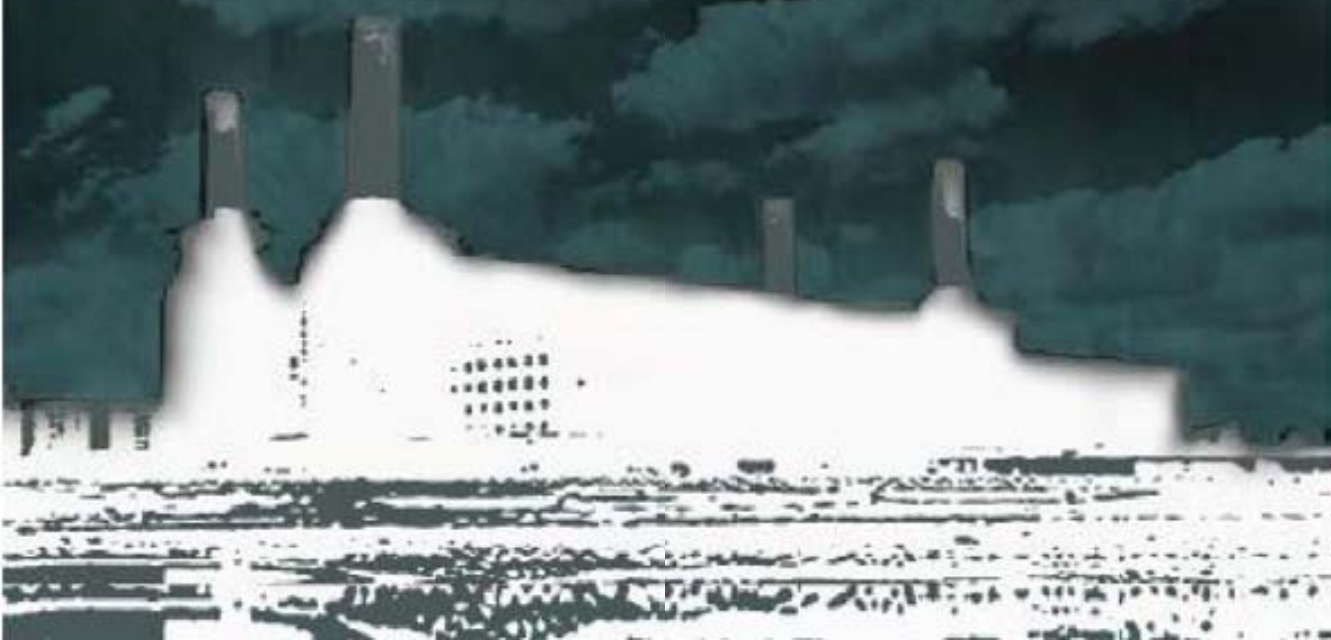


# RESILIENCE IN INTERNATIONALLY ADOPTED CHILDREN

Natàlia Barcons I Castel  
PhD Thesis 2012





RESILIENCE  
IN INTERNATIONALLY ADOPTED CHILDREN

NATÀLIA BARCONS I CASTEL

---

PhD Thesis UAB/ 2012

PhD supervisors: DIANA MARRE

CARME BRUN

ALBERT FORNIELES

Departament de Psicologia Clínica i de la Salut

Facultat de Psicologia

Universitat Autònoma de Barcelona

2012



A mis padres, Joan y Montse

## **Acknowledgements**

Hace ahora 5 años inicié el Máster oficial de Investigación en Psicología Clínica y de la Salud con la idea y convencimiento de continuar en el campo de la investigación con la tesis doctoral.

Fue en el momento de inscribir la tesis doctoral cuando encontré a mi mentora y directora de tesis, Diana Marre, fuente de conocimiento, motivación, energía desbordante y exigencia, que me ha dirigido durante estos años de manera excelente que ha propiciado que esté escribiendo mi tesis ahora mismo. También quiero agradecer su dedicación a Carme Brun y a Albert Fornieles en el diseño y la elaboración de la tesis, y a Carme Costas, por su asesoramiento en los inicios de mis investigaciones.

Quiero agradecer a la Dra. Victoria Fumadó y al servicio de pediatría del Hospital Sant Joan de Déu de Barcelona, la confianza depositada en la investigación y la colaboración en el acceso a las familias.

También quiero agradecer a la Dra. Carmen Pinto, al Prof. Stephen Scott, al Dr. Matt Woolgar y a la Dra. Anouk Houdijk, junto con el resto del equipo del *Conduct, Adoption and Fostering Team* del

Michael Rutter Center – Maudsley Hospital- King’s College London, la formación recibida, su dedicación y su confianza durante los seis meses de estancia en el centro.

Quiero agradecer también a Beatriz San Román, Bruna Álvarez, Paola Galbany, Cati Pou, Rosa Mora, Esther Grau y a todos los miembros del grupo de investigación AFIN (Adopciones, Familias e Infancias) por el trabajo conjunto durante estos años y por sus ánimos. Afortunadamente en los inicios, tuve la suerte de conocer a mi compañera de viaje en el doctorado, Neus Abrines, con la cual tuvimos la oportunidad de trabajar conjuntamente, realizar el trabajo de campo, apoyarnos mutuamente en los momentos más difíciles, y celebrar juntas nuestros avances.

El desarrollo de mi tesis doctoral ha sido un proceso largo y costoso que ha representado un gran esfuerzo, tanto mío como de las personas que me rodean, mi familia y mis amigos. Durante estos años, he visto crecer a mi hija Noa, de manera paralela a mi crecimiento personal y profesional. Cuando miro hacia atrás, tengo recuerdos preciosos y curiosos de este crecimiento paralelo: leyendo artículos con mi hija dormida en brazos, analizando datos con el SPSS antes de despertarla, cogiendo sus primeros vuelos para

acompañarme a los congresos, haciendo sus primeros dibujos a mi lado mientras yo redactaba alguno de los artículos..., y sobre todo, su esfuerzo más importante y enriquecedor, adaptándose a las costumbres, compañeros e idioma de otro país durante mi estancia en Londres.

Quiero agradecer expresamente a mis padres, Joan y Montse, su apoyo incondicional, su infinita capacidad de comprensión y aceptación, su gran ilusión por compartir “mi” ilusión y por estar a mi lado, siempre.

A Laia, por animarme a continuar, por escucharme, por confiar en mí acompañándome a Londres, por llegar cuando yo no llegaba. A mi hermana Elisabet, por su comprensión y respeto. Y a mis amigas Ximena y Txell, con las que, por mi inversión en este proyecto, no he compartido todo el tiempo que hubiera deseado.

Y por último, quiero agradecer la colaboración a todas las familias que han participado en la investigación. Sin ellos, este trabajo no sería posible.





# Index

---

Acknowledgements .....	vii
Summary.....	1
Resumen.....	3
Part I:	
1. Introduction	
1.1. International adoption. ....	7
1.2. International adoption in Spain.....	11
1.3. Research on the psychological adaptation of internationally adopted children.....	12
1.4. Resilience .....	16
1.4.1. Attachment .....	20
1.4.2. Countries of origin .....	22
1.4.3. Age at adoption .....	23
Part II:	
2. Justification .....	27
3. Research objective .....	28

Part III:

4. Method and results.....31

4.1. Article 1: **Barcons, N.**, Fornieles, A., & Costas, C. (2011).  
International adoption: Assessment of adaptive and  
maladaptive behavior of adopted minors in Spain. *Spanish  
Journal of Psychology*, 14, 123-132. ....33

4.2. Article 2: **Barcons, N.**, Abrines, N., Brun, C., Sartini, C.,  
Fumadó, V., Marre, D. (in press). Attachment and adaptive  
skills in children of international adoption. *Child and Family  
Social Work*. ....44

4.3. Article 3: **Barcons, N.**, Abrines, N., Brun, C., Sartini, C.,  
Fumadó, V., Marre, D. (2012). Social relationships in  
children from intercountry adoption. *Children and Youth  
Services Review*, 34, 955-961. ....56

Part IV:

5. Discussion .....68

6. Conclusion .....76

7. Final considerations and future research ..... 82

Part V:

8. References .....86

## **Summary**

Since 1998, Spain has received 45,696 internationally adopted children. Research on the psychological adaptation of internationally adopted children indicate that most internationally adopted children present an adequate psychosocial adjustment, but they are more likely to develop behavioural and emotional difficulties and, they exhibit poorer social competence. The examination of personal strengths and the role that personal and social resources play in positive development, is a recent emerging area of research in resilience.

This research has focused on the factors that contribute positively to the development of the social and adaptive skills of the internationally adopted children, as an expression of their resilience.

The results indicate that the development of adaptive and social skills, including interpersonal relationships and relationships with parents differ significantly depending on various factors analyzed: the secure attachment pattern of the children appears as a factor that favours the development of these skills, being the only significant factor in relations with parents, regardless of age or time lived with the adoptive family.

The age of adoption also appears as a relevant factor, the younger age at adoption favours the development of adaptive and social skills, except that it has no effect on the scale of relationships with parents.

The results of the three articles in the thesis indicate that children adopted from Eastern European countries encounter greater difficulties to develop a secure attachment pattern, in the development of adaptive skills, in the interpersonal relationships and in the social stress scale. These results confirm other international studies that report a more severe deprivation and high rates of prenatal exposure to tobacco and alcohol in children from Eastern European countries, suggesting the possible existence of Fetal Alcohol Syndrome in the sample, a fact that should be developed as a future research line.

Adoption is a complex situation that implies the interaction of multiple factors. This research has highlighted the importance of each of the factors analysed and future research objectives should incorporate the effect of the childrens' specific individual characteristics together with the post adoption environmental factors, such as the adoptive family parenting styles.

## **Resumen**

Desde 1998, 45.696 menores procedentes de adopción internacional han llegado a España. Las investigaciones sobre la adaptación psicológica de estos niños y niñas indican que, a pesar de que la mayoría presentan un ajuste psicosocial adecuado, son más propensos a experimentar dificultades emocionales, conductuales y en habilidades sociales.

La investigación en los puntos fuertes personales y el papel que los recursos personales y sociales desempeñan en el desarrollo evolutivo, es un área de investigación reciente en resiliencia. Esta investigación se ha centrado en los factores que contribuyen positivamente al desarrollo de las habilidades sociales y de adaptación de los menores adoptados internacionalmente, como expresión de su capacidad de resiliencia.

Los resultados indican que el desarrollo de habilidades adaptativas y sociales, incluidas las relaciones interpersonales y las relaciones con los padres difieren significativamente dependiendo de diferentes factores analizados.

El patrón de apego seguro de los niños aparece como factor que favorece el desarrollo de estas habilidades, siendo el único factor significativo en las relaciones con los padres, independientemente de la edad de adopción o del tiempo transcurrido con la familia adoptiva.

La edad de adopción también aparece como un factor relevante, en cuanto que la edad de adopción temprana favorece el desarrollo de habilidades adaptativas y sociales, exceptuando que no ejerce ningún efecto en la escala de relaciones con los padres.

Los resultados de los tres artículos que componen la tesis, indican que los menores adoptados procedentes de países de la Europa del Este tienen más dificultades en problemas de atención, en desarrollar un patrón de apego seguro, en el desarrollo de habilidades adaptativas, en las relaciones interpersonales y en la escala de estrés social; confirmando otros estudios internacionales que informan de una deprivación más severa y de altos índices de exposición prenatal al tabaco y al alcohol, sugiriendo la posible existencia de Síndrome Alcohólico Fetal en la muestra y que debería desarrollarse como una línea de investigación futura.

La adopción implica la interacción de múltiples factores que hace de ella una situación de investigación compleja. Esta investigación ha puesto de manifiesto la importancia de cada uno de los factores analizados y futuras investigaciones deberían incorporar el efecto que ejercen las características individuales de los menores junto con factores post adoptivos en su entorno más cercano, tales como los estilos educativos familiares.

# **PART I**





# **1. INTRODUCTION**

## **1.1. International adoption**

Adoption is a childhood protection measure with the objective to provide a family to children whose biological families cannot take care of them, according to the Convention on the Rights of the Children (United Nations, 1989) and to the Convention on Protection of Children and Co-operation in respect of Intercountry Adoption (Hague Conference on Private International Law, 1993).

Since the 1970's, domestic adoptions have decreased dramatically in the United States and in Europe while the number of intercountry adoptions has increased. International adoption is a phenomenon that involved yearly up to 45,000 children in 2004, when Spain became the second receiving country, behind the United States of America (Selman, 2009). Between the years 2000 and 2010, around 400,000 children have been adopted by citizens from 27 different countries. The main sending countries have been: China, Russia, Guatemala and Ethiopia; and the main receiving countries have been: the United States of America, Spain, France, Italy and Canada. In 2004, 5.541 children were adopted in Spain, what made of Spain the second country in the world with the highest adoption rate: 13 per 100,000 habitants, following Norway with a 15.4 adoption rate (Selman, 2011).

Since 1998, Spain has received 45,696 children of international adoption; this fact justifies the importance and need for research regarding this phenomenon.

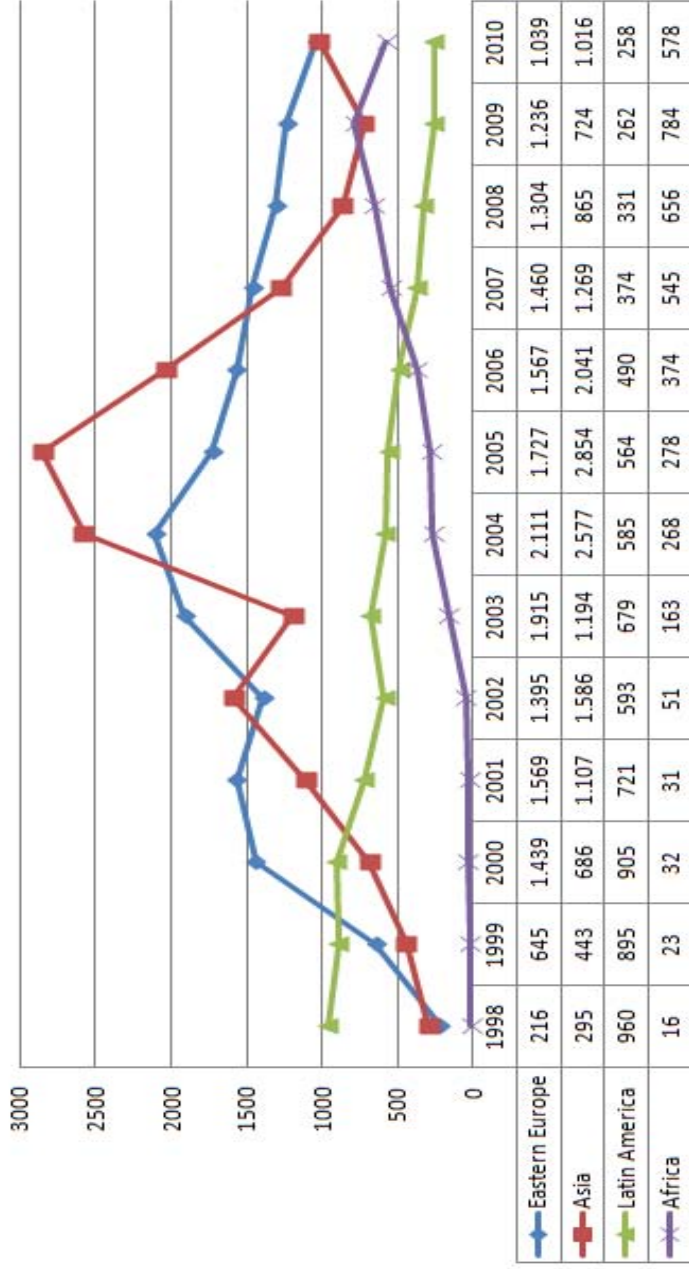
These children have come from:

- 17,632 from Eastern European countries, mainly from Russia and the Ukraine;
- 16,657 from Asia, mostly from China;
- 7,617 from Latin America, mainly from Colombia;
- 3,799 from Africa, mainly from Ethiopia.

The international adoption evolution in Spain can be appreciated in figure 1.

The phenomenon began to decrease from 2005 onwards, and in 2010 the number of children who entered Spain from international adoption had decreased to 2,891. The moderation in these figures has been similar throughout the world due to the changes in international adoption laws in the sending countries.

**Figure 1: Evolution of international adoption in Spain**



According to Selman's research (2011):

— The decline in adoptions from China has been caused by the characteristics of children placed for adoption. Such characteristics include age, sex and special needs. In 2005,5 the percentage of children adopted over the age of 5 was 1.4%. By 2009 this figure had reached 10.9%. In 2005, 5% of the children were male, and in 2009 the male ratio reached 26%. Finally, China decided to increase the number of adoptions of special needs children, which on aggregate of all countries represented 9% from China in 2005 and in 2009 had risen to 49%.

— From 2004 to 2010, Russia reduced the number of children placed for adoption, increasing the special needs adoptions and those of older children. In fact, in 2004, 1,618 children from Russia were adopted by Spanish families, while in 2010, the number of children from Russia was 801.

— In contrast, in children from Ethiopia, the process has been reversed because of the demand for younger children, and in 2009 and 2010, Ethiopia replaced Russia as a supplier, only behind China, though in 2011, Ethiopia modified its policy on adoption and the number of children available for adoption has also begun to decrease.

— Regarding the adoptions from Latin America, Guatemala adoptions have declined significantly since 2009, adoptions from Colombia have held constant and the number of adoptions in Haiti grew after the earthquake in January 2010.

This brief presentation of the actual situation in international adoption numbers indicates that: while total circulation figures of children has decreased worldwide in some of the traditional sending countries over the past two decades, nowadays, the adoptions are taking place from other countries and with children with different characteristics such as the adoption of children with special needs and the adoption of children of older ages.

## **1.2. International Adoption in Spain**

From the second half of the 90's, in Spain, as in other Western European countries and in North America, transnational adoption constituted a way to become or to increase the family for couples and for people with difficulties to have a biological child, as well as for people who wanted to have children but not through the biological ways (Marre, 2009).

As Spain was putting itself in the international arena as one of the first receiving countries of internationally adopted children, the birth rate in Spain was positioning itself as one of the lowest rates in the European Union (1.39 children per woman in 2007). However, other receiving countries of international adoptions such as France

(2.0 children per woman), Sweden (1.9) and Ireland (1.85), recorded the highest birth rates in the EU in 2007 (Marre, 2009).

