival. For many months after the adoption,

Alex needed to accompany Dhani to the special-needs child care center recommended by early intervention specialists. Dhani would scream uncontrollably if Alex was not present. It was a very difficult time for the family. Alex stated that she felt guilty that she did not bond to her child for a long time. She said it would have been helpful if she had other mothers or a professional to talk to about her ambivalence about being a mother after so many years of longing.

Currently, Alex reported that Dhani was very secure in her attachment but it took at least a year for attachment to happen for mother and child. Alex said that there was not a defining moment when she knew Dhani was attached to her; attachment was more a process.

II. Sasha (Russia)

(1) Child history prior to adoption

Sasha was 33 months when she was adopted by her parents. Sasha was living in an orphanage in Russia prior to the adoption. No family or medical history was available about Sasha.

(2) Adoptive family history

Jane and Bill were both working professionals until the adoption. Jane and Bill had been seeking medical treatment for infertility for several years. Jane had been pregnant several times through in-vitro fertilization but experienced several miscarriages. A talk by adoption professionals to their local infertility group had changed their strategy regarding the path to parenthood. They decided to pursue international adoption. While taking pre-parenting classes at a local adoption clinic, they received a referral for two children. One child was a blond chubby white baby named Oleg and the other child was a 30 month old girl with a hat covering part of her head, disguising her large ears. Jane and Bill had requested two children under the age of two during their home study. They agonized for days over accepting the referral because Sasha was close to three years old and they were fearful of attachment problems due to her age. They could not request another child according to their agency and Oleg was adorable. Bill and Jane accepted the referral and travelled to Russia to adopt both children.

(3) Attachment over time

Once home Bill went back to work and Jane stayed home with the children. Jane and Bill first thought the children were attaching to them. However, as the months progressed, Jane became very emotional and cried because Sasha had indiscriminate

friendliness towards everyone. In fact, Sasha did not prefer her. On one play date, after Sasha fell down and hurt herself, she ran to the other mother for comfort. "I've waited all this time to be a mother and now she didn't even know I am her mother," Jane stated tearfully. Jane described how Sasha would seek strangers over her, had poor boundaries and often wandered off even in the street, had high pain tolerance, and would not seek comfort when hurt during the initial weeks post-adoption. Jane and Bill said that it took close to a year for attachment to occur with Sasha. She had sensory issues, particularly with food, and Jane often had to feed her. She later recalled that this did assist with attachment. Over the first year, Sasha began to attach slowly to Jane and Bill. Years later, Jane described Sasha's attachment as secure. She did admit that it took longer than six months and closer to a year for attachment to occur. Jane was convinced that it was because Sasha was older that attachment took longer than it had for her younger brother Oleg. She stated that not one event defined attachment but rather a series of events that happened over time."It's like a relationship where you get to know each other and it takes time."

III. Jason (Russia)

(1) Child history prior to adoption

Jason was adopted from Russia when he was 10 months old. He lived in an orphanage prior to his adoption. No biological history was known.

(2) Adoptive family history

Denise and Don had wanted a child since their marriage five years ago. They had tried infertility treatments and had been unsuccessful in their attempts to get pregnant. Denise and Dan are very religious, and their faith helped them continue on their path to parenthood. Through their church, they met a few families who had adopted through a local international adoption agency. Denise and Dan attended the pre-adoption meetings and decided that Russia was the best country for them to adopt from. Denise and Dan attended pre-parenting classes together to prepare for the adoption. Jason was 8 months old at the time of their referral. He was very small for his age and Denise worried about Fetal Alcohol Syndrome, particularly since Jason was from Russia.

(3) Attachment over time

Denise and Dan returned with Jason after a two week trip to Russia and had Jason received a diagnostic assessment for Fetal Alcohol Syndrome (FAS) at a local adoption clinic. The assessment did not indicate FAS for Jason. Looking back on attachment a few years later, Denise did initially think that Jason was attached to her because he depended on her for feeding and comfort. She did not find him seeking attention from strangers but it took him several months to differentiate between her mother (who often babysat for Jason) and herself. She gave an example that he called both of them "Mama." Currently, she does not have any fears about Jason and his attachment to her or

her family. She reported that he is very affectionate and loving to his family. He is still seeing a speech therapist for language delay. He is still small for his age and is still not interested in food. Denise is still worried about FAS because Jason has repetitive behaviors and she feels he is hyperactive but his family adores him and he loves them right back.