This phenomenon is due mainly to changes in social and family structures, the postponement of motherhood giving priority to the access to the paid employment, and the lack of social support to the work and life balance. The incorporation of women into the labour market with few policies to encourage a healthy balance between life and work, has forced women into choosing between a job and a child. Many have delayed the childbearing age while others have decided not to have children in order to preserve their working conditions (Marre, 2009).

### **1.3. Research on the psychological adaptation of internationally adopted children**

Several researches conducted in Spain about the psychological adaptation of children of international adoption indicate that, although the majority of children from international adoptions achieve a similar adaptation to non-adopted children, the previous are more likely to develop certain behavioural problems, hyperactivity, low self esteem and academic difficulties (Berástegui, 2005; Fernández, 2004; Moliner & Gil, 2002; Orjales, 1997).

The review of numerous researches conducted abroad shows similar results to those conducted in Spain: most internationally adopted

children present an adequate psychosocial adjustment (Bimmel, Juffer, Van IJzendoorn, Bakermans-Kranenburg, 2003; Juffer & Van IJzendoorn, 2005; Juffer & Van IJzendoorn, 2007). Adoption usually provides opportunities for a positive development in the physical, medical, educational and psychological areas for previously institutionalized children and, historically, adoption has been considered a favourable solution for both the child and adoptive parents. However, compared with their peers, most adopted children show: developmental delays (Beckett et al., 2006; Morison, Ames, & Chisholm, 1995); attachment difficulties (Chisholm, 1998; Marcovitch et al., 1997; Van den Dries, Juffer, Van IJzendoorn, & Bakermans-Kranenburg, 2009); psychiatric disorders in adolescence and adulthood, increased risks for psychiatric hospitalization, suicidal behaviour, severe social problems, lower cognitive functioning, and poorer school performance (Dalen et al., 2008; Hjern, Lindblad, & Vinnerljung, 2002; Lindblad, Hjern, & Vinnerljung, 2003; Lindblad, Ringbäck Weitoft, & Hjern, 2010; Tieman, Van der Ende, & Verhulst, 2005, 2006) and show more internalizing and externalizing problems (Bimmel et al., 2003; Brodzinsky, 1987, 1990, 1993; Gunnar, Van Dulmen & the International Adoption Project Team, 2007; Juffer & Van IJzendoorn, 2005, Kirschner & Nagle, 1995; Stams, Juffer, Rispen, & Hoksbergen, 2000; Verhulst, Althaus, & Versluis-den Bieman, 1990; Wierzbicki, 1993; Wiik et al., 2011; Zeanah et al., 2009).



Many of the children experience before and/or after being adopted various unfavourable factors that influence their psychosocial adjustment and parent-child relationship, such as inadequate health services, inadequate pre-, peri- and postnatal medical care, very early mother separation, psychological deprivation, neglect, abuse and malnutrition in orphanages or poor families (Rutter et al., 1998). Approximately 80% of adopted children have been institutionalized in the first year of life (Johnson, 2002) and the standard of these institutions is a factor that can exert a profound influence on the potential development of these children (Odenstad et al., 2008; Wiik et al., 2011; Zeanah et al., 2009). The effects of institutionalization on child development, including the effect on attachment relationships have been widely reported in other studies (Gunnar, Bruce & Grotevant, 2000; Howe, 2005; Vorria et al., 2003).

Children of international adoption, apart from the pre-adoptive experiences lived, may experience difficulties in adapting to their adoptive family, to a new culture and a new social environment, the need to learn a new language; they should integrate into their new lives the loss of their culture and their family of origin and may encounter problems arising from their divergence identity (Juffer & Van IJzendoorn, 2005).

Qualitative data from various research studies MCININ CSO2009-14763-C03-01 *"International and Domestic Adoption: family, education and belonging: interdisciplinary and comparative perspectives"* 2010-2012, and MEC R+D SEJ 2006-2009 15286

*“International Adoption: social and familial inclusion of the internationally adopted children. Interdisciplinary and comparative perspectives”* show significant differences in the post-adoption processes, and therefore in the familial and social integration of transnationally adopted children.

These differences report high-risk processes in developing the adoptive family attachment that can lead even to an adoption breakdown. These difficulties have not been officially measured or informed but several studies report adoption disruption rates between 2% and 20%, depending on the research and the samples (Berástegui, 2003; Stryker, 2011). Berástegui (2003) found the disruption rate between 1997 and 1999 in Spain to be 1.5%, growing to 6.7% when the age at adoption was 6 or older.

Over fifteen years of international adoption in Spain have provided sufficient evidence to highlight the need to implement post-adoptive services referred to the development of the physical health, mental health and education for adopted children and their families.

## **1.4. Resilience**

Adoption can be defined as a situation in which risk factors interact with protection factors. The interaction of these factors may counterbalance the negative effects, leading to children's resilience, a process by which the protection factors are recovered and enhanced (Rutter, 1985, 1987, 1990; Scroggs & Heitfield, 2001; Werner, 1993, 2000). The term resilience refers to a relatively positive psychological adaptation despite suffering of risk experiences, which would be expected to entail significant negative consequences (Rutter, 2007).

These protective mechanisms include individual factors as cognitive ability and temperament; pre-adoptive factors as the different conditions in their country of origin, age at the time of adoption, medical care, and attachment relationships established with their caregivers; and post-adoptive factors as attachment relationships with the adoptive family and family parenting styles.

There is a lot of research focused on the psychological adjustment of adoptees, although there is few research focused on the children's expressions of resilience such as how the adoptees function in areas such as adaptability and social adjustment.

Juffer, Stams & Van IJzendoorn's investigation (2004) elucidates the fact that, in contrast to the abundant literature dealing with behaviour problems of adopted children, research on the personalities of adopted children are scarce. They analyse two key

aspects of the personality: ego resiliency – referred to the tendency to respond flexibly to situations involving a change, especially in situations that can lead to frustration and stress- and ego control - refers to the tendency to hold or express emotional and motivational impulses-; though more research on adaptive skills of the internationally adopted children is needed, including the ability to adapt to changes in routines in a flexible way, changing tasks, sharing; social skills and adaptation to community and school.

The study of Tieman, van de Ende, and Verhulst (2006) compared the social functioning of 24- to 30-year-old intercountry adoptees with that of same-aged nonadoptees in The Netherlands, using data from a large adoption and general population cohort; and results showed that adoptees, compared to nonadoptees, were less likely to have intimate relationships, to live with a partner, and to be married.

Another study by Tan (2006) analyzed the social competence (participation and performance in extracurricular activities; quality of social relations; and academic attainment) of 115 girls aged 6–8, adopted from China before they were 2 y.o. by American families and its association with their history of neglect. Results showed the percentage of children who were in the neglected group that felt below the normal range of the Overall Competence scale group was significantly higher than for the comparison group.

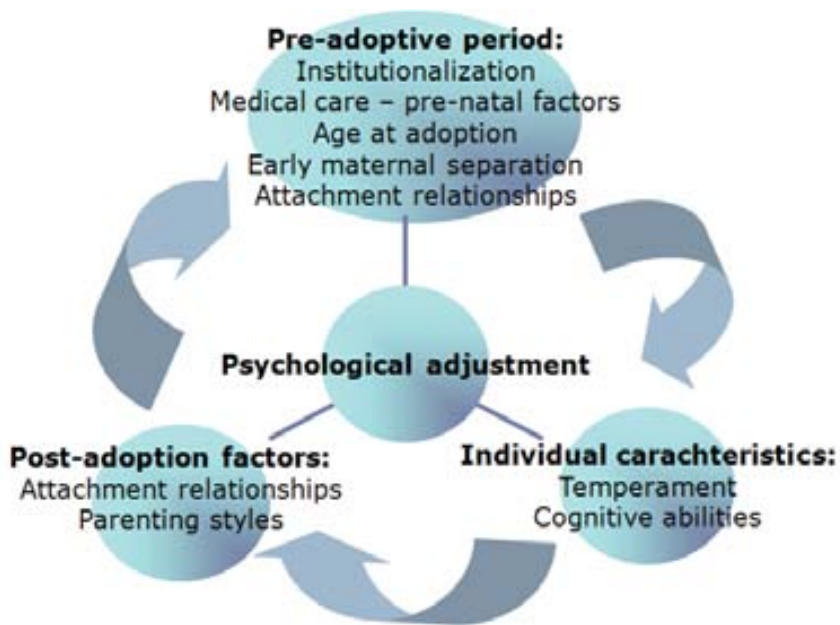
Some studies show that both, domestic and international adoptees, regardless of history of neglect, exhibit poorer social competence

(Brodzinsky, 1993; Brodzinsky, Schechter, & Henig, 1992; Hodges & Tizard, 1989; Miller et al., 2000; Tan, 2006; Van IJzendoorn, Juffer, & Klein Poelhuis, 2005; Wierzbicki, 1993). In intercountry adoption, the English Romanian Adoptees study provided relevant information regarding the intellectual good catch-up, whereas the social skills development was often substantially impaired, showing difficulties in social situations and to make friends (Goodman & Scott, 2005). Emotional/conduct disturbances could develop as a consequence of difficulties in picking up social cues and knowing how to behave in different social situations. This competence and understanding is crucial in middle childhood in terms of peer relations, thus can have repercussions for both conduct and emotional functioning (Colvert et al., 2008).

Existing literature shows that the children's pre-adoption experience, gender, age at adoption, and country of origin, all contribute to their post-adoption outcomes. In fact, the main finding in Tan & Camras research (2011) was that the adopted Chinese girls scored similar to or higher than same-age girls from the US normative sample on parents' and teachers' ratings when assessing social skills. The authors understand this fact to the characteristics of the adopted children themselves: the circumstances to give a child for adoption and the prenatal conditions in China, where drinking, smoking, and drug use are extremely rare among Chinese women (Tan & Camras, 2011).

The following figure explains the different factors interaction that lead to the psychological adaptation of the adopted children:

**Figure 2: Conceptual framework of psychological adjustment in children of international adoption**



The examination of personal strengths, internal and external assets, and the role that personal and social resources play in positive development, is a recent emerging area of research in resilience. Longitudinal research is demonstrating that numerical increases in assets are predictive of better developmental outcomes, when outcomes are defined as prosocial behaviors that are culturally relevant, identifying the interactional effect and differential amounts

of variance accounted for in children's development dependent on the risks measured (Ungar, 2011).

Literature describes the different factors implied in the psychological wellbeing of the children of international adoption and this research will explore the effect of the child's attachment pattern, the country of origin and the age at adoption on the expressions of resilience of the internationally adopted children, such as the development of their adaptive and social skills:

### **1.4.1. Attachment**

One of the factors that the literature describes as a mitigating effect of these adverse experiences is the secure attachment relationship between child and caregiver (Cassidy & Shaver, 1999; Werner, 2000). A secure attachment relationship provides the child the ability to develop their social identity, their own adaptive and social skills, and explore the environment autonomously. Attachment security has been shown to be antecedents of children's adaptive functioning over time, to contribute to the child's social development and to reduce behaviour difficulties and psychopathology (Pierrehumbert, Miljkovitch, Plancherel, Halfon, & Ansermet, 2000; Van IJzendoorn, Schuengel & Bakermans-Kranenburg, 1999).

Conceptually and based on the attachment theory of John Bowlby (Bowlby 1969/1982, 1973, 1980), attachment describes the bond between the child and the primary caregiver. Infants learn from

birth to expect a certain reaction from their caregivers and to adapt their behaviour in ways that are most likely to facilitate the caregiver's appropriate and effective response, whether the caregiver is the biological parent, adoptive parent, relative, or institutional caregivers.

Three attachment patterns were identified, based on Mary Ainsworth's research with the *Strange Situation* procedure according to an infant's behavioural strategy in response to separation from and reunion with the attachment figure: secure, insecure avoidant, and insecure ambivalent (Ainsworth, Blehar, Waters, & Wall, 1978). Main & Solomon (1990) extended Ainsworth's work by identifying a fourth category: disorganised attachment pattern.

According to Van IJzendoorn et al.'s meta-analysis (1999), attachment patterns in normative samples are distributed as follows: 62% secure attachment pattern, 15% insecure-avoidant, 9% insecure-ambivalent and 15% disorganised attachment pattern.

The development of a secure attachment relationship is a complex process, and the literature suggests that experiences of institutionalisation, abuse and neglect can affect cognitive processes, attachment relationships, and consequently the children's relationships with peers and family (Van den Dries et al., 2009). Some studies indicate a higher probability of attachment disorders among adopted children (Chisholm, 1998; Marcovitch et al., 1997; Zeanah, 2000).



According to Bernedo, Fuentes, Fernández and Bersabé's study (2007), adoptive families perceive themselves as more affectionate and communicative than non adoptive families do, a factor which can promote a secure attachment relationship for the child. There is a growing body of evidence, in fact, that the quality of parent-child relationships in adoptive families promotes healthy development for adoptees that may protect against risk factors (Whitten & Weaver, 2010).

#### **1.4.2. Countries of origin**

The pre-adoptive context may vary among the countries of origin and several researches have found differences in the medical care and development difficulties depending on the country of origin of the adopted children (Welsh, Viana, Petrill & Mathias, 2007).

The socioeconomic and political peculiarities of international adoption in the countries of origin can provide some data about the life conditions of these minors before being adopted, which can affect their behavioural profile (Selman, 2002).

Minors from Eastern Asia present the highest rates of craneoencephalic anomalies and skin infections at the moment of adoption; minors from Eastern Europe have often experienced severe deprivation (Morison et al., 1995; Smyke et al., 2007), display more neurological symptomatology, higher rates of prenatal exposure to tobacco and to alcohol.

The study of Johnson (2000) reports that more than 50% of children institutionalized in Eastern Europe present low birth weight, in many cases they are premature, and some of them have been exposed to alcohol during pregnancy. The long-term impact of such exposure and its effects on the foetus, and the prevalence of these problems among the institutionalized minors in Eastern Europe is more pronounced (Miller, Chan, Tirella, & Perrin, 2009).

### **1.4.3. Age at adoption**

The age at placement is a factor that some literature suggests that can influence in the appearance of more difficulties in the development of the adopted minors, in the security in attachment and as an indicator of the emergence of behavioural problems in adolescence (Habersaat, Tessier & Pierrehumbert, 2011).

Age at adoption is usually interpreted as a risk factor implying that a high age at adoption means more difficulties to develop a close relationship with a caregiver and the lack of positive experiences early in life; factors that can lead to a less positive development of the children (Odenstad et al., 2008). Recently, the study of Merz & McCall (2010) found that later adoptees scored higher in the CBCL (Child Behavior Checklist) than earlier adoptees and that the standardization sample; and results of other research suggest that the major factor contributing to extreme behaviours is age at adoption, with those adopted after 6/18 months having more

behaviour problems, especially internalizing, externalizing, and attention problems (Hawk & McCall, 2010).

Those who were over 3 years of age at placement present higher rates of problems because they spent more time in unfavourable conditions for their development, such as institutionalization (Barth, Berry, Yoshikami, Goodfield, & Carson, 1988; Berry & Barth, 1989; Erich & Leung, 2002; Grotevant et al., 2006; Gunnar et al., 2007).

## **PART II**



## **2. Justification**

There is a growing body of evidence in the international arena focused on the psychological adjustment of adoptees, though there are few research studies conducted in Spain. There is a need for more research to expand our knowledge of the factors that mediate in the psychological adjustment process and how they interact to strengthen the resilience of minors of international adoption.

Added to this, there is the need to expand our scarce research on how the adoptees function in areas such as social relationships, and on the factors that contribute to the development of their adaptive skills, in order to better identify the needs of adopted children and their families in relation to the improvement of the services they may require.

### **3. Research objective**

The overall objective of this thesis is to examine the factors that contribute positively to the development of the social and adaptive skills of the internationally adopted children, as an expression of their resilience.

Specific objectives:

1. To examine the adaptive and maladaptive behaviour of a sample of minors from international adoption.
2. To explore differences in the adaptive skills and attachment patterns of a sample of internationally adopted children.
3. To explore the social relationships -social stress, relationship with parents and interpersonal relationships- of a sample of internationally adopted children.

# **PART III**





#### 4. Method and results

In order to carry out the objectives, the research has been designed to answer the three research objectives and the results have been published in the following articles:

1. Article 1:

**Barcons, N.**, Fornieles, A., & Costas, C. (2011).

International adoption: Assessment of adaptive and maladaptive behavior of adopted minors in Spain. *Spanish Journal of Psychology*, *14*, 123-132.

2. Article 2:

**Barcons, N.**, Abrines, N., Brun, C., Sartini, C., Fumadó, V., Marre, D. (in press). Attachment and adaptive skills in children of international adoption. *Child and Family Social Work*.

3. Article 3:

**Barcons, N.**, Abrines, N., Brun, C., Sartini, C., Fumadó, V., Marre, D. (2012). Social relationships in children from intercountry adoption. *Children and Youth Services Review*, *34*, 955-961.



## ARTICLE 1

**Barcons, N.,** Fornieles, A., & Costas, C. (2011).  
International adoption: Assessment of adaptive and  
maladaptive behavior of adopted minors in Spain.  
*Spanish Journal of Psychology*, 14, 123-132.



## International Adoption: Assessment of Adaptive and Maladaptive Behavior of Adopted Minors in Spain

Natalia Barcons-Castel, Albert Fornieles-Deu, and Carme Costas-Moragas

Universitat Autònoma de Barcelona (Spain)

Research on adjustment of internationally adopted children indicates that, although they have adequate development, more emotional and behavioral problems are detected compared with nonadopted children. In this research, emotional and behavioral characteristics of a sample of 52 internationally adopted minors were examined with the BASC (Parent Rating Scales and Self-Report of Personality), comparing the outcomes with 44 nonadopted minors, all of them of ages between 6 and 11 years (mean age = 8.01 years). Results indicate differences between adopted and nonadopted children related to somatization, adopted minors are those that obtain lower scores in the scale, and in the adaptability scale, where nonadopted minors obtain higher scores. Significant differences were found in the adaptive abilities scales, suggesting that nonadopted boys show better abilities than adopted ones, and no differences were found among girls. In general, boys present higher scores in externalizing symptomatology and depression than girls. Among adopted children, time spent in an institution is a variable that has negative impact on the onset of externalizing and internalizing problems. Minors coming from Eastern Europe display more attentional problems, poorer adaptive abilities and poorer interpersonal relations than the rest of the minors. According to the age at placement, attentional problems appear in minors adopted after the age of 3 years.