IV. Emma (China)

(1) <u>Child history prior to adoption</u>

Emma was adopted by Melissa and Joe when she was 14 months old from China. Emma lived in an orphanage until she was adopted. No biological history was known.

(2) <u>Adoptive family history</u>

Melissa reported unrealistic expectations about how she would juggle motherhood and her life. Melissa and Joe wanted children but had many years of infertility before seeking international adoption. They did not attend pre-parenting classes and thought that the home study would be sufficient to prepare them for parenthood. Melissa and Joe both worked for a nature center. Melissa worked part-time and Joe was employed full time. Melissa did not return to work at the nature center after the adoption.

(3) <u>Attachment over time</u>

Melissa reported that Emma did not attach to her during the first year of adoption. In the first three months, Emma would cry and not be consoled when she was alone with her mother. Joe felt Emma was attaching to him slowly during the first year. Melissa was distraught that Emma was inconsolable when they were alone but was "happy" when she was with her father. Motherhood was not she expected in other ways. She thought she could still take her yoga classes and paint just like she did before having a child. Melissa became resentful that she had no time for herself and that Emma took up so much time. Melissa began to see a therapist. It helped her to see that intimacy was frightening to her since she had been raised in an alcoholic family. Many of her angry feelings were being projected upon Emma, and Emma was reacting to her mother's moods. Melissa was angry at adoption professionals who told her she was doing fine and

that Emma appeared to be attaching to her. She was angry that no one seemed to recognize what was going on with her relationship with her daughter. Emma was fine while visitors were in the house but as soon as the mother and daughter were alone, the emotional discord began.

As Melissa's therapy progressed, the better her relationship with Emma developed. This process took approximately a year. Recently, Melissa and Joe added Claire, who was also adopted from China, a year and a half later. Melissa felt much more secure in meeting the needs of Claire after she learned so much from her rocky road to motherhood in her first year with Emma. Emma was now more comfortable in her relationship with her mother. They loved to color, sing songs and play games together. Emma still has a very good relationship with Joe.

V. Tatiana (Russia)

(1) Child history prior to adoption

Tatiana was 13 months old when she was adopted by single mother, Jane. Tatiana lived in an institution prior to adoption in Russia. No information regarding biological family was known.

(2) Adoptive family history

Jane was a very successful director of an art gallery. She had wanted to get married but never found the right partner. She moved to Cleveland from New York City because she was offered a great job. She wanted to be a mother but felt like her age was preventing her from getting pregnant, so she chose adoption. She contacted a local adoption agency to conduct a home study. She enrolled in pre-parenting classes at a local adoption clinic and waited for the referral.

(3) Attachment over time

Tatiana was a beautiful baby with dark curly hair. Jane was thrilled to be a mother and took six weeks off to devote herself to Tatiana. Jane thought Tatiana was very attached to her from the beginning. Jane stated that during the first year the attachment only grew stronger. Jane worried that Tatiana did not sleep through the night and slept by her crib. By the time Jane went back to work, she needed her rest and developed a plan with a local physician to not disturb attachment but help her rest at night in her own room. Jane was not worried about indiscriminate friendliness. Jane delighted in all of Tatiana's behaviors. Jane hired a nanny to care for Tatiana while she was at work and this worked out well for Tatiana who liked the one-on-one attention. During the interview Jane reiterated that she felt Tatiana was immediately attached to her and

that their love had only grown stronger. Jane was a very involved parent who was fun and artistic in the eyes of her child. They made each other happy.

VI. Alicia (Russia)

(1) Child history prior to adoption

Alicia was adopted from Russia when she was 18 months old. She lived in an orphanage until she was adopted. No biological history was known.

(2) Adoptive family history

Joan and Eric were both employed in full time corporate careers prior to the adoption. Joan and Eric wanted to be parents and sought infertility treatments for several years. They eventually met some friends who had adopted from a local international adoption agency. They completed their home study and were referred a beautiful 8 month old girl who they named Emily. They travelled to Russia to met Emily and fell completely in love with her. Their adoption took two trips to complete.

Joan and Eric returned home without Emily to wait for the call from the agency so that they could return to complete the adoption. Their excitement turned to grief as they learned that Emily was no longer available for adoption. Crushed, they put their dreams on hold. They contacted the agency a few months later and were open to another referral. Alicia was seventeen months older than Emily. They wondered if another try at adoption would be the right decision.