*Keywords:* international adoption, adaptation, institutionalization, BASC.

Las investigaciones sobre la adaptación de menores procedentes de adopción internacional señalan que, aunque estos niños tienen un desarrollo correcto, se detectan más problemas emocionales y conductuales que en niños no adoptados. Esta investigación ha examinado con el BASC (cuestionario para padres y autoinforme) tanto los trastornos de adaptación como los rasgos adaptativos de una muestra de 52 menores procedentes de adopción internacional, comparando los resultados con 44 menores no adoptados de edades comprendidas entre los 6 y los 11 años (media = 8.01 años). Los resultados indican diferencias entre los menores adoptados y los no adoptados relativas a somatización, siendo los menores adoptados quienes obtienen mejores puntuaciones en la escala, y en la escala de adaptabilidad, siendo los menores no adoptados los que obtienen mejores puntuaciones. Se han encontrado diferencias significativas en la escala de habilidades adaptativas, sugiriendo que los varones no adoptados muestran mejores habilidades que los adoptados, no encontrándose diferencias en las niñas. En cuanto al sexo de los menores, en los varones se detecta una mayor sintomatología externalizada y depresión que en las mujeres. Entre el grupo de menores adoptados, el tiempo de institucionalización influye negativamente en la aparición de trastornos, tanto externalizados como internalizados. Según el país de procedencia, los menores procedentes de Europa del Este presentan más problemas de atención, y peores habilidades adaptativas y relaciones interpersonales que el resto de menores. Destaca la aparición de más problemas de atención en los menores adoptados a partir de los tres años.

*Palabras clave:* adopción internacional, adaptación, institucionalización, BASC.

---

This article was written within the framework of the research project International adoption: Family and social integration of internationally adopted minors. Interdisciplinary and comparative perspectives (SEJ2006-15286/SOCl), financed by the Ministerio de Ciencia e Innovación.

Correspondence concerning this article should be addressed to Natalia Barcons-Castel. Departamento de Psicología Clínica y de la Salud. Facultad de Psicología. Universitat Autònoma de Barcelona. 08193- Bellaterra. (Spain). E-mail: natalia.barcons@campus.uab.cat

International adoption is an increasing phenomenon and, according to the data of the Ministry of Education, Social Policy and Sport (2008), the number of international adoptions in Spain in the last five-year interval (2003-2007) was approximately 23,035.

Studies on international adoption in Spain show that most of the adopted minors achieve a very similar adaptation as the minors who live with their biological families, but the adopted children have a higher probability of suffering from behavior problems, hyperactivity, low self-esteem, and academic problems (Berástegui, 2005; Fernández, 2004; Moliner & Gil, 2002; Orjales, 1997).

The review of the investigations carried out abroad shows that most of the adopted minors present adequate psychosocial adjustment (Bimmel, Juffer, van IJzendoorn, & Bakermans-Kranenburg, 2003; Juffer & van IJzendoorn, 2005, 2007). However, compared with their peers, they display: more developmental delay (Beckett et al., 2006; Morison, Ames, & Chisholm, 1995), attachment problems (Chisholm, 1998; Marcovitch et al., 1997), psychiatric disorders in adolescence and adulthood (Hjern, Lindblad, & Vinnerljung, 2002; Tieman, Van der Ende, & Verhulst, 2005), and internalized and externalized problems, with higher incidence among the males (Andresen, 1992; Berry & Barth, 1989; Bimmel et al., 2003; Brodzinsky, 1990, 1993; Brodzinsky, Radice, Huffman, & Merkler, 1987; Juffer & van IJzendoorn, 2005; Kirschner & Nagle, 1995; Stams, Juffer, Rispen, & Hoksbergen, 2000; Verhulst, Althaus, & Versluis-den Bieman, 1990; Wierzbicki, 1993).

Among the adopted minors, those who were over 3 years of age at placement present higher rates of problems because they spent more time in conditions that were unfavorable for their development, such as institutionalization (Barth, Berry, Yoshikami, Goodfield, & Carson, 1988; Berry & Barth, 1989; Erich & Leung, 2002).

In international adoption, a large number of the children undergo diverse unfavorable factors before being adopted, which affect their psychosocial adaptation and the parent-child relationship, such as: inadequate pre-, peri-, and postnatal care and insufficient health services, very early maternal separation, psychological deprivation, negligence, abuse, and malnutrition in orphanages or in very poor families (Rutter et al., 1998).

The socioeconomic and political peculiarities of international adoption in the countries of origin can provide some data about the life conditions of these minors before being adopted, which can affect their behavioral profile (Selman, 2002). Studies find differences in the medical and developmental problems depending on the country of origin of the adopted minor (Welsh, Viana, Petrill, & Mathias, 2007): minors from Eastern Asia present the highest rates of craneoencephalic anomalies and skin infections at the moment of adoption, whereas in some studies, minors from Eastern Europe display more

neurological symptomatology, higher rates of prenatal exposure to tobacco and to alcohol. The long-term impact of such exposure and its effects on the fetus, and the prevalence of these problems among the institutionalized minors in Eastern Europe is more pronounced (Miller, Chan, Tirella, & Perrin, 2009). However, individual differences and the institutionalization centers are relevant factors that can affect the minors' development.

Adoption can be defined as a situation in which risk factors such as the above-mentioned ones interact with protection factors such as high self-esteem, acceptance of ethnic identity, parents' cultural competence, and quality in the practice of paternity. Various studies show that the adoptive families are more affectionate and communicative than the nonadoptive ones, and they control their children's behavior appropriately (Bernedo, Fuentes, & Fernández, 2005). In fact, these same families perceive themselves as more affectionate, communicative, and inductive than nonadoptive families, according to the study of Bernedo, Fuentes, Fernández, and Bersabé (2007).

The interaction of these factors may counterbalance the negative effects, leading to children's resilience, a process by which the protection factors are recovered and enhanced (Rutter, 1985, 1987, 1990; Scroggs & Heitfield, 2001; Werner, 1993, 2000).

The adoption process produces a dramatic turn in the minor's life. Between the ages of 5 and 7 years, the minors begin to understand the implications of being adopted, and they begin to join in a more extensive social environment, the school (Brodzinsky, Singer, & Braff, 1984).

The goal of this study is to examine the adaptive and maladaptive behavior of a sample of minors from international adoption, aged between 6 and 11 years, and to compare it with that of a sample of nonadopted minors of the same ages.

Taking into account the above, we began with the following hypotheses:

- a. The adopted minors would present more externalizing problems and internalizing problems in the global dimensions of the Behavioral Assessment System for Children (BASC; Reynolds & Kamphaus, 1992).
- b. The boys will present more externalizing problems and internalizing problems than the girls in the global dimensions assessed with the BASC.
- c. Children adopted as of 3 years of age will present more clinical symptomatology, maladjustment, and externalizing problems / internalizing problems on the BASC, than children adopted at an earlier age.
- d. The minors who were institutionalized for a longer period of time will obtain higher scores in clinical symptomatology of the BASC.
- e. There will be differences in the adaptive and maladaptive behaviors as a function of the country of origin.

## Method

### *Participants*

The following selection criteria were used: minor's age between 6 and 11 years, with a minimum period of 1 year living with the adoptive family. The exclusion criterion (less than 1 year with the adoptive family) had the aim of avoiding the critical period of adoption (Amorós, 1987; Berástegui, 2005).

The participants were recruited by means of an incidental sample, with the support of Collaborative Entities of International Adoption (CEIA) and associations of adoptive families from Barcelona.

The group of nonadopted minors, who lived with their biological families, was recruited in the same sociodemographic area as the adopted minors, with some exceptions, and they were paired by sex and age.

Out of a total of 116 families contacted, 96 minors participated in the investigation: 52 (54.2%) were internationally adopted: 36 (62.2%) were girls and 16 (30.8%) were boys; and 44 (45.8%) were biological children: 28 girls (63.6%) and 16 boys (36.4%). Of the remaining 20 minors, 50% did not meet the age requirement: they were either younger than 6 years (7) or older than 11 years (3). The remaining 10 minors dropped out of the investigation (8.62% of the total).

Mean age of the sample was 8.01 years ( $SD = 1.625$ ). The mean age of the group of nonadopted minors was 8.18 ( $SD = 1.702$ ) and that of the group of adopted minors was 7.87 ( $SD = 1.560$ ). The mean age at placement in the group of adopted minors was 28.75 months ( $SD = 21.42$ ), and the minimum value was 8 and the maximum 84 months. See sample description in Table 1.

Of the families, 94.1% had some sort of information about their children prior to the adoption. It is noteworthy that 92.3% of the adopted minors had been institutionalized, 14% had lived with relatives for some time before being adopted, and 14% were in a foster home prior to adoption.

The adopted minors were from the following countries of origin: 51.9% from Asia (27 girls, 100% females): 25 from China and 2 from Nepal; 26.9% from Eastern Europe (14 children: 4 girls, 28.6%, and 10 boys, 71.4%: 2 from Bulgaria, 4 from Russia, and 8 from Ukraine); 15.4% from Central and South America (8 children: 4 girls, 50% and 4 boys, 50%: 1 from Colombia, 2 from Guatemala, 1 from Haiti, and 4 from Peru); and the remaining 5.8% were from Africa (3 children: 1 girl, 33.3% and 2 boys, 66.7%: all from Ethiopia).

### *Instruments*

*Questionnaire of sociodemographic data and adoption data:* Questionnaire elaborated ad hoc for this investigation

and completed by the parents. We collected the following data: number and sex of the adoptive parents civil status, number of children, motivation for adoption, data prior to adoption: institutionalization, staying with relatives or with foster family, medical report in country of origin, data about birth, diagnosed pathology in country of origin and/or on arrival, current medical or psychological pathology, current medical or psychological treatment.

*Behavioral Assessment System for Children (BASC;* Reynolds, & Kamphaus, 1992; Spanish adaptation, TEA, 2004). This is a multidimensional and multimethod questionnaire that collects information from the parents, the teachers, or the individual. In the current investigation, we used the questionnaire completed by the parents (P2) and the self-report (S2).

*Questionnaire for parents.* The subscales and the Cronbach alpha reliability coefficients obtained in the Spanish adaptation were as follows: 9 clinical scales: aggressiveness ( $\alpha = .79$ ), hyperactivity ( $\alpha = .73$ ), behavior problems ( $\alpha = .70$ ), attentional problems ( $\alpha = .76$ ), atypicality ( $\alpha = .60$ ), depression ( $\alpha = .77$ ), anxiety ( $\alpha = .59$ ), withdrawal ( $\alpha = .65$ ), and somatization ( $\alpha = .71$ ); 3 adaptive scales: adaptability ( $\alpha = .66$ ), social skills ( $\alpha = .84$ ), and leadership ( $\alpha = .77$ ); it also provides 4 global dimensions: externalizing problems ( $\alpha = .87$ ), internalizing problems ( $\alpha = .82$ ), adaptive skills ( $\alpha = .89$ ), and the index of behavioral symptoms ( $\alpha = .90$ ). The internal consistency of the questionnaire for the parents was .72 and the rest-retest reliability for a 3-month interval was .78.

*Self-Report.* The self-report provides 8 clinical scales: negative attitude towards school ( $\alpha = .81$ ), negative attitude towards teachers ( $\alpha = .72$ ), atypicality ( $\alpha = .79$ ), locus of control ( $\alpha = .77$ ), social stress ( $\alpha = .72$ ), anxiety ( $\alpha = .81$ ), depression ( $\alpha = .83$ ), and sense of inadequacy ( $\alpha = .72$ ); 5 adaptive scales: interpersonal relations ( $\alpha = .83$ ), relations with parents ( $\alpha = .56$ ), self-esteem ( $\alpha = .75$ ), and self-reliance ( $\alpha = .61$ ); it also provides 4 global dimensions: clinical ( $\alpha = .90$ ), maladjustment ( $\alpha = .90$ ), academic maladjustment ( $\alpha = .85$ ), personal adjustment ( $\alpha = .84$ ), and index of emotional symptoms ( $\alpha = .93$ ). The internal consistency of the self-report was .76, and the rest-retest reliability for a 3-month interval was .69 (González-Marqués, Fernández-Guinea, Pérez-Hernández, Pereña, & Santamaria, 2004).

### *Procedure*

With the support of the CEIA and associations of adoptive families of Barcelona, we contacted each family that had accepted to participate in the study so they could complete the self-administered BASC questionnaire. After the questionnaires were completed, they were returned personally either by post or by e-mail. All the contacted families accepted to participate and signed the informed consent. After the investigation, a report was provided to each of the 96 families with the results of their children's questionnaires.



Table 1  
Sample Description

	$\chi^2$	Age groups		Sex		Type of family			Civil status		Type of school	
		2.102 ( $p = .350$ )	.336 ( $p = .562$ )	5.296 ( $p = .021$ )	12.811 ( $p < .001$ )	4.219 ( $p = .131$ ) *	Married	Unmarried	Public	Concerted Private	Private	
Adopted 54.2% (n1 = 52)		Group 6-7 53.8% (28)	69.2% (36)	30.8% (16)	88.5% (46)	11.5% (6)	97.9% (46)	2.1% (1)	66.7% (26)	28.2% (11)	5.1% (2)	
Group 8-9 26.9% (14)		Group 10-11 19.2% (10)										
Total 100% (52)												
Nonadopted 45.8% (n2 = 44)		Group 6-7 47.7% (21)	63.6% (28)	36.4% (16)	100% (44)	-	70.7% (29)	29.3% (12)	62.9% (22)	17.1% (6)	20% (7)	
Group 8-9 20.5% (9)		Group 10-11 31.8% (14)										
Total 100% (44)												
Total sample (n = 96) 100%		Group 6-7 51% (49)	66.7% (64)	33.3% (32)	93.7% (89)	6.3% (6)	85.2% (75)	14.8% (13)	64.9% (48)	23% (17)	12.2% (9)	
Group 8-9 24.0% (23)		Group 10-11 25% (24)										
Total 100% (96)												

\*Fisher's exact statistic

The statistical program SPSS 15.0 was used to analyze the data. A factorial 2x2 between-group ANOVA was performed to study the possible interaction of sex and group (adopted/nonadopted). We used t-tests for independent samples to analyze differences in the questionnaire scores as a function of adopted/nonadopted group and the minor's sex. We used a unifactorial ANOVA for independent data to analyze differences as a function of age at the moment of adoption, and linear regression to analyze the influence of the time the minors had been institutionalized. Unifactorial ANOVA was conducted to study differences in the questionnaire scores as a function of the country of origin.

### Results

We carried out  $\chi^2$  tests in order to analyze the association of age group, sex, type of family, civil status, and type of school and the main dimensions of the study associated with adoption (Table 1). No significant relations by age group, sex, and type of school were found, but significant relations were found with type of family ( $\chi^2 = 5.296$ ,  $p = .021$ ), and the adoptive parents' civil status ( $\chi^2 = 12.811$ ,  $p < .001$ ). As can be observed, 100% of the nonadopter families were biparental, but only 70.7% reported having married. In the case of the adoptive families, 88.5% were biparental and, among them, 100% were married.

#### *Adopted/nonadopted Group and Sex Interaction*

In order to study Hypotheses a and b, we carried out a 2 x 2 (Sex x Group) factorial ANOVA with independent data to determine the influence of the minor's sex and group (adopted/nonadopted) on the scores of the diverse questionnaire scales.

The only significant interaction was between sex and group on the scale of Adaptive Skills,  $F(1,95) = 4.592$ ,  $p = .035$ . The simple effects reveal significant differences between the groups of nonadopted and adopted minors, with a difference of means of 9.625 ( $p = .0109$ ), suggesting better adaptive skills in the nonadopted minors. In the girls, the difference of means was nonsignificant (0.052,  $p = .984$ ). No significant differences were found in the rest of the scales.

#### *Externalizing and Internalizing problems in the BASC Scales as a Function of Adopted/Nonadopted Groups*

Once the presence of Sex x Group interactions was ruled out, we used t-tests for independent samples to study Hypothesis a, in which we predicted group differences in the BASC scores. Once homocedasticity was confirmed, we only found group significant differences in the Somatization scale, where the highest scores were obtained by the group

of nonadopted minors ( $n1 - n2 = 4.19$ , 95% CI: 0.58 to 7.80). There were no significant differences in the remaining scales, although, once the degrees of freedom had been corrected—because homocedasticity was not met in this analysis—the Adaptability scale was almost significant,  $t(85,41) = 1.73$ ,  $p = .088$ ,  $n1 - n2 = 4.08$ , 95% CI: -0.61 to 8.77, with the group of nonadopted minors obtaining higher scores.

#### *Externalizing and Internalizing problems in the BASC Scales as a Function of the Minor's Sex*

We used t-tests to study Hypothesis b, in which we expected to find sex differences in the questionnaire scores. After we had confirmed homocedasticity in all the tests that revealed significant differences, we found more problems among the male minors (independently of whether or not they were adopted) in: aggressiveness ( $n1 - n2 = -4.657$ ,  $p = .042$ , 95% CI: -9.130 to -0.182), behavior problems ( $n1 - n2 = -6.313$ ,  $p = .019$ , 95% CI: -11.562 to -1.063), depression ( $n1 - n2 = -5.953$ ,  $p = .023$ , 95% CI: -11.064 to -0.842), and the general index of behavioral symptoms ( $n1 - n2 = -6.453$ ,  $p = .013$ , 95% CI: -11.500 to -1.406). No differences were found in the rest of the scales.

The descriptive statistics and the main effects of the variables sex and group can be seen in Table 2.

#### *Age at Placement*

To study Hypothesis c, we categorized the minor's age at placement into three groups (0-12 months, 13-36 months, and more than 37 months). The differences in the questionnaire scores as a function of age group were analyzed with unifactorial ANOVA for independent data. After the application conditions of the model had been verified, we found significant differences in the scale of attentional problems,  $F(3,91) = 4.766$ ,  $p = .004$ , between the nonadopted minors, the adopted minors between 0 and 12 months, and the minors adopted after 3 years of age. Tukey's HSD contrasts indicate that the difference of means of the older adopted minors with regard to the younger adopted minors was 14.968 points ( $p = .004$ , 95% CI = 3.78 to 26.15), and of 10.136 ( $p = .028$ , 95% CI = 0.78 to 19.50) with regard to the nonadopted minors; that is, minors adopted after 3 years of age have more attentional problems than their nonadopted counterparts and than minors who were adopted at earlier ages. No significant differences were found in the remaining scales of the BASC.

#### *Institutionalization*

For Hypothesis d, referring to the effect of the time spent in institutions, we carried out linear regression models. In the initial model, in addition to the time spent in institutions

Table 2  
*Means and Standard Deviations of the Dependent Variables by Sex and Group*

BASC: questionnaire for parents	Group		Sex	
	Total nonadopted ( <i>n</i> = 44)	Total adopted ( <i>n</i> = 52)	Male ( <i>n</i> = 32)	Female ( <i>n</i> = 64)
	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )
Aggressiveness	52.00 (11.24)	49.38 (9.94)	<b>53.69 (11.45)*</b>	<b>49.03 (9.85)*</b>
Hyperactivity	47.66 (10.07)	49.48 (12.00)	49.81 (10.75)	48.06 (11.36)
Behavior problems	51.64 (9.97)	51.75 (14.41)	<b>55.91 (11.92)*</b>	<b>49.59 (12.35)*</b>
Attentional problems	48.05 (8.37)	50.81 (13.02)	52.06 (11.58)	48.28 (10.87)
Atypicality	46.07 (9.40)	45.60 (11.58)	48.63 (11.99)	44.41 (9.60)
Depression	49.64 (10.81)	50.19 (13.28)	<b>53.91 (13.37)*</b>	<b>47.95 (11.085)*</b>
Anxiety	46.43 (11.04)	45.69 (10.55)	47.91 (11.80)	45.09 (10.11)
Withdrawal	51.05 (9.16)	53.25 (12.17)	50.94 (11.62)	52.89 (10.55)
Somatization	<b>46.61 (9.98)*</b>	<b>42.42 (7.80)*</b>	44.69 (10.59)	44.17 (8.28)
Adaptability	<b>49.36 (8.56)*</b>	<b>45.29 (14.23)*</b>	44.69 (13.02)	48.39 (11.50)
Social skills	52.95 (9.14)	50.46 (10.99)	51.03 (10.04)	51.89 (10.36)
Leadership	52.70 (9.69)	51.15 (10.91)	52.06 (9.78)	51.77 (10.69)
Externalizing problems	50.80 (11.00)	50.17 (12.83)	53.44 (10.67)	48.97 (12.37)
Internalizing problems	47.23 (10.41)	45.52 (11.36)	49.13 (12.48)	44.89 (9.84)
Adaptive skills	52.11 (9.02)	48.92 (11.52)	49.50 (11.11)	50.83 (10.27)
Behavioral Symptoms Index	47.32 (11.03)	47.73 (12.98)	<b>51.84 (11.94)*</b>	<b>45.39 (11.63)*</b>
BASC: self-report	( <i>n</i> = 23)	( <i>n</i> = 24)	( <i>n</i> = 12)	( <i>n</i> = 35)
Negative attitude to school	53.22 (10.47)	51.13 (5.03)	53.33 (11.08)	51.74 (7.02)
Negative attitude to teachers	49.26 (7.77)	47.50 (7.13)	52.50 (8.27)	46.94 (6.66)
Atypicality	46.43 (7.96)	49.46 (9.32)	50.25 (9.84)	47.20 (8.32)
Locus of control	46.43 (8.21)	48.29 (7.87)	51.67 (8.21)	45.91 (7.50)
Social stress	45.83 (7.95)	48.96 (8.90)	49.17 (9.43)	46.83 (8.23)
Anxiety	47.70 (11.16)	45.29 (9.70)	53.00 (9.28)	44.23 (9.91)
Depression	49.00 (11.04)	49.00 (6.24)	54.17 (13.49)	47.23 (5.81)
Sense of inadequacy	47.35 (8.41)	50.54 (7.46)	52.50 (8.35)	47.77 (7.65)
Interpersonal relations	52.09 (5.21)	51.67 (6.61)	50.00 (5.00)	52.51 (6.12)
Relations with parents	54.57 (4.47)	53.67 (6.20)	53.67 (5.34)	54.26 (5.46)
Self-esteem	52.26 (9.91)	53.33 (4.07)	48.42 (13.29)	54.31 (2.98)
Self-reliance	50.35 (10.58)	47.71 (11.16)	42.83 (11.75)	51.11 (9.82)
-Clinical maladjustment	46.74 (8.74)	47.88 (8.94)	51.83 (9.28)	45.77 (8.15)
-Academic maladjustment	51.43 (8.94)	49.08 (6.57)	54.58 (10.20)	48.74 (6.34)
- Personal maladjustment	53.00 (7.11)	52.04 (5.65)	48.25 (7.68)	53.97 (5.18)
Emotional Symptoms Index	47.43 (9.16)	48.13 (6.68)	52.58 (9.58)	46.14 (6.64)

\* $p \leq .05$ .

measured in months, we included the variables age at placement and time living with the adoptive family. Except for the scores in Self-esteem ( $r^2 = .205$ ,  $p = .030$ ,  $b = -0.77$ ), these variables had significant effect, and were therefore excluded from the definitive analyses. The dependent variables were, in all cases, the BASC scores.

The data about the effect of the predictor variable time spent institutionalized are shown in Table 3. This table shows the regression parameters (a, b) and their confidence

intervals, as well as the significance of the normality tests of the standardized residuals. As noted by Navarro and Domènech (2008), as these are not sequential data, it is not necessary to verify the assumption of independence (Durvin-Watson test). The assumptions of linearity and homocedasticity were verified by analyzing the externally studentized residuals as a function of the foreseen values and of the predictor variable, and we observed no violations of linearity or homogeneity.

There were significant differences in the criterion variable as a function of whether or not the minor was institutionalized before being adopted in the Self-reliance scale, the difference of means was 7.955 (95% CI = 2.882 to 13.027), with higher scores in the noninstitutionalized minors.

*Country of Origin*

Due to the diversity of countries, they were grouped as follows: Asia (China and Nepal), Eastern Europe (Russia, the Ukraine, and Bulgaria), Africa (Ethiopia), and Central and South America (Colombia, Guatemala, Haiti, and Peru). We also included the nonadopted group of minors in the ANOVA.

As seen in Table 4, the application conditions were confirmed, and significant group differences were found in the Attentional problems scale,  $F(4,91) = 3.654, p = .008, \eta^2 = .138$ . By means of Tukey's HSD contrasts, we found differences between the minors from Asia and the minors from Eastern Europe. The mean in Attentional problems of the minors from Eastern Europe was higher than that of the remaining groups, which indicates that these minors have more attentional problems; the difference with the minors from Asia and with the nonadopted minors was significant ( $p = .007$  and  $.022$ , respectively). The difference with the rest of the groups (Africa and Central and South America) was nonsignificant.

We also found significant differences in the scale of Adaptability,  $F(4,91) = 4.304, p = .003, \eta^2 = .159$ , after applying the conservative F, because it did not meet the assumption of homocedasticity. The difference of means between the nonadopted minors and the adopted minors from Eastern Europe was 13.435 ( $p = .002$ ), and the difference of means between the adopted minors from Asia and the adopted minors from Eastern Europe was 11.886 ( $p = .017$ ), which indicates that the minors from Eastern Europe had more difficulties to adapt than the rest of the children of the sample.

Differences were found between the groups in the Adaptive skills scale,  $F(4,91) = 3.588, p = .009, \eta^2 = 0.136$ . These differences refer to the comparison of the group of nonadopted minors—with a difference of 10.756 ( $p = .006$ )—, the minors from Asia—a difference of means of 10.272 ( $p = .020$ )—, and the group of adopted minors from Eastern Europe. These data indicate that, as with the parameter Adaptability, the minors from Eastern Europe have more difficulties to develop their adaptive skills than the nonadopted minors or the minors from Asia.

In the self-report analysis, we excluded the African group, as there was only one participant in this age range. There were quasi-significant differences among the remaining groups in the Interpersonal relations scale,  $F(1,42) = 3.123, p = .08, \eta^2 = 0.182$ , after we applied the conservative F, as the assumption of equality of variances

Table 3  
*Effect of Time spent in Institutions on Symptomatology*

	a (95% CI) Constant	b (95% CI) Slope	r <sup>2</sup>	F (p)	Durbin – Watson statistic	Standardized Shapiro- Wilk residuals
Behavior problems	43.972 (36.263 ÷ 51.680)	.491 (.105 ÷ .877)	.127	6.573 (.014)	1.527	.047
Attentional problems	4.082 (33.871 ÷ 46.293)	.626 (.315 ÷ .937)	.268	16.447 (<.001)	1.436	.305
Atypicality	37.339 (31.232 ÷ 43.446)	.490 (.184 ÷ .795)	.188	10.406 (.002)	1.835	.003
Depression	42.056 (34.866 ÷ 49.246)	.482 (.123 ÷ .842)	.139	7.292 (.010)	2.108	.045
Adaptability	57.547 (49.985 ÷ 65.109)	-.684 (-1.062 ÷ -.305)	.227	13.238 (.001)	2.130	.262
Social skills	56.414 (5.303 ÷ 62.524)	-.330 (-.636 ÷ -.024)	.095	4.728 (.035)	2.269	.197
Leadership	57.624 (51.822 ÷ 63.427)	-.361 (-.0651 ÷ -.0711)	.122	6.270 (.016)	2.261	.747
Externalizing problems	43.828 (36.687 ÷ 5.969)	.405 (.048 ÷ .763)	.104	5.218 (.027)	1.985	.056
Internalizing problems	4.157 (34.066 ÷ 46.248)	.312 (.007 ÷ .617)	.086	4.243 (.045)	1.844	.325
Adaptive skills	58.800 (52.968 ÷ 64.632)	-.548 (-.840 ÷ -.257)	.241	14.323 (<.001)	2.552	.202
Behavioral Symptoms Index	38.391 (31.677 ÷ 45.104)	.565 (.229 ÷ .901)	.203	11.453 (.001)	1.812	.695
Negative attitude to school	55.569 (5.758 ÷ 6.380)	-.218 (-.430 ÷ -.007)	.188	4.630 (.440)	1.431	.334
Sense of inadequacy	44.325 (38.658 ÷ 49.992)	.286 (0.037 ÷ .535)	.223	5.735 (.027)	1.397	.251

Table 4  
*Country of Origin*

Variables			Difference of means (Tukey's HSD )	Significance
Attentional problems	Eastern Europe	Nonadopted	10.026	.022
		Asia	12.108	.007
		South America	4.071	.908
		Africa	6.071	.896
Adaptability	Eastern Europe	Nonadopted	-13.435	.002
		Asia	-11.886	.017
		South America	-13.696	.058
		Africa	-18.738	.079
Global-Adaptive Skills	Eastern Europe	Nonadopted	-10.756	.006
		Asia	-10.272	.020
		South America	-8.768	.284
		Africa	-15.310	.122
Interpersonal relations	Eastern Europe	Nonadopted	-5.687	.181
		Asia	-8.171	.036
		South America	-2.350	.922

was not met. Tukey's HSD contrast detected differences between the groups from Asia and Eastern Europe with a difference of 8.171 ( $p = .036$ ), suggesting that interpersonal relations are significantly more adequate in the minors from Asia than in those from Eastern Europe.

The rest of the scales, both from the questionnaire for parents and the self-report, revealed no significant differences.

### Discussion

Firstly, we wish to clarify that the differences in the family characteristics of the groups of adopted and nonadopted minors, as well as the type of family and the civil status, can be explained by the requirements of the minors' countries of origin, in which common-law couples are not accepted as adopters. Consequently, as reflected in the study, and in accordance with similar works, the adopter parents are legally married heterosexual families, or single-parent adopters (Giménez-Salinas, Luque, Muzelle, Rossell, & Tamayo, 1998).

On the basis of the results found herein, the proposed hypotheses are partially confirmed:

As a function of the group and the minor's sex, there was significant interaction in the scale of Adaptive skills among the males, suggesting that the nonadopted males show better adaptive skills than the adopted males; however, this difference was not significant for the females. We found significant differences between the adopted and nonadopted children only in the Somatization scale, with the nonadopted

minors obtaining higher scores than the adopted minors, and quasi-significant differences for the Adaptability scale, with the nonadopted minors obtaining higher scores. As a function of the minor's sex, and confirming the international investigations reviewed in the introduction, we found more problems among the males in: aggressiveness, behavior problems, depression, and the global index of behavioral symptoms; however, no significant differences were found in the remaining BASC scales.

In contrast to the reports of diverse authors, stating that age at placement (over 3 years) is related to a higher probability of unfavorable experiences (Barth et al., 1988; Berry & Barth, 1989; Erich & Leung, 2002), in the present study, we only found differences in attentional problems. However, a notable fact is that the time spent in institutions seems to be related to diverse developmental areas: the onset of behavior problems, attentional problems, atypicality, depression, poorer adaptability, poorer social skills, less leadership capacity, more externalized and internalized problems, and, in general, poorer adaptive skills, as well as more feelings of inadequacy, thus confirming the unfavorable effects of institutionalization found in other international studies (Rutter et al., 1998).

The minors from Eastern Europe, whose proportion of children is higher than that of the other groups, present higher indexes in the scales of attentional problems, adaptive skills, and interpersonal relations, in comparison to the minors from other countries or to nonadopted minors, and this also coincides with other international investigations (Stams et al., 2000; Verhulst et al., 1990). The differences in

the pre- and postnatal conditions in the countries of origin and the effects of alcohol and tobacco on the fetus could be a working hypothesis for future investigations. The minors from Asia, Africa, and Central and South America present a similar adaptation to that of nonadopted minors, and there were no differences among them in any of the scales of the questionnaire.

Despite the above-mentioned differences, it is noteworthy that the groups of adopted and nonadopted minors generally do not differ significantly in the aspects assessed, except for the Somatization scale, in which the nonadopted minors were more affected, and in the Adaptive skills scale, where the nonadopted males obtained higher scores. It is logical to think that the minors who underwent adverse experiences at the start of their lives would have some kind of problem in the future, compared to minors who did not suffer these situations. However, in this study, these difficulties were not observed. On the basis of these data and that from diverse investigations, we could infer the existence of a series of factors that counterbalance the negative effects, strengthening the resilience of the adopted minors (Rutter, 1985, 1987, 1990; Scroggs & Heitfield, 2001; Welsh et al., 2007; Werner, 1993, 2000).

This study has attempted to examine the current situation of these minors in Spain. From this investigation, we can see that we still lack knowledge about the factors that mediate in this process and how they interact to strengthen the resilience of minors from international adoption.

The results should be interpreted with caution due to diverse limitations of the study. The first limitation is that the sampling was incidental and the control subjects were not completely paired as a function of sex and age with the experimental subjects, which favours bias in the results.

The second limitation of the study is that the results could not be compared with a sample of adopted minors from the national sphere. It would be useful to study this group, because these children have undergone similar adverse situations to those from international adoption, despite the fact that they do not suffer the cultural or language shock that internationally adopted minors must undergo.

The third limitation is the scarce information available to the families about their children prior to adoption, and it is difficult to determine the experiences undergone by these minors. We can infer that the more time they spend in institutions, the more problems they will experience in the future, but we could not collect information of or take into consideration other adverse experiences prior to adoption.

## References

- Amorós, P. (1987) *La adopción y el acogimiento familiar. Una perspectiva socio-educativa* [Adoption and foster care. A socio-educational perspective]. Madrid: Narcea.
- Andresen, I. L. K. (1992). Behavioral and school adjustment of 12-13 year old internationally adopted children in Norway: A research note. *Journal of Child Psychology and Psychiatry*, 33, 427-439. doi:10.1111/j.1469-7610.1992.tb00877.x
- Barth, R., Berry, M., Yoshikami, R., Goodfield, R., & Carson. (1988): Predicting adoption disruption. *Social Work*, 33, 227-233.
- Beckett, C., Maughan, B., Rutter, M., Castle, J., Colvert, E., Groothues, C.,... Sonuga-Barke, E. J. S. (2006). Do the effects of early severe deprivation on cognition persist into early adolescence? Findings from the English and Romanian Adoptees Study. *Child Development*, 77, 696-711. doi:10.1111/j.1467-8624.2006.00898.x
- Berástegui, A. (2005). *La adaptación familiar en adopción internacional* [Family adaptation in international adoption]. Madrid: Consejo Económico y Social.
- Bernedo, I. M., Fuentes, M. J., & Fernández, M. (2005). Percepción del grado de conflicto en familias adoptivas y no adoptivas [Conflict grade perception within adoptive and non-adoptive families]. *Psicothema*, 17, 370-374.
- Bernedo, I. M., Fuentes, M. J., Fernández, M., & Bersabé, R. (2007). Percepción de las estrategias de socialización parentales en familias adoptivas y no adoptivas [Perception of parental socialization strategies in adoptive and non-adoptive families]. *Psicothema*, 19, 597-602.
- Berry, M., & Barth, R. (1989). Behavioral problems of children adopted when older. *Children and Youth Services Review*, 11, 221-238. doi:10.1016/0190-7409(89)90022-4
- Bimmel, N., Juffer, F., Van IJendoorn, M. H., & Bakermans-Kranenburg, M. J. (2003). Problem behavior of internationally adopted adolescents: A review and meta-analysis. *Harvard Review of Psychiatry*, 11, 64-78. doi:10.1080/10673220303955
- Brodzinsky, D. M. (1990). A stress and coping model of adoption adjustment. In D. M. Brodzinsky, & M. D. Schechter (Eds.), *The psychology of adoption* (pp. 3-24). New York, NY: Oxford University Press.
- Brodzinsky, D. M. (1993). Long-term outcomes in adoption. *Future of Children*, 3, 153-166. doi:10.2307/1602410
- Brodzinsky, D. M., Radice, C., Huffman, L., & Merkler, K. (1987). Prevalence of clinically significant symptomatology in a nonclinical sample of adopted and nonadopted children. *Journal of Clinical Child Psychology*, 16, 350-356. doi:10.1207/s15374424jccp1604\_9
- Brodzinsky, D. M., Singer, L. M., & Braff, A. M. (1984). Children's understanding of adoption. *Child Development*, 55, 869-878. doi:10.2307/1130138
- Chisholm, K. (1998). A three year follow-up of attachment and indiscriminate friendliness in children adopted from Romanian orphanages. *Child Development*, 69, 1092-1106. doi:10.2307/1132364
- Erich, S., & Leung, P. (2002). The impact of previous type of abuse and sibling adoption upon adoptive families. *Child Abuse and Neglect*, 26, 1045-1058. doi:10.1016/S0145-2134(02)00374-5
- Fernández, M. (2004). La investigación internacional sobre adopción. Análisis, conclusiones y perspectivas de futuro [International research on adoption. Analysis, conclusions and perspectives]. *Anuario de Psicología Jurídica*, 14, 39-66.