(3) Attachment over time

They travelled to Russia again and returned home with Alicia. The plane trip home and the first week at home were very stressful and unhappy for Joan and Eric. Alicia was crying uncontrollably and was not sleeping. Joan and Eric took Alicia to a local international adoption clinic and stated how stressed out they were and were

wondering if the adoption was right thing to do. A referral was made for early intervention services and that helped Joan feel more comfortable with Alicia.

Joan stated that she was afraid to get close to Alicia because of all the disappointment and Alicia was so different from baby Emily. Both mother and daughter were cautious around each other. While Eric returned to work after two weeks, Joan returned to work part-time after three months. Joan felt completely incompetent as a mother but she felt like her husband was very supportive of her. The interventionist helped her play some games with Alicia and she began to have fun with Alicia. It was six months before Joan felt like Alicia was her daughter and felt the beginnings of attachment to her. Alicia was also opening up to her family. She followed her parents around, called to them, but it took six months before she came to them for comfort. Joan and Eric said it took approximately a year for the attachment process to happen, and they felt that her age at the time of adoption was a significant factor in attachment taking a longer time to develop as well as their own guarded feelings toward loving a child who might be taken away from them.

After the first six months, Alicia began to blossom in her attachment. She would play a game where she would pretend to be hurt then run to her parents for comfort. Joan and Eric said that attachment began to really take place between six months and a year. During the time of the interview, Alicia was engaging and very secure in her attachment to her parents. Her parents still were concerned about her affection for strangers by waving and trying to hug them but they worked with her to be her boundaries regarding indiscriminate friendliness. Alicia had grown into a beautiful engaging girl, far from the

sad, scared thin toddler a few years ago. The parents had also let their guard down and joined fully as a family.

VII. YiYi (China)

(1) Child history prior to adoption

YiYi was adopted when she was 12 months old from China. No information regarding biological family history was known.

(2) Adoptive family history

Catherine and Chris had wanted to be parents for many years but were unsuccessful at getting pregnant. They were very enthusiastic about going to China. They both met in the military where they were both still employed. They even worked out where they each could take three months off when YiYi arrived. They both reported being surprised at how little they were able to communicate with doctors and officials during the adoption.

(3) Attachment over time

Once home, Catherine and Chris experienced troubles with feeding YiYi and were referred immediately to early intervention. This was very stressful on both of them. Looking back on this experience, they wondered how that might have impacted early attachment with their daughter. After a few weeks, YiYi soon began eating and the problem was resolved. Overall, Catherine and Chris delighted in YiYi and spent all their time playing and caring for her. They both reported much experiencing much joy from being parents. They were both adamant about feeling YiYi was very attached to them initially. At the interview, both parents laughed because they reported that what they thought was attachment was YiYi being scared to death but also beginning to trust her new parents. In hindsight, both parents reported that what they thought was attachment early in the adoption really might have been a survival mechanism for YiYi. The parents

also reported feeling very overwhelmed during the early days of the adoption since they were first time parents. This was helped by their feeling that YiYi quickly began to understand what they were talking about to her. Catherine and Chris said that YiYi was such a good baby and they felt that she was attached to them in less than six months. YiYi also was not walking so they felt like this helped her attach to them since she depended on them for everything until she learned to walk at 14 months.

Presently, YiYi has a secure attachment according to her parents, loves to play with other children, and participates in Families with Children from China with her parents. Catherine and Chris report being a very happy family.

VIII. Vivienne (China)

(1) Child history prior to adoption

Vivienne was 13 months when she was adopted from China. She lived in an orphanage for 13 months. No biological history was known.

(2) Adoptive family history

Georgia worked as a research coordinator at a local university and had a Ph.D. She never expected to get married but met Alfred when he was the landscaper for her yard. They really wanted to be parents but with Georgia's age, they knew adoption was a good choice for them.

(3) Attachment over time

Georgia and Alfred travelled to China and both stayed home with Vivienne for many months. They reported that Vivienne was a very good baby; she was very cooperative and parenting was easy for both parents. Georgia stated that she felt Vivienne was very attached to her in the beginning. She enjoyed playing with her and reported that Vivienne was very smart and understood many of things said to her very quickly. She said that early on Vivienne would come to her or Alfred for comfort was very affectionate and smiled often. Georgia stated that being a mother was the best thing that had every happened to her. Georgia stated that it was around three months when she felt like Vivienne was attached. Georgia stated that there was no defining moment when she felt like Vivienne was attached to her; it happened rather "organically." Currently, Vivienne has a very strong relationship with her parents, does not venture far from them, laughs and smiles often, and loves to cuddle with both parents.