- Giménez-Salinas, S., Luque, M. E., Muzelle, S., Rossell, M., & Tamayo, N. (1998). *L'adopció: un estudi comparat* [Adoption: a comparative study]. Barcelona: Generalitat de Catalunya.
- González-Marqués, J., Fernández-Guinea S., Pérez-Hernández, E., Pereña, J., & Santamaría, P. (2004). *Sistema de evaluación de la conducta en niños y adolescentes: BASC* [Behavior Assessment System for Children: BASC]. Madrid: TEA.
- Hjern, A., Lindblad, F., & Vinnerljung, B. (2002). Suicide, psychiatric illness, and social maladjustment in intercountry adoptees in Sweden: A cohort study. *Lancet*, *360*, 443-448. doi:10.1016/S0140-6736(02)09674-5
- Juffer, F., & Van IJzendoorn, M. H. (2005). Behavior problems and mental health referrals of international adoptees: A meta-analysis. *Journal of the American Medical Association*, *293*, 2501-2515. doi:10.1001/jama.293.20.2501
- Juffer, F., & Van IJzendoorn, M. H. (2007). Adoptees do not lack self-esteem: A meta-analysis of studies on self-esteem of transracial, international, and domestic adoptees. *Psychological Bulletin*, *133*, 1067-1083. doi:10.1037/0033-2909.133.6.1067
- Kirschner, D., & Nagle, L. S. (1995). Antisocial behaviour in adoptees: Patterns and dynamics. *Child and Adolescent Social Work*, *5*, 300-314. doi:10.1007/BF00755393
- Marcovitch, S., Goldberg, S., Gold, A., Washington, J., Wasson, C., Krekewich, K., & Handley-Derry, M. (1997). Determinants of behavioral problems in Romanian children adopted in Ontario. *International Journal of Behavioral Development*, *20*, 17-31. doi:10.1080/016502597385397
- Miller, L., Chan, W., Tirella, L., & Perrin, E. (2009). Outcomes of children adopted from Eastern Europe. *International Journal of Behavioral Development*, *33*, 289-298. doi:10.1177/0165025408098026
- Ministerio de Educación, Política Social y Deporte. (2008). *Estadísticas de adopción internacional* [International adoption statistics]. Retrieved from <http://www.mepsyd.es/>
- Moliner, M., & Gil, J. M. (2002). Estudios sobre la adaptación de los menores en la adopción internacional [Studies on the adaptation of children in intercountry adoption]. *Revista de Psicología General y Aplicada*, *55*, 603-623.
- Morison, S. J., Ames, E. W., & Chisholm, K. (1995). The development of children adopted from Romanian orphanages. *Merrill-Palmer Quarterly: Journal of Developmental Psychology*, *41*, 411-430.
- Navarro, J. B., & Domènech, J. M. (2008). *Modelos de regresión lineal* [Linear regression models]. Bellaterra: Laboratori d'Estadística Aplicada.
- Orjales, I. (1997). Adaptación familiar, desarrollo intelectual y trastornos psicopatológicos en los niños de adopción internacional [Family adaptation, cognitive development and psychopathology in children from international adoption]. *Psicología Educativa*, *3*, 189-201.
- Reynolds, C. R., & Kamphaus, R. W. (1992). *Behavior Assessment System for Children manual*. Circle Pines, MN: American Guidance Service [Spanish adaptation: TEA, 2004].
- Rutter, M. (1985). Family and school influences on cognitive development. *Journal of Child Psychology and Psychiatry*, *26*, 683-704. doi:10.1111/j.1469-7610.1985.tb00584.x
- Rutter, M. (1987). Psychosocial resilience and protective mechanisms. *American Journal of Orthopsychiatry*, *57*, 316-331. doi:10.1111/j.1939-0025.1987.tb03541.x
- Rutter, M. (1990). Psychosocial resilience and protective mechanisms. In J. Rolf, A. S. Masten, D. Cicchetti, K. H. Nuechterlein, & S. Weintraub (Eds.), *Risk and protective factors in the development of psychopathology* (pp. 181-214). New York, NY: Cambridge University Press.
- Rutter, M., Andersen-Wood, L., Becket, C., Brendekamp, D., Castle, J., Dunn, J., ... White, A. (1998). Developmental catch-up and deficit, following adoption after severe global early privation. *Journal of Child Psychology and Psychiatry*, *39*, 465-476. doi:10.1017/S0021963098002236
- Scroggs, P. H., & Heitfield, H. (2001). International adopters and their children: Birth culture ties. *Gender Issues*, *19*, 3-30. doi:10.1007/s12147-001-1005-6
- Selman, P. (2002). Intercountry adoption in the new millennium: The 'quiet migration' revisited. *Population Research and Policy Review* *21*, 205-225. doi:10.1023/A:1019583625626
- Stams, G. J. J. M., Juffer, F., Rispens, J., & Hoksbergen, R. A. C. (2000). The development and adjustment of 7-year-old children adopted in infancy. *Journal of Child Psychology and Psychiatry*, *41*, 1025-1037. doi:10.1111/1469-7610.00690
- Tieman, W., Van der Ende, J., & Verhulst, F. C. (2005). Psychiatric disorders in young adult intercountry adoptees: An epidemiological study. *American Journal of Psychiatry*, *162*, 592-598. doi:10.1176/appi.ajp.162.3.592
- Verhulst, F. C., Althaus, M., & Versluis-den Bieman, H. J. (1990). Problem behavior in international adoptees: I. An epidemiological study. *Journal of the American Academy of Child and Adolescent Psychiatry*, *29*, 94-103. doi:10.1097/00004583-199001000-00015
- Welsh J. A., Viana A. G., Petrill S. A., & Mathias, M. D. (2007). Interventions for internationally adopted children and families: A review of the literature. *Child and Adolescent Social Work Journal*, *24*, 285-311. doi:10.1007/s10560-007-0085-x
- Werner, E. E. (1993). Risk, resilience, and recovery: Perspectives from the Kauai longitudinal study. *Development and Psychopathology*, *5*, 503-515. doi:10.1017/S095457940000612X
- Werner, E. E. (2000). Protective factors and individual resilience. In J. P. Shonkoff, & S. J. Meisels (Eds.), *Handbook of early childhood intervention* (pp. 115-132). New York, NY: Cambridge University Press.
- Wierzbicki, M. (1993). Psychological adjustment of adoptees: A meta-analysis. *Journal of Clinical Child Psychology*, *22*, 447-454. doi:10.1207/s15374424jccp2204\_5

Received July 9, 2009

Revision received February 8, 2010

Accepted March 24, 2010

## ARTICLE 2

**Barcons, N.**, Abrines, N., Brun, C., Sartini, C.,  
Fumadó, V., Marre, D. (in press). Attachment and  
adaptive skills in children of international adoption.  
*Child and Family Social Work.*





# Attachment and adaptive skills in children of international adoption

Natàlia Barcons\*, Neus Abrines\*, Carme Brun\*, Claudio Sartini§, Victoria Fumadó‡ and Diana Marre†

\*Department of Clinical and Health Psychology, Universitat Autònoma de Barcelona, †Department of Social and Cultural Anthropology, Universitat Autònoma de Barcelona, Bellaterra, ‡Paediatric Service, Hospital Sant Joan de Déu, Esplugues, and §CIBER Epidemiología y Salud Pública, Madrid, Spain

## Correspondence:

Natalia Barcons,  
Departament de Psicologia  
Clínica i de la Salut, Edifici B,  
Universitat Autònoma de Barcelona,  
Bellaterra, Barcelona 08193,  
Spain  
E-mail: nataliabarcons@gmail.com

**Keywords:** adaptive skills,  
attachment, children, international  
adoption, resilience

**Accepted for publication:** April 2012

## ABSTRACT

The attachment pattern of a sample of 168 internationally adopted children was explored in this study using the semi-structured *Friends and Family Interview*. The pattern was analysed in relation to the development of adaptive skills as an expression of the children's resilience.

The secure attachment pattern rates were slightly lower and the insecure attachment patterns were considerably higher than those of normative samples from the previous studies. The children from Eastern Europe demonstrated a more insecure attachment pattern (odds ratio [OR] = 2.46; confidence interval [CI] = 1.23–3.94), and their scores on the adaptive skills scales were lower than the scores of children from other countries (OR = 2.62; 95% CI = 1.02–6.72). These results help to identify the groups at risk of failing to develop secure attachment patterns and appropriate adaptive skills, and should provide valuable information for designing effective interventions.

## INTRODUCTION

International and national research on international adoption provides relevant data on the development and the psycho-emotional and social difficulties faced by some of the children who experience this process (Hjern *et al.* 2002; Tieman *et al.* 2005). Despite these difficulties, however, the research also indicates that the psychosocial adjustment of most of these children is similar to that of their non-adopted peers (Bimmel *et al.* 2003; Juffer & van IJzendoorn 2005, 2007; Barcons *et al.* 2011).

Children of international adoption have experienced adverse pre- and post-adoptive experiences, which may affect their adaptation and their relationships with their parents and peers. They deal with such unfavourable factors such as inappropriate prenatal, perinatal and post-natal care; inadequate medical services; early maternal separation; psychological deprivation; neglect; abuse; and malnutrition whether in

poor families or in orphanages (Rutter *et al.* 1998). Approximately 80% of all internationally adopted children are placed in some type of institution in their first year of life (Johnson 2002), and the standard of these institutions is a factor that may exert a profound influence on the developmental potential of these children (Odenstad *et al.* 2008). The effects of institutionalization on a child's development, including the effect on attachment relationships, have been widely reported (Gunnar *et al.* 2000; Vorria *et al.* 2003; Howe 2005).

The pre-adoption context varies according to the country of origin, and researchers have found differences in medical and developmental problems as a function of the country of origin of the adopted minor (Welsh *et al.* 2007). The pre-adoption living conditions may be a relevant risk factor in explaining differences in adaptation; children from Eastern European countries have often experienced severe deprivation (Morison *et al.* 1995; Smyke *et al.* 2007)

Attachment and adaptive skills in children N Barcons *et al.*

and may show more problems with attachment than do children adopted from other continents (Van den Dries *et al.* 2009). Over 50% of institutionalized children in Eastern Europe are low-birthweight infants, born prematurely and some have been exposed to alcohol in the uterus (Johnson 2000). The long-term impact of such exposure, its effects on the fetus and the prevalence of these problems among institutionalized minors is more pronounced in Eastern Europe than in other countries (Miller *et al.* 2009). In addition, these children may encounter difficulties with adjustment to the adoptive family, adaptation to a new culture and social environment, and, in many cases, the need to learn a new language in order to communicate with others. More than 15 years of transnational adoption in Spain have highlighted the need to implement post-adoptive physical health, mental-health and educational services for adopted minors and their families.

Qualitative data from various research studies (MEC R + D SEJ 2006–2009 15286 *International Adoption: social and familial inclusion of the internationally adopted children. Interdisciplinary and comparative perspectives*) show significant differences in the post-adoption processes, and therefore, in the familial and social integration of transnationally adopted children. These differences report high-risk processes in developing the adoptive family attachment that can lead even to an adoption breakdown.

These difficulties have not been officially measured or informed but several studies report adoption disruption rates between 2% and 20%, depending on the research and the samples (Berástegui 2003; Stryker 2010). Berástegui (2003) found the disruption rate between 1997 and 1999 in Spain to be 1.5%, growing to 6.7% when the age at adoption was 6 or older.

Research on international adoption highlights a variety of mechanisms that may explain the different trajectories in subsequent adaptability to adverse situations that give rise to resilience in children (Welsh *et al.* 2007). These *protective* mechanisms include such individual factors as cognitive ability, temperament, locus of control and self-esteem; such pre-adoptive factors as the different conditions in their country of origin, age at the time of adoption, medical care and attachment relationships established with their caregivers; and such post-adoptive factors as attachment relationships with the adoptive family and family parenting styles. The strength of each of these factors in reinforcing the resilience of adopted children is as yet unknown (Barcons *et al.* 2011).

Research on international adoption underlines the differences found in various problems that these children can encounter compared with their unadopted peers, including a higher proportion of externalizing disorders (hyperactivity and conduct disorders) and internalizing disorders. Most of the internationally adopted children show a positive adaptation, however. In any process of adoption, risk factors interact with the protective factors, and it is this interaction in which protective factors are rescued and enhanced (Rutter 1985, 1987, 1990; Werner 1993, 2000), and can mitigate the effects of adverse experiences, allowing the child to cope effectively with stress and adversity and emerge stronger from these experiences. There is empirical evidence of delays – primarily modest delays – in physical growth, attachment, school achievement and behaviour problems among adoptees. Yet, a massive catch-up and gains in all developmental domains indicates that adoption, as the alternative to institutional care, is a successful intervention (Juffer & van IJzendoorn 2009) that engenders normative levels of self-esteem in adopted children (Juffer & van IJzendoorn 2007). The term *resilience* refers to a relatively positive psychological adaptation despite the suffering of risk experiences, which would be expected to entail significant negative consequences (Rutter 2007).

One of the factors that the literature describes as a mitigating effect of these adverse experiences is the secure attachment relationship between child and caregiver (Cassidy & Shaver 1999; Werner 2000). Conceptually and based on the attachment theory of John Bowlby (Bowlby 1969/1982, 1973, 1980), attachment describes the bond between the child and the primary caregiver. Infants learn from birth to expect a certain reaction from their caregivers and to adapt their behaviour in ways that are most likely to facilitate the caregiver's appropriate and effective response, whether the caregiver is the biological parent, adoptive parent, relative or institutional caregivers. Three attachment patterns were identified, based on Mary Ainsworth's research with the *strange situation* procedure: secure, insecure-avoidant and insecure-ambivalent (Ainsworth *et al.* 1978). Main & Solomon (1990) extended Ainsworth's work by identifying a fourth category: disorganized attachment pattern. According to van IJzendoorn *et al.*'s (1999) meta-analysis, attachment patterns in normative samples are distributed as follows: 62% secure attachment pattern, 15% insecure-avoidant pattern, 9% insecure-ambivalent pattern and 15% disorganized attachment pattern.

The development of a secure attachment relationship is a complex process, and the literature suggests that experiences of institutionalization, abuse and neglect can affect cognitive processes, attachment relationships and, consequently, the children's relationships with peers and family (Van den Dries *et al.* 2009; Barcons *et al.* 2012). According to Bernedo *et al.*'s (2007) study, adoptive families perceive themselves as more affectionate and communicative than non-adoptive families do, a factor that can promote a secure attachment relationship for the child. There is a growing body of evidence, in fact, that the quality of parent-child relationships in adoptive families promotes healthy development for adoptees that may protect against risk factors (Whitten & Weaver 2010).

Juffer *et al.*'s (2004) investigation elucidates the fact that, in contrast to the abundant literature dealing with behaviour problems of adopted children, research on the personalities of adopted children are scarce. Two key aspects of the personality were explored in that research: ego resiliency and ego control, as defined by Block & Block (1980). Ego resiliency refers to the tendency to respond flexibly to situations involving a change, especially in situations that can lead to frustration and stress; ego control refers to the tendency to hold or express emotional and motivational impulses. The Juffer *et al.*'s research was the first to examine these factors in adopted children, together with their relationship to behavioural problems.

Inter-country adoption involves approximately 40 000 children per year. Spain is the second highest receiving country in the world; it experienced an increase of 273% in children of inter-country adoption between 1998 and 2004. This phenomenon is due mainly to changes in social and family structures; the postponement of motherhood, which prioritizes paid employment; and the lack of social support to conciliate private and working life. In 2007, Spain became the country with the lowest birth rate index per woman in Europe: 1.39 children per woman (Marre 2009). Since 2004, however, the numbers have undergone a significant decline because of changes in legislation from the countries of origin (Selman 2009).

The purpose of this study was to explore differences in the adaptive abilities and attachment patterns of a sample of 168 children aged 7–11, who had been adopted from various countries by Spanish parents. The goal was to identify the needs of adopted children and their families in relation to the services that they may require.

The children were interviewed and their narratives coded in order to obtain their attachment patterns. The proportion of children scoring a secure attachment pattern was expected to be lower than in normative samples because of the difficulties faced by adoptees in their development process. Subsequently, we explored the effect of the children's attachment pattern on their development of adaptive skills – an indication of the resilience of children – considering the factors that could influence this relationship: gender of the child, adoption age, country of origin and family socio-economic status. It was hypothesized that children with secure attachments, compared with children without secure attachment patterns, would attain higher scores on the global scale of adaptive skills as assessed by the Behavioural Assessment System for Children (BASC; Reynolds & Kamphaus 1992). This global scale comprises three subscales:

- *Adaptability* – the ability to adapt to changes in routines in a flexible way, changing tasks and sharing
- *Social skills* – which include the interpersonal aspects of social adaptation, which research associates significantly to the resilience of the subject (Collishaw *et al.* 2007)
- *Leadership skills* – which are related to good adaptation to community and school

## METHOD

### Participants

Participants were recruited with the collaboration of the Paediatric Department of Hospital de Sant Joan de Déu in Barcelona. Its database contained 4000 families with internationally adopted children, from which 1700 families with children in the required age range – 7–11 years of age – were invited to participate. A minimum of 2 years with the adoptive family was required as an inclusion criterion. Almost 10% of the families confirmed their interest to participate in the study, yielding a final sample of 168 adoptive parents and 168 children of international adoption, 46.4% (78) of whom were female and 53.6% (90) of whom were male.

The average age of children in the sample is 8.33 years (standard deviation [SD] = 1.269) and mean age at the time of the adoption is 28.99 months (SD = 20.557; range = 1–103 months). Given the diversity in the age of adoption, three groups were established: 21.3% of children were adopted between 0 and 12

Attachment and adaptive skills in children N Barcons *et al.*

1	months of age, 50.6% were adopted between 13 and		
2	36 months, and 28.1% were older than 36 months at		
3	the time of adoption.		
4	The 168 children were from four continents and 17		
5	countries:		
6	• 48 (28.6%) from Asia (43 girls – 35 from China, 5	<b>Instruments</b>	53
7	from Nepal and 3 from India; and 5 boys – 1 from		54
8	China, 2 from Nepal and 2 from India)	<i>Socio-demographic questionnaire and details</i>	55
9	• 75 (44.6%) from Eastern Europe (29 girls – 21	<i>of adoption</i>	56
10	from Russia, 6 from Ukraine and 2 from Bulgaria;	This is an <i>ad hoc</i> questionnaire developed for this	57
11	and 46 boys – 34 from Russia, 10 from Ukraine and	research and completed by parents.	58
12	2 from Bulgaria)		59
13	• 20 (11.9%) from Central and South America	<i>The Hollingshead's four-factor index of social</i>	60
14	(9 girls – 6 from Colombia, 1 from Guatemala, 1	<i>status</i>	61
15	from Mexico and 1 from Haiti; and 11 boys – 9	The Hollingshead's four-factor index of social status	62
16	from Colombia, 1 from El Salvador and 1 from	(Hollingshead 1975) is used for the evaluation of	63
17	Peru)	family socio-economic status.	64
18	• 25 (14.9%) from Africa (9 girls – 7 from Ethiopia,	<i>Friends and family interview</i>	66
19	1 from Madagascar and 1 from Congo; and 16 boys	The friends and family interview (FFI; Steele & Steele	67
20	– 10 from Ethiopia, 1 from Guinea Bissau, 4 from	2005) is a semi-structured interview to assess the	68
21	Madagascar and 1 from Morocco).	child's attachment relationships. The children were	69
22	According to the Hollingshead index, 51.2% of	asked to talk about themselves and their relationships	70
23	participating families belonged to a medium-high	with family and close relatives, teachers and friends.	71
24	socio-economic level, 21.7% to a high level, 18.1%	The interviews are videotaped, transcribed and	72
25	to a medium level, 7.8% to a medium-low level	double coded.	73
26	and the remaining 1.2% to a low socio-economic	The FFI has eight dimensions, each one with its	74
27	level.	respective sub-dimensions. <i>Coherence</i> : truth, economy,	75
28	Although there were no such data available for	relation, manner and overall coherence; <i>Reflective</i>	76
29	10.1% of the population, 89.9% ( $n = 151$ ) of the	<i>Functioning</i> – developmental perspective, theory of	77
30	children had been institutionalized prior to their	mind (for mother, father, friend, sibling and teacher)	78
31	adoption. At the time of evaluation, 81.9% of the	and diversity of feelings (for self, mother, father,	79
32	children had lived with their adoptive family for more	friend, sibling and teacher); <i>Evidence of Secure Base</i> –	80
33	than 5 years.	father, mother and other significant figure; <i>Evidence of</i>	81
34	Families were asked for the duration and quality	<i>Self-esteem</i> – social and school competence; <i>Peer Rela-</i>	82
35	of the child's adaptation to the family. Adaptation is	<i>tions</i> – frequency and quality of contact; <i>Sibling Rela-</i>	83
36	a bidirectional process between the adopted child	<i>tions</i> – warmth, hostility and rivalry; <i>Anxieties and</i>	84
37	and the adoptive family, and for the purposes of this	<i>Defence</i> – idealization (self, mother and father), role	85
38	study, it is understood to be the time the child needs	reversal (mother and father), anger (mother and	86
39	to settle into the new family environment, to feel	father), derogation (self, mother and father) and adap-	87
40	secure and to establish confident relationships that	tive response; and <i>Differentiation of Parental Represen-</i>	88
41	can allow the child to develop in a psychologically	<i>tations</i> . The interview also comprises <i>non-verbal codes</i>	89
42	healthy way.	regarding fear/distress and frustration/anger and the	90
43	In this research, 68.9% of the families described	global attachment classification, which is the classifi-	91
44	the process as having lasted between 0 and 6	cation used in this research. The dimensions are	92
45	months; 12.8% said that the process took between 6	scored on a 4-point scale (1 = no evidence; 2 = mild	93
46	months and 1 year, 12.2% of the families reported	evidence; 3 = moderate evidence; 4 = marked evi-	94
47	that it took between 1 and 3 years, and the remain-	dence), according to the coding guidelines from the	95
48	ing 6.1% considered that the process took over 3	authors (Steele <i>et al.</i> 2009).	96
49	years. For 80.1% of the families, this adaptation	<i>Behavioural assessment system for children</i>	98
50	process was considered good or very good, 16.3%	The behavioural assessment system for children	99
51	described it as good but difficult, and 3.6% called it	(BASC; Reynolds & Kamphaus 1992), Spanish	100
52	difficult.		

14 adaptation (TEA 2004), is a multidimensional and multi-method questionnaire designed to collect information from parents or teachers; it is also used as a self-assessment measure for children. It assesses both positive (leadership, social skills, study skills, adaptability, interpersonal relationships, relationships with parents, self-esteem and self-confidence) and negative aspects (anxiety, aggression, attention problems, learning problems, hyperactivity, withdrawal, sensation seeking, externalizing problems, internalizing problems, depression, conduct problems, somatization, negative attitude towards school, negative attitude towards parents, locus of control, social stress and sense of incapability). The BASC is presented in a multiple-choice format with four response alternatives. The internal consistency of the questionnaire for parents is 0.72 and the test-retest reliability over 3 months is 0.88 (González-Marqués *et al.* 2004). The parents' questionnaire and the global adaptive skills dimension were employed in this study; adaptive skills summarize pro-social skills, organizational and other adaptive skills, and comprise three subscales.

**Adaptability.** Adaptability is one of several temperament variables that correlate with early school performance, which includes attention-distractibility and activity level. It assesses the ability to adapt to changes in routine and new teachers, changing from one task to another and sharing toys or belongings with other children.

**Social skills.** Social skills have long been recognized as a key factor in proper adaptation. In this questionnaire, the interpersonal aspects of social adaptation – admitting mistakes, congratulating others, offering help and starting conversations properly, for example – are considered.

**Leadership.** This subscale evaluates skills related to good adaptation to community and school. Some elements are closely related to social skills, and others relate to cognitive skills involved with problem solving, as having many ideas and suggestions and easily making good decisions.

#### Procedure

In collaboration with the Paediatric Service of *Hospital Sant Joan de Déu* in Barcelona, an invitation letter was sent to 1700 selected families with children between the ages of 7 and 11. Each family that accepted the invitation letter made an appointment at the hospital

clinic with one of the two psychologists who conducted the assessment. The children were interviewed and the parents completed the questionnaires, and the children were interviewed. All the families agreed to participate and signed an informed consent form. Following the investigation, a report was provided to each family, with the results of the questionnaires for their children and possible treatment recommendations.

The statistical program STATA 11 (Release Stata/MP 11.1 for Windows, College Station, TX, USA: Copyright 2009 StataCorp. LP) was used to obtain the results. Descriptive analyses were conducted in order to obtain the attachment rates of the sample by the children's gender and country of origin. A logistic regression was employed, adjusting the model for five possible confounding variables: country of origin, gender, age at adoption, family socio-economic status and time having lived with adoptive family.

The *t*-tests were conducted to analyse the mean differences in the adaptive skills scale as a function of the attachment pattern of the child. Logistic regression was used to explore the effect of the attachment pattern on scores below the cut-off ( $t \leq 40$ ) of the global scale of adaptive skills, introducing five covariates: country of origin, gender, socio-economic status, age of adoption and time having lived with the adoptive family.

## RESULTS

### Attachment pattern

We analysed the attachment pattern of the 168 internationally adopted children from the sample; 58.9% ( $n = 99$ ) obtained a secure attachment pattern, while the remaining 41.1% has an insecure attachment pattern. Differences by country of origin are statistically significant ( $P = 0.004$ ). The insecure attachment pattern of the sample is distributed into three categories: 25% ( $n = 42$ ) has an insecure-avoidant pattern, 13.1% ( $n = 22$ ) has an insecure-ambivalent pattern and 3% ( $n = 5$ ) has a disorganized attachment pattern.

The attachment pattern rate distribution by country of origin and gender of the child is reflected in Table 1.

To investigate the effect of country of origin on the attachment pattern, a logistic regression was conducted. The model was adjusted for four possible confounding variables: gender, age at adoption, family socio-economic status and time having lived with adoptive family.

Attachment and adaptive skills in children N Barcons *et al.***Table 1** Attachment pattern by country of origin and gender

Attachment pattern	Eastern Europe		Latin America		Asia		Africa	
	No.	%	No.	%	No.	%	No.	%
Gender: male								
Secure	18	39	7	64	3	60	11	69
Insecure-avoidant	16	35	4	36	1	20	3	19
Insecure-ambivalent	10	22	0	0	1	20	1	6
Disorganized	2	4	0	0	0	0	1	6
Total	46	100	11	100	5	100	16	100
Gender: female								
Secure	15	52	7	78	33	77	5	56
Insecure-avoidant	8	28	1	11	6	14	3	33
Insecure-ambivalent	5	17	1	11	3	7	1	11
Disorganized	1	3	0	0	1	2	0	0
Total	29	100	9	100	43	100	9	100
All children								
Secure	33	44	14	70	36	75	16	64
Insecure	42	56	6	30	12	25	9	36
Total	75	100	20	100	48	100	25	100

The results indicate that children from Eastern Europe are at more than twice the risk of having an insecure attachment pattern than are children from other continents (odds ratio [OR] = 2.46; 95% confidence interval [CI] = 1.23–4.93). No other variable introduced into the model had a significant effect, however.

### Attachment pattern and adaptive skills

To evaluate the influence of the attachment pattern on the global scale of adaptive skills, the children's mean scores on these scales were analysed.

The *t*-tests for independent samples showed significant differences in the adaptive skills on the global scale, mean difference = 4.440 ( $P = 0.009$ ). The results indicated that a secure attachment relationship facilitates the development of adaptive skills.

The global scale of adaptive skills was categorized by cut-off points of the questionnaire to obtain scores within the normal range ( $t > 40$ ) and scores from risk range ( $t \leq 40$ ).

Six covariates were introduced in the logistic regression model: attachment pattern, country of origin, gender, socio-economic status, age of adoption and time having lived with the adoptive family. The effect sizes are shown in Table 2.

The attachment pattern appeared not to influence the scores in the risk range of the global scale of adaptive skills. A sensitivity analysis was performed in order to determine if a small sample size ( $n = 156$ )

**Table 2** Effect size in the adaptive skills global scale in the logistic regression model

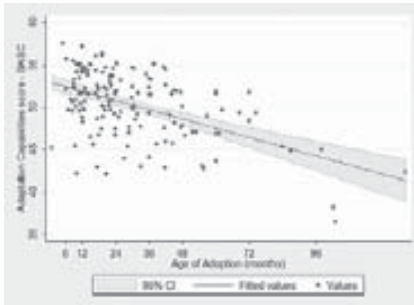
Covariate	OR	95% CI
Attachment pattern categories		
Secure*	1	
Insecure	2.03	(0.83–4.97)
Country of origin		
Non-Eastern Europe*	1	
Eastern Europe	2.62	(1.02–6.72)
Gender of the child		
Male*	1	
Female	2.4	(0.94–6.13)
Socio-economic status		
Medium/high*	1	
Medium	1.44	(0.46–4.53)
Medium/low	3.03	(0.81–11.35)
Age at adoption		
Per unit	1.59	(1.11–2.27)
Years with family since adoption		
Per unit	1.35	(0.95–1.93)

\*Baseline category.

CI, confidence interval; OR, odds ratio.

could explain the fact that the attachment pattern is not significant in the interaction.

The age of adoption was a significant variable in the scores. No significant differences were found when the scores were analysed monthly, but each year of the child's life that elapsed before the adoption significantly increased the risk that the child's adaptive skills scores would be situated within the range of risk



**Figure 1** Age at adoption and adaptive skills. BASC, Behavioural Assessment System for Children; CI, confidence interval.

(OR = 1.59; 95% CI = 1.11–2.27). The trend of the scores on the global scale of adaptive skills can be observed in Fig. 1.

In the initial model, the country of origin also appears as a significant variable, indicating that scores of children adopted from Eastern Europe are more than twice likely to be in the risk range than are the scores obtained by children from other continents (OR = 2.62; 95% CI = 1.02–6.72).

Furthermore, the weight exerted by the family's socio-economic status has a significant effect on the global adaptive skills scale. Children from Eastern Europe who are adopted into a low or lower-middle socio-economic status have an OR of 11.56 (CI = 1.77–75.33) in relation to children from Eastern Europe whose family is at a medium or medium-high socio-economic level.

#### Sensitivity analysis

One goal of the project is to increase the number of observations, including more children, in order to increase the power of the analysis. In the meantime, we tried to increase the number of observations artificially by using the command *expand* of the statistical package STATA. Each observation in the dataset was replaced with one copy of the observation, using *Expand* with Option 2. This allowed the sample size to be doubled because the original observation is retained and one new copy created. Then, the logistic regression model shown in Table 2 was replicated. With a sample size of 312 observations, the OR for children with an insecure attachment pattern is 2.03 (95% CI = 1.09–3.79) rather than 2.03 (95% CI = 0.83–4.97). This result may suggest that the

sample is not large enough to observe a significant effect, but it can be hypothesized that in case of increasing the sample size, these differences would become patent. In reality, however, increasing the numbers of observations may not retain the characteristics of the 156 children in the original sample (the same frequency for all the variables included in the model).

#### DISCUSSION

The aim of this research has been to explore the attachment pattern of 168 children of international adoption and the relationship between their attachment pattern and the adaptive skills of those children. The results indicate that the percentage of children in this sample with a secure attachment pattern (58.9%) is slightly lower than the general population, as was hypothesized. The proportion of children in this study with an insecure-avoidant attachment pattern (25%) and an insecure-ambivalent pattern (13.1%) is relatively higher than that in a normative sample. On the other hand, the percentage of children with a disorganized attachment pattern is extremely low (3%; van IJzendoorn *et al.* 1999). These results are independent of age at adoption and time spent with the adoptive family, suggesting that the effect of early deprivation and neglect has long-lasting consequences for the attachment organization. It is relevant to note that the adopted children appear to develop an adaptive attachment pattern, whether secure or insecure. These results suggest that children of international adoption develop attachment organizational skills despite the adverse circumstances of institutional caring, which occurred in nearly 90% of this sample.

Significant differences were found in the attachment pattern between the children adopted from Eastern Europe and the children adopted from other continents, confirming the results of other investigations (Van den Dries *et al.* 2009) and suggesting that Eastern European children encounter more difficulties in developing a secure attachment pattern. It is possible that these children experienced more severe deprivation and prenatal risks, such as prenatal alcohol exposure (Johnson 2000), although the families participating in this study lacked information about the pre-adoptive period of their children that would allow for the confirmation or disconfirmation of that possibility.

A secure attachment pattern appears as a significant variable in the subsequent development of adaptive skills, and although it does not appear that the effect in



**Attachment and adaptive skills in children** N Barcons *et al.*

1 scores are within the risk range, it could be due to a  
2 limitation in the sample; that tendency can be  
3 observed in the *t*-test results and in the sensitivity  
4 analysis.

5 When analysing the adaptive skills of the children,  
6 *t*-tests show significant differences depending on the  
7 attachment pattern of the child and indicating the  
8 difficulties that the children with a non-secure attach-  
9 ment pattern can encounter in developing adaptive  
10 skills. The non-secure attachment pattern does not  
11 have a direct effect on obtaining a risk score in the  
12 scale, however, even though the sensitivity analysis  
13 indicates that these findings may be due to a sampling  
14 deficiency.

15 The results of this study lead us to confirm the  
16 importance of a warm, nourishing and supportive  
17 relationship in protecting or mitigating the unfavour-  
18 able effects of living in an adverse environment. This  
19 relationship becomes one factor to protect, given its  
20 importance in the development of the resilience of  
21 children of international adoption. When developing  
22 a healthy attachment relationship, the physical and  
23 psychological needs of children are fulfilled, and the  
24 children can build their skills to a higher level of  
25 competence. The establishment of bonding with the  
26 adoptive family is not a simple process because of  
27 adverse experiences experienced by children and the  
28 difficulties encountered by the adoptive family in the  
29 development of a secure attachment relationship.  
30 Protecting the development of an affective bond pro-  
31 vides security and autonomy in the adopted child  
32 and becomes a priority in any adoption process.

33 The time spent before being adopted increases the  
34 risk of scores within the risk range, which confirms the  
35 results of other research (Barcons *et al.* 2011).

36 The children from Eastern Europe in this study  
37 were twice as likely to receive low scores on the adap-  
38 tive skills scale as were children from other countries.  
39 Within this group of Eastern European adoptees,  
40 socio-economic status of the adoptive family is a  
41 further predictor of adaptive skills. Children adopted  
42 into low and medium-low socio-economic status  
43 families receive lower adaptive skills scores than  
44 Eastern European children adopted into medium and  
45 medium-high socio-economic status families.  
46 Perhaps, it is more difficult for these lower socio-  
47 economic status families to allocate economic and  
48 educational resources to their children in order to deal  
49 with any adaptation problems that may arise.

50 The results of this study help in the identification of  
51 groups that are most at risk in developing a secure  
52 attachment pattern and in developing their adaptive

skills, and should enable the relevant agencies to  
53 design tools for early intervention and prevention. As  
54 mentioned in the Introduction, the adoption break-  
55 down rates are significant enough for agencies to con-  
56 sider these results and design effective programmes in  
57 physical and mental-health services and in educa-  
58 tional settings for the internationally adopted children  
59 and their families.