IX. Carlos (Guatemala)

(1) Child history prior to adoption

Carlos was 13 months when he was adopted from Guatemala by a single mother. Carlos lived with a foster family prior to adoption. His birth mother had three other children and could not afford to parent him so he was relinquished for adoption.

(2) Adoptive family history

Carol was a very successful professional woman who worked out of her home. Carol's sister had recently adopted from Guatemala from a local agency and Carol was enthusiastic about becoming a parent through adoption. Her home study completed, she waited for the referral. Carlos was 3 months old when he was referred to Carol. She was thrilled with the progress report, that he was in foster care, and that she had pictures and a letter from his birth mother. Carol was able to visit Carlos for a week when he was 8 months old. She brought blankets with her scent on it and pictures when she returned to wait another five months until Carlos could be adopted and return home with her.

(3) Attachment over time

Carol reported that her entry into motherhood was rocky for both Carlos and herself. Carlos did not sleep so Carol slept on the floor next to his crib. He cried a great deal during the night and Carol was exhausted. She said that he did not listen, threw things at her and the three cats, and had a tantrum when he did not get his own way. He did not seek her out when he fell or was in pain. In addition, he was walking so he ran everywhere in the house. Carol stated that attachment was not good at the beginning although she thought it was at the time. She didn't have a frame of reference to compare her experiences except her sister who was married with two biological children and lived

in Columbus. She admitted that the first few months she didn't really know what she was doing. It was survival mode. Carol put Carlos in a day care center and he became worse in his behavior. Carol then hired a part-time nanny which seemed to give Carol some support. Carol stated that between three months and six months Carlos became more attached to her. She seemed to believe that he missed his foster parents and was grieving that loss. It took about a year before Carlos was attached to Carol. There was one moment at about six months when he sat in her lap, put his hand on her face and stared at her. She felt like this was a feeling of attachment for both mother and son.

During the interview, Carol laughed as she remembered the tough times in the beginning. She said that having someone come to her house and help her with attachment would have been helpful. She now finds Carlos securely attached, affectionate, active, cooperative and loving. Carlos attends a Montessori school five days a week and is doing well. Carol is engaged to be married to a man who has a 13 year old son, so Carlos will have a brother. Carol stated that now she has everything she has ever wanted.

X. Morgan (Mongolia)

(1) <u>Child history prior to adoption</u>

Morgan was adopted when he was 30 months old from Mongolia. He lived in an orphanage until he was adopted. No biological history was known.

(2) <u>Adoptive family history</u>

Jen and Edgar had three biological children (14, 11 & 9) and were very religious. They thought it was God's will that they adopt Morgan. They had been married seventeen years and were high school sweethearts. They were both employed at a large discount chain and had a comfortable lifestyle full of children, dogs and cats. They took it upon themselves to learn as much as they could about adopting a toddler from an institution although they did not take pre-parenting classes through an organization. They thought that since they were experienced parents and had read on attachment, they were equipped both financially and psychologically to adopt Morgan. They were open to child with special needs.

(3) <u>Attachment over time</u>

Jen and Edgar were very patient and accepting of Morgan during the early months of the adoption. They had low expectations regarding attachment although he did seem to like his new home, he was not especially affectionate in the beginning, was stubborn, but did like his new siblings and the dogs. Jen kept her focus upon Morgan and stated that she could understand how it would take some time for him to feel attached to his new parents since he had spent 30months in an institution without a mother or father. Jen said it was very slow for attachment for the first six months. Morgan had a high pain tolerance, did not easily seek comfort, was disobedient, and cried a great deal. Jen and

Edgar had Morgan evaluated by early intervention at 34 months, when he was eligible to receive services. After 6 months, Morgan began to be more affectionate with his parents, be more cooperative, and cry less. Jen said there was no event that she remembered that said that Morgan was attached to his family. Jen said that it took Morgan close to a year to adjust to his new home. At the time of the interview, Morgan had been joined by a sister with special needs from Korea. Jen said he was completely attached to the family, and they couldn't imagine life without him. He still needed speech therapy, but was progressing well in this large and happy family.

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