60 Some limitations of the study must be mentioned,  
61 and the results should be interpreted with caution. We  
62 employed incidental sampling, recruiting only families  
63 with children aged between 7 and 11 who had spent a  
64 minimum of 2 years with their adoptive family at the  
65 time of the assessment. Within that group, self-  
66 selection created a further limitation, as only those  
67 families that chose to participate were interviewed and  
68 included, which could create a bias in the results.  
69 Although a sample matched by gender and age from  
70 the four continents would have been ideal, it would  
71 have required a deletion of subjects, and it was  
72 deemed necessary to retain as many of the 168 chil-  
73 dren in the sample as possible.

74 A second limitation results from a lack of com-  
75 parison between the results of adopted children and  
76 non-adopted children. Such a matched sample  
77 would have allowed for a direct comparison of the  
78 attachment rates of these two groups rather than a  
79 comparison between internationally adopted chil-  
80 dren and the normative samples from other studies.  
81 It would be useful to include a control group in  
82 future research. Furthermore, the parents' limited  
83 information about the pre-adoption circumstances of  
84 their children makes it difficult to relate specific  
85 adverse experiences to long-term consequences for  
86 attachment development.

**CONCLUSION**

87  
88  
89  
90 The aim of this study has been to explore the differ-  
91 ences in the adaptive abilities of a sample of 168  
92 internationally adopted children aged 7–11 as an  
93 expression of children's resilience.

94 Qualitative data from various research studies pre-  
95 viously mentioned have reported significant differ-  
96 ences in post-adoption processes, among which are  
97 the familial and the social integration of the adopted  
98 children. In this study, the groups that encountered  
99 more difficulties in developing adaptive skills have  
100 been identified and these results have contributed to  
101 the identification of specific needs of the families and  
102 the children, with the objective of designing precise  
103 psychosocial programmes in post-adoption services,

including early detection, child–family treatment, mental-health and educational services in Spain, in order to promote the children’s well-being and reduce the adoption breakdown rate.

#### ACKNOWLEDGEMENTS

This research started in the research project MEC R + D SEJ 2006–2009 15286 *International Adoption: social and familial inclusion of the internationally adopted children. Interdisciplinary and comparative perspectives*, and continues in the framework of the research project *National and international adoption: family, education and pertinence: interdisciplinary and comparative perspectives (MIGINNGSO2009-14763-C03-01 subprogram SOC)*, both financed by the Spanish Ministry of Science and Innovation.

#### REFERENCES

- Ainsworth, M.D., Blehar, M.C., Waters, E. & Wall, S. (1978) *Patterns of Attachment: A Psychological Study of the Strange Situation*. Laurence Erlbaum, Hillsdale, NJ.
- Barcons, N., Fornieles, A. & Costas, C. (2011) International adoption: assessment of adaptive and maladaptive behavior of adopted minors in Spain. *The Spanish Journal of Psychology*, **14**, 123–132.
- Barcons, N., Abrines, N., Brun, C., Sartini, C., Fumadó, V. & Marre, D. (2012) Social relationships in children from inter-country adoption. *Children and Youth Services Review*, **36**, 1–10. DOI: 10.1016/j.childyouth.2012.01.028.
- Berástegui, A. (2003) *Adopciones Truncadas y en Riesgo en la Comunidad de Madrid*. Consejo Económico y Social, Madrid.
- Bernedo, I.M., Fuentes, M.J., Fernández, M. & Bersabé, R. (2007) Percepción de las estrategias de socialización parentales en familias adoptivas y no adoptivas [Perception of parental socialization strategies in adoptive and non-adoptive families]. *Psicothema*, **19**, 597–602.
- Block, J.H. & Block, J. (1980) The role of ego-control and ego-resiliency in the organization of behavior. In: *Minnesota Symposium on Child Psychology* (ed. W.A. Collins), pp. 39–101. Erlbaum, Hillsdale, NJ.
- Bowlby, J. (1969/1982) *Attachment and Loss*. Vol. 1. Attachment. Basic Books, New York.
- Bowlby, J. (1973) *Attachment and Loss*. Vol. 2. Separation. Basic Books, New York.
- Bowlby, J. (1980) *Attachment and Loss*. Vol. 3. Loss. Basic Books, New York.
- Cassidy, J. & Shaver, P.R. (eds) (1999) *Handbook of Attachment: Theory, Research, and Clinical Applications*. Guilford Press, New York.
- Collishaw, S., Pickles, A., Messer, J., Rutter, M., Shearer, C. & Maughan, B. (2007) Resilience to adult psychopathology following childhood maltreatment: evidence from a community sample. *Child Abuse and Neglect*, **31**, 211–229.
- Gunnar, M.R., Bruce, J. & Grotevant, H.D. (2000) International adoption of institutionally reared children: research and policy. *Development and Psychopathology*, **12**, 677–693.
- Hollingshead, A.B. (1975) *Four Factor Index of Social Status*. Unpublished manuscript. Yale University, New Haven, CT.
- Howe, D. (2005) *Child Abuse and Neglect: Attachment, Development and Intervention*. Palgrave Macmillan, Basingstoke.
- Johnson, D. (2000) Adopting a post-institutionalized child: what are the risks? In: *International Adoption: Challenges and Opportunities*, 2nd edn. (eds T. Tepper, L. Hannon & D. Sandstrom), pp. 5–8. Parent Network for Post Institutionalized Children, Meadowlands, PA.
- Johnson, D. (2002) Adoption and the effect on children’s development. *Early Human Development*, **68**, 39–54.
- Juffer, F. & Van IJzendoorn, M.H. (2007) Adoptees do not lack self-esteem: a meta-analysis of studies on self-esteem of trans-racial, international and domestic adoptees. *Psychological Bulletin*, **133**, 1067–1083.
- Juffer, F. & Van IJzendoorn, M.H. (2009) International adoption comes of age: development of international adoptees from a longitudinal and meta-analytical perspective. In: *International Advances in Adoption Research* (eds G. Wrobel & E. Neil), pp. 169–192. John Wiley, London.
- Juffer, F., Stams, G. & van IJzendoorn, M. (2004) Adopted children’s problem behavior is significantly related to their ego resiliency, ego control, and sociometric status. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, **45**, 697–706.
- Main, M. & Solomon, J. (1990) Procedures for identifying infants as disorganised/disorientated during the Ainsworth strange situation. In: *Attachment in the Pre-School Years: Theory, Research and Intervention*. (eds M.T. Greenberg, D. Cicchetti & E.M. Cummings), pp. 121–160. University of Chicago Press, Chicago, IL.
- Marre, D. (2009) Los silencios de la adopción en España. *Revista De Antropología Social*, **18**, 97–126.
- Miller, L., Chan, W., Tirella, L. & Perrin, E. (2009) Outcomes of children adopted from Eastern Europe. *International Journal of Behavioral Development*, **33**, 289–298.
- Morison, S.J., Ames, E.W. & Chisholm, K. (1995) The development of children adopted from Romanian orphanages. *Merrill-Palmer Quarterly*, **41**, 411–430.
- Odenstad, A., Hjern, A., Lindblad, F., Rasmussen, F., Vinnerljung, B. & Dalen, M. (2008) Does age at adoption and geographic origin matter? A national cohort study of cognitive test performance in adult inter-country adoptees. *Psychological Medicine*, **38**, 1803–1814.
- Rutter, M. (1985) Family and school influences on cognitive development. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, **26**, 683–704.
- Rutter, M. (1987) Psychosocial resilience and protective mechanisms. *The American Journal of Orthopsychiatry*, **57**, 316–331.
- Rutter, M. (1990) Psychosocial resilience and protective mechanisms. In: *Risk and Protective Factors in the Development of Psychopathology* (eds J. Rolf, A.S. Masten, D. Cicchetti, K.H. Nuechterlein & S. Weintraub), pp. 181–214. Cambridge University Press, New York.

## Attachment and adaptive skills in children N Barcons et al.

- 1 Rutter, M. (2007) Resilience, competence and coping. *Child Abuse and Neglect*, **31**, 205–209. 22
- 2 23
- 3 Selman, P. (2009) The rise and fall of intercountry adoption in 24
- 4 the 21st century. *International Social Work*, **52**, 575. 25
- 5 18 Smyke, A.T., Koga, S.F., Johnson, D.E., Fox, N.A., Marshall, P.J., 26
- 6 Nelson, C.A. et al. (2007) The caregiving context in institution 27
- 7 reared and family reared infants and toddlers in Romania. 28
- 8 *Journal of Child Psychology and Psychiatry*, **48**, 210–218. 29
- 9 Steele, H. & Steele, M. (2005) The construct of coherence as an 30
- 10 indicator of attachment security in middle childhood. The 31
- 11 friends and family interview. In: *Attachment in Middle Child-* 32
- 12 *hood* (eds K.A. Kerns & R.A. Richardson), pp. 137–160. Guil- 33
- 13 ford Press, \*\*, NY. 34
- 14 19 Steele, H., Steele, M. & Kriss, A. (2009) The Friends and Family 35
- 15 Interview (FFI) Coding Guidelines. Unpublished manuscript. 36
- 16 Van den Dries, L., Juffer, F., Van IJzendoorn, M.H. & 37
- 17 Bakermans-Kranenburg, M. (2009) Fostering security? A 38
- 18 meta-analysis of attachment in adopted children. *Children and* 39
- 19 *Youth Services Review*, **31**, 410–421. 40
- 20 Van IJzendoorn, M.H., Schuengel, C. & Bakermans- 41
- 21 Kranenburg, M.J. (1999) Disorganized attachment in early 42
- childhood: meta-analysis of precursors, concomitants, and 22
- sequelae. *Development and Psychopathology*, **11**, 225–249. 23
- Vorria, P., Papaligoura, Z., Dunn, J., van IJzendoorn, M.H., 24
- Steele, H., Kontopoulou, A. et al. (2003) Early experiences 25
- and attachment relationships of Greek infants raised in resi- 26
- dential group care. *Journal of Child Psychology and Psychiatry,* 27
- and Allied Disciplines*, **44**, 1208–1220. 28
- Welsh, J.A., Viana, A.G., Petrill, S.A. & Mathias, M.D. (2007) 29
- Interventions for internationally adopted children and fami- 30
- lies: a review of the literature. *Child and Adolescent Social Work* 31
- Journal*, **24**, 285–311. 32
- Werner, E.E. (1993) Risk, resilience, and recovery: perspectives 33
- from the Kauai longitudinal study. *Development and Psychopa-* 34
- thology*, **5**, 503–515. 35
- Werner, E.E. (2000) Protective factors and individual resilience. 36
- In: *Handbook of Early Childhood Intervention* (eds J.P. Shonkoff 37
- & S.J. Meisels), pp. 115–132. Cambridge University Press, 38
- New York. 39
- Whitten, K.L. & Weaver, S.R. (2010) Adoptive family relation- 40
- ships and healthy adolescent development: a risk and resilience 41
- analysis. *Adoption Quarterly*, **13**, 209–226. 42

### ARTICLE 3

**Barcons, N.,** Abrines, N., Brun, C., Sartini, C.,  
Fumadó, V., Marre, D. (2012). Social relationships  
in children from intercountry adoption. *Children  
and Youth Services Review*, 34, 955-961.





## Social relationships in children from intercountry adoption

Nàtalia Barcons <sup>a,\*</sup>, Neus Abrines <sup>a</sup>, Carme Brun <sup>a</sup>, Claudio Sartini <sup>d</sup>, Victoria Fumadó <sup>c</sup>, Diana Marre <sup>b</sup>

<sup>a</sup> Department of Clinical and Health Psychology, Universitat Autònoma de Barcelona, Bellaterra, Spain

<sup>b</sup> Department of Social and Cultural Anthropology, Universitat Autònoma de Barcelona, Bellaterra, Spain

<sup>c</sup> Pediatric Service, Hospital Sant Joan de Déu, Esplugues, Spain

<sup>d</sup> CIBER Epidemiología y Salud Pública, Madrid, Spain

### ARTICLE INFO

#### Article history:

Received 27 October 2011

Received in revised form 28 January 2012

Accepted 29 January 2012

Available online 3 February 2012

#### Keywords:

Intercountry adoption

Social relationships

Attachment

Country of origin

Children

### ABSTRACT

The aim of this study is to analyze the social relationships from a sample of 116 internationally adopted children aged 8–11, considering the following factors: relationship with parents, interpersonal relationships, and social stress. In comparison with previous researches, we have used the child as the informant. These factors are explored depending of the attachment pattern of the child, the country of origin, sex and age at adoption. The attachment pattern is explored with the semi-structured *Friends and Family Interview* (FFI; Steele and Steele, 2005) and the social relationships have been assessed with the *Behavior Assessment System for Children* (BASC; Reynolds & Kamphaus, 1992).

Results show significant differences in the attachment pattern depending on the countries of origin and the impact of the secure attachment pattern over the interpersonal and parental relationships of the children is highlighted. Research helps us to identify the groups that are at risk in developing a secure attachment pattern and in developing their skills for social relationships.

© 2012 Elsevier Ltd. All rights reserved.

### 1. Introduction

According to the Convention on the Rights of the Children Adoption (United Nations, 1989) and to the Convention on Protection of Children and Co-operation in respect of Intercountry Adoption (Hague Conference on Private International Law, 1993); adoption is a childhood protection measure with the objective to provide a family to children whose biological families are not able to care for them. It is a phenomenon that involves 45,000 transnational adoptees every year around the world. In 2004, Spain was the second country in the world in receiving children from other countries, after USA. (Selman, 2009).

Research in intercountry adoption has been mostly focused on differences on the psychological adjustment of the adoptees compared with their non-adopted peers, and the results indicate that, although they have adequate development, more emotional and behavioral problems are detected compared with nonadopted children, such as: developmental delays (Beckett et al., 2006; Morison, Ames, & Chisholm, 1995); attachment difficulties (Van den Dries, Juffer, Van IJzendoorn, & Bakermans-Kranenburg, 2009); psychiatric disorders in adolescence and adulthood, increased risks for psychiatric hospitalization, suicidal behavior, severe social problems, lower cognitive functioning, and poorer school performance (Dalen et al., 2008; Lindblad, Hjern, & Vinnerljung, 2003); and internalized and externalized

problems, with higher incidence among the males (Bimmel, Juffer, Van IJzendoorn, & Bakermans-Kranenburg, 2003; Juffer & Van IJzendoorn, 2005; Stams, Juffer, Rispen, & Hoksbergen, 2000).

In any adoption process, risk factors interact with protective factors that can mitigate the effects of adverse experiences allowing the child to cope with stress and adversity effectively and emerge stronger from these experiences promoting the children's resilience (Rutter, 1985, 1987, 1990; Scroggs & Heitfield, 2001; Werner, 1993, 2000). The term resilience refers to the relative positive psychological adaptation despite suffering risk experiences that would be expected to entail significant consequences (Rutter, 2007).

There is a lot of research focused on the psychological adjustment of adoptees, although there is few research focused on how the adoptees function in areas such as social adjustment, and educational and professional attainment.

These areas are the focus of the study of Tieman, van de Ende, and Verhulst (2006) in which, using data from a large adoption and general population cohort, the authors compared the social functioning of 24- to 30-year-old intercountry adoptees with that of same-aged nonadoptees in The Netherlands. Results showed that adoptees, compared to nonadoptees, were less likely to have intimate relationships, to live with a partner, and to be married (Tieman et al., 2006).

Another study by Tan (2006) analyzed the social competence (participation and performance in extracurricular activities; quality of social relations; and academic attainment) of 115 girls aged 6–8, adopted from China before they were 2 y.o. by American families and its association with their history of neglect. Results showed the percentage of children who were in the neglected group that felt

\* Corresponding author at: Departament de Psicologia Clínica i de la Salut, Edifici B. Universitat Autònoma de Barcelona, 08193 Bellaterra (Barcelona), Spain. Tel.: +34 660862919.

E-mail address: [natalia.barcons@gmail.com](mailto:natalia.barcons@gmail.com) (N. Barcons).

below the normal range of the Overall Competence scale group was significantly higher than for the comparison group.

Some studies show that both, domestic and international adoptees, regardless of history of neglect, exhibit poorer social competence (Brodzinsky, 1993; Brodzinsky, Schechter, & Henig, 1992; Hodges & Tizard, 1989; Miller et al., 2000; Van Ijzendoorn, Juffer, & Klein Poelhuis, 2005; Wierzbicki, 1993). In intercountry adoption, the English Romanian Adoptees study provided relevant information regarding the intellectual good catch-up, whereas the social skills development was often substantially impaired, showing difficulties in social situations and to make friends (Goodman & Scott, 2005).

As mentioned in previous research, emotional/conduct disturbances could develop as a consequence of difficulties in picking up social cues and knowing how to behave in different social situations. This competence and understanding is crucial in middle childhood in terms of peer relations, thus can have repercussions for both conduct and emotional functioning (Colvert et al., 2008). This fact can point to some other pre- and post adoption factors that may affect the adopted children's social competence, such as pre-natal alcohol exposure or the quality of the relationship with the adoptive family.

### 1.1. Attachment pattern

One of the factors that can mitigate the adverse experiences is a secure attachment pattern of the child with a caregiver (Cassidy & Shaver, 1999; Werner, 2000). According to Van Ijzendoorn, Schuengel, & Bakermans-Kranenburg, 1999, in normative samples attachment patterns are distributed as follows: 62% secure attachment pattern, 15% insecure-avoidant, 9% insecure-ambivalent and 15% of disorganized attachment pattern. The adverse experiences of the early months of life of a child can influence in the later way of interacting with others and various studies indicate a higher probability of attachment disorders among adopted children (Chisholm, 1998; Marcovitch et al., 1997; Zeanah, 2000). The development of a secure attachment relationship is a complex process, and the literature suggests that experiences of institutionalization, abuse and neglect, can affect cognitive processes, attachment relationships, and therefore the children's relationships with peers and family (Van den Dries et al., 2009). A secure attachment relationship provides the child the ability to develop their social identity, their own adaptive and social skills, and explore the environment autonomously. Attachment security has been shown to be antecedents of children's adaptive functioning over time and to contribute to the child's social development.

### 1.2. Country of origin

Some studies find differences in medical and developmental difficulties depending on the country of origin of the adopted minor (Welsh, Viana, Petrill, & Mathias, 2007): minors from Eastern Asia present the highest rates of cranoencephalic anomalies and skin infections at the moment of adoption; minors from Eastern Europe display more neurological symptomatology, higher rates of prenatal exposure to tobacco and to alcohol. The study of Johnson (2000) reports that more than 50% of children institutionalized in Eastern Europe present low birth weight, in many cases they are premature, and some of them have been exposed to alcohol during pregnancy. The long-term impact of such exposure and its effects on the fetus, and the prevalence of these problems among the institutionalized minors in Eastern Europe is more pronounced (Miller, Chan, Tirella, & Perrin, 2009). In the research of Barcons, Fornieles, and Costas (2011) children from Eastern Europe displayed more difficulties in the interpersonal relationships than children from other countries of origin, such as Asia, Latin-America and Africa, similar results to those also found in other researches (Stams et al., 2000; Verhulst, Althaus, & Versluis-den Bieman, 1990).

### 1.3. Age of adoption

The age at placement is a factor that some literature suggests that can influence in the appearance of more difficulties in the development of the adopted minors. Those who were over 3 years of age at placement present higher rates of problems because they spent more time in unfavorable conditions for their development, such as institutionalization (Barth, Berry, Yoshikami, Goodfield, & Carson, 1988; Erich & Leung, 2002), though some studies find few difficulties between the children adopted before the 3 years of age and those adopted before, and find differences only in the attention scales (Barcons et al., 2011).

Most of the studies about the psychological adjustment of the adopted minors have been based on the answers of the parents or teachers which can constitute a bias based on the perceptions of adult people around the adoptees but not on the adoptees themselves. In this research the information has been gathered from the adoptees, via interview about their attachment relationships (FFI, *Friends and Family Interview*, Steele & Steele, 2005) and via the *Behavior Assessment System for Children – Self Questionnaire* (Reynolds & Kamphaus, 1992; González-Marqués, Fernández-Guinea, Pérez-Hernández, Pereña, & Santamaria, 2004).

Due to the few research focused on the social relationships of the adopted children, the aim of this article is to explore the social relationships of a sample of 116 internationally adopted children in Spain aged 8–11. The social relationships have been analyzed with the *Behavior Assessment System for Children* (BASC) using three of the instrument scales: social stress, relationship with parents and interpersonal relationships. The results of the social relationships scales have been analyzed in relation to the adoptees attachment pattern, assessed with the FFI, country of origin, age at adoption, and sex of the minor with the intention to answer three questions: do the children with a secure attachment pattern obtain better scores in the scales related to their social relationships than the children with an insecure attachment pattern? Is the age of adoption a factor that influences the development of the social skills of the adopted children? And do the children adopted from Eastern Europe display more difficulties in the social relationships scales than the children adopted from other countries?

## 2. Method

### 2.1. Participants

Participants were recruited with the collaboration of the *Pediatric Department of the Hospital de Sant Joan de Déu* in Barcelona. Its database contained 4000 families with internationally adopted children, from which 1700 families were invited to participate because they had children in the required age range between 8 and 11 years. A minimum of 2 years living with the adoptive family was required as an inclusion criterion.

The final total sample was 116 children from intercountry adoption, 53.4% (62) were female and 46.6% (54) were male. From the pre-adoption information that the families had available, it is noteworthy that 86.2% (100) of the children had been in an institution before being adopted.

Mean age of the sample was 8.92 years ( $SD = 1.08$ ). The mean age at placement of the adopted minors was 30.61 months ( $SD = 21.94$ ), the minimum value was 1 month and the maximum 103 months, the mean age depending on the country of origin is detailed below.

The adopted minors were from the following countries of origin:

- 28% from Asia ( $n = 33$ ).
  - 15.2%; 5 boys: 1 from China, 2 from Nepal, 2 from India.
  - 84.8%; 28 girls: 21 from China, 4 from Nepal and 3 from India.
- 47% from Eastern Europe ( $n = 54$ )
  - Mean age at adoption was 29.57 months ( $SD = 21.44$ ).

- 61.1%: 33 boys: 26 from Russia, 5 from Ukraine, 2 from Bulgaria.
- 38.9%: 21 girls: 16 from Russia, 4 from Ukraine, 1 from Bulgaria.
- 14% from Latin-America (n = 16)
  - Mean age at adoption was 30.5 months (SD = 20.12).
  - 56.3%: 9 boys: 6 from Colombia, 1 from Peru.
  - 43.8%: 7 girls: 5 from Colombia, 1 from Guatemala, 1 from Haiti.
- 11% from Africa (n = 13)
  - Mean age at adoption was 58.77 months (SD = 23.90).
  - 53.8%: 7 boys: 6 from Ethiopia, 1 from Madagascar.
  - 46.2%: 6 girls: 5 from Ethiopia, 1 from Madagascar.

## 2.2. Instruments

### 2.2.1. Socio-demographic questionnaire and details of adoption: ad-hoc questionnaire developed for this research and answered by parents

2.2.1.1. *Friends and family interview* (Steele and Steele, 2005). Semi-structured interview to assess the child's attachment relationships. In the interview, the children are asked to talk about themselves and their relationships with family and close relatives, teachers and friends. The interviews are videotaped, transcribed and double coded by two child psychologists that have been trained by the authors. The FFI interview has 8 dimensions, each one with the respective sub-dimensions, as follows: *Coherence*: truth, economy, relation, manner and overall coherence; *reflective functioning*: developmental perspective, theory of mind (mother, father, friend, sibling, teacher) and diversity of feelings (self, mother, father, friend, sibling, teacher); *evidence of secure base*: father, mother and other significant figure; *evidence of self-esteem*: social and school competence; *peer relations*: frequency and quality of contact; *sibling relations*: warmth, hostility and rivalry; *anxieties and defense*: idealization (self, mother and father), role reversal (mother and father), anger (mother and father), derogation (self, mother and father) and adaptive response; *differentiation of parental representations*. The interview also has the *non-verbal codes* regarding fear/distress and frustration/anger and the global attachment classification, which is the classification used in this research.

The dimensions are scored on four-point ratings (1 = no evidence; 2 = mild evidence; 3 = moderate evidence; and 4 = marked evidence) according to the coding guidelines from the authors (Steele, Steele, & Kriss, 2009).

In this article, the categorized score of the attachment pattern of the child has been obtained from the attachment classification scores from the interview and the correlation between coherence, the evidence of a secure base with the mother/father and a secure attachment pattern has been tested, obtaining a positive correlation among the overall coherence and a secure attachment pattern ( $r = .49, p < .00$ ), and a positive correlation among the evidence of a secure base with the mother ( $r = .46, p < .00$ ) and with the father ( $r = .32, p = .001$ ) and a secure attachment pattern.

Descriptive analyses of the attachment pattern have been carried out. The attachment pattern of this sample is as follows, 60.3% (n = 70) have a secure attachment pattern; 25% (n = 29) have an insecure-avoidant pattern; 12.9% (n = 15) have an insecure-ambivalent attachment pattern; and 1.7% (n = 2) have a disorganized pattern.

2.2.1.2. *Behavior Assessment System for Children (BASC; Reynolds & Kamphaus, 1992; González-Marqués, Fernández-Guinea, Pérez-Hernández, Pereña, & Santamaría, 2004)*. This is a multidimensional and multimethod questionnaire that collects information from the parents, the teachers, or the individual. The BASC is presented with a multiple choice format of two response alternatives. In the current investigation, we used the self-report questionnaire filled in by the children (S2).

The self-report provides 8 clinical scales: negative attitude towards school ( $\alpha = .81$ ), negative attitude towards teachers ( $\alpha = .72$ ), atypicality ( $\alpha = .79$ ), locus of control ( $\alpha = .77$ ), *social stress* ( $\alpha = .72$ ), anxiety ( $\alpha = .81$ ), depression ( $\alpha = .83$ ), and sense of inadequacy ( $\alpha = .72$ ); 5 adaptive scales: *interpersonal relations* ( $\alpha = .83$ ), *relations with parents* ( $\alpha = .56$ ), self-esteem ( $\alpha = .75$ ), and self-reliance ( $\alpha = .61$ ); it also provides 4 global dimensions: clinical maladjustment ( $\alpha = .90$ ), academic maladjustment ( $\alpha = .85$ ), personal adjustment ( $\alpha = .84$ ), and index of emotional symptoms ( $\alpha = .93$ ). The internal consistency of the self-report was .76, and the test-retest reliability for a 3-month interval was .69 (González-Marqués, Fernández-Guinea, Pérez-Hernández, Pereña, & Santamaría, 2004).

In this study, three scales related to social competence from the self report questionnaire have been used:

- *Social stress*: included 13 items and measured the child's tension around peers, rejection and isolation from others.
- *Relations with parents*: included nine items and measured the individual's perception of being important in the family, the status of the parent-child relationship, and the child's perception of the degree of parental trust and concern.
- *The interpersonal relations with peers scale*: included six items and measured the individual's reports of success in relating to others and the degree of enjoyment derived from this interaction.

## 2.3. Procedure

In collaboration with the *Pediatric Service of the Hospital Sant Joan de Déu* from Barcelona, and after the approval of the Ethics Committee of the institution, an invitation letter was sent to the selected families according the age of their children. Each family who accepted the invitation letter had an appointment at the clinics of the Hospital with one of the two psychologists who conducted the assessment. Every assessment lasted approximately 2 h, during which parents completed the questionnaires and the child was interviewed. All families agreed and signed informed consent. Following the investigation, a report was provided to each family with the results of the questionnaires for their children and possible treatment recommendations.

Statistical analyses were conducted using statistical software Stata 11 (Release Stata/MP 11.1 for windows. College Station, TX: Copyright 2009 StataCorp LP).

Descriptive statistics were used as preliminary analysis to describe the sample. Chi-square tests were used for the analysis of the attachment pattern of the children depending on the country of origin, sex and age at adoption of the minors.

Finally, linear regression models were used for multivariate analyses to investigate the relationship between the social relationships outcome scales (social stress, relation with the parents and interpersonal relationships) and the following factors: country of origin, age at adoption, attachment pattern and sex of the minors.

## 3. Results

### 3.1. Attachment pattern

The distribution of the attachment pattern classification depending on the country of origin can be found in Table 1.

Due to the few observations in the different categories of the attachment pattern, we have categorized the attachment pattern whether it is secure (n = 70; 60.3%) or insecure (n = 46; 39.7%), including in the insecure group the insecure-avoidant, the insecure-ambivalent and the disorganized attachment patterns. Chi-square tests have been carried out to check whether there were differences in the attachment pattern of the child depending of the country of origin, sex and age at adoption of the children. (Fisher exact tests were not used because



**Table 1**  
Attachment pattern categories distribution depending on the countries of origin.

		Eastern Europe	Latino America	Asia	Africa	Total
Attachment pattern	Secure	n 24	12	26	8	70
		% 34,29%	17,14%	37,14%	11,42%	100,00%
	Insecure-avoidant	n 17	4	4	4	29
		% 58,62%	13,79%	13,79%	13,79%	100,00%
	Insecure-ambivalent	n 11	0	3	1	15
		% 73,33%	0%	20%	6,66%	100,00%
Disorganized	n 2	0	0	0	2	
	% 100,00%	0%	0%	0%	100,00%	
Total		n 54	16	33	13	116
		% 46,55%	13,79%	28,44%	11,20%	100,00%

the number of expected observations in any of the cells was always greater than five).

Results indicate that there are significant differences depending on the sex of the minor ( $\chi^2 = 4.518$ ;  $p = .034$ ), and on the country of origin ( $\chi^2 = 11.840$ ;  $p = .008$ ), but no differences are found depending on the age at adoption ( $\chi^2 = 2.571$ ;  $p = .276$ ).

Distribution of the attachment pattern depending on the sex of the minor, the country of origin and the age at adoption can be found in Table 2.

3.2. Social relationships

Linear regression models were used to assess the link between the country of origin of the minors, sex, age at adoption and the attachment pattern and the three scales of the social relationships of the child: social stress, relationship with the parents, and interpersonal relationships.

3.2.1. Social stress

In this scale, the children from Latin America, Asia and Africa obtain statistically significant lower scores compared with children from Eastern Europe: the coefficient for Latin America is -7.38 (IC 95%: -13.59; -1.16), for Asia is -7.16 (IC 95%: -12.51; -1.81) and for Africa is -10.38 (IC 95%: -17.70; -3.06); indicating that the minors from Eastern Europe experiment a higher level of social stress than the minors adopted from the other continents.

The age at adoption shows a low but positive association with social stress scale and is statistically significant, what means that children adopted at older age (per months) obtain higher scores and the coefficient equals 0.11 (IC 95%: 0.00; 0.21). These results indicate that for each month of life the children passed before the adoption we have an increase of 0.11 points in the score of social stress.

The sex and the attachment pattern have no significant effect on this scale.

The linear regression model for the social stress score can be found in Table 3.

**Table 2**  
Attachment pattern by sex, country of origin and age at adoption.

		Sex 4.518 (p = .034) <sup>a</sup>		Country of origin by groups 11.840 (p = .008) <sup>a</sup>				Age at adoption 2.571 (p = .276) <sup>a</sup>		
		Masc.	Fem.	Eastern Europe	Latin America	Asia	Africa	Adopted from 0 to 12 months	Adopted from 13 to 36 months	Adopted at more than 36 months
Secure	n	27	43	24	12	26	8	17	30	18
	%	38.6%	61.4%	34.3%	17.1%	37.1%	11.4%	26.2%	46.2%	27.7%
Insecure	n	27	19	30	4	7	5	6	25	13
	%	58.7%	41.3%	65.2%	8.7%	15.2%	10.9%	13.6%	56.8%	29.5%
Total	n	54	62	54	16	33	13	23	55	31
	%	46.6%	53.4%	46.6%	13.8%	28.4%	11.2%	21.1%	50.5%	28.4%

<sup>a</sup> Chi-square test ( $\chi^2$ ).

**Table 3**  
Linear regression model: outcome variable: social stress (n = 116).

	Coef.	p-Value	95% Conf. Interval
<i>Country of origin by groups</i>			
Eastern Europe <sup>a</sup>			
Latin-America	-7.38	0.02**	(-13.59; -1.16)
Asia	-7.16	0.01**	(-12.51; -1.81)
Africa	-10.38	0.01**	(-17.70; -3.06)
<i>Age at adoption of the case (in months) per month</i>			
	0.11	0.04**	(0.00; 0.21)
<i>Sex of the child</i>			
Masculine <sup>a</sup>			
Femenine	1.31	0.56	(-3.06; 5.68)
<i>Attachment pattern categories</i>			
Secure <sup>a</sup>			
Insecure	0.59	0.79	(-3.72; 4.90)

<sup>a</sup> Baseline category.  
\*\* p ≤ .05.

3.3. Relationship with the parents

In this scale, the children with an insecure attachment pattern obtain lower scores compared with children with a secure attachment pattern: the coefficient for the children with insecure attachment pattern is -4.09 (IC 95%: -8.03; -0.15). This result indicates that the secure attachment pattern is the only factor that appears significant in the relationship with the parents' scale, indicating that children with an insecure attachment pattern experiment more difficulties in the relationship with their parents. None of the other factors exert a significant effect in the model: sex, age at adoption and country of origin.

The linear regression model results of the relationship with the parents' scale can be found in Table 4.

3.4. Interpersonal relationships

In this scale, the children from Asia and Africa obtain statistically significant higher scores compared with children from Eastern Europe: the coefficient for Asia is 6.31 (IC 95%: 1.19; 11.43) and for Africa is 9.06 (IC 95%: 2.07; 16.06). With the children of Latin America the differences are non significant, being the coefficient 5.39 (IC 95%: -0.56; 11.33). These results indicate that children from Asia and from Africa have higher interpersonal relationships skills than children from Eastern Europe.

The age at adoption (in months) shows a negative association with interpersonal relationship scale meaning that children adopted at an older age obtain lower scores. It is statistically significant although the coefficient is low and equals to -0.11 (IC 95%: -0.21; -0.01), meaning that for every month past before the adoption the scores of this scale falls 0.11 points.

**Table 4**  
Linear regression model: outcome variable: relations with parents (n = 116).

	Coef.	p-Value	95% Conf. Interval
<i>Country of origin by groups</i>			
Eastern Europe <sup>a</sup>			
Latin-America	2.9	0.31	(−2.79; 8.58)
Asia	1.08	0.66	(−3.81; 5.97)
Africa	6.18	0.07	(−0.52; 12.87)
<i>Age at adoption of the case (in months)</i>			
per month	−0.03	0.6	(−0.12; 0.07)
<i>Sex of the child</i>			
Masculine <sup>a</sup>			
Femenine	0.87	0.67	(−3.13; 4.86)
<i>Attachment pattern categories</i>			
Secure <sup>a</sup>			
Insecure	−4.09	0.04**	(−8.03; −0.15)

<sup>a</sup> Baseline category.

\*\* p ≤ .05.

In this model, the attachment pattern appears to be a significant factor on the results of this scale (p-value is 0.05). The p-value is a statistical agreement and the tolerance around this parameter is scientifically accepted. The children with an insecure attachment pattern obtain lower scores than the children with a secure attachment pattern, being the coefficient −4.04 (IC 95%: −8.18; 0.08), meaning that the children with an insecure attachment pattern encounter more difficulties in the interpersonal relationships.

The linear regression model results of the interpersonal relations' scale can be found in Table 5.

#### 4. Discussion

The attachment pattern of the research sample has been analyzed and results indicate that the attachment pattern of these children is very similar to that estimated in normative samples (Van Ijzendoorn et al., 1999), but some differences need to be highlighted.

The secure attachment pattern percentage (60.3%) is very close to the 62% in normative samples, but the insecure attachment pattern is higher, in this sample 25% of the children have an insecure-avoidant pattern, vs. 15% in normative samples; and 12.9% have an insecure-ambivalent – vs. 9% in normative samples. In this sample, only 1.7% of the children have been found to have a disorganized attachment pattern – vs. 15% in normative samples.

**Table 5**  
Outcome variable: interpersonal relationships (n = 116).

	Coef.	p-Value	95% Conf. Interval
<i>Country of origin by groups</i>			
Eastern Europe <sup>a</sup>			
Latin-America	5.39	0.08	(−0.56; 11.33)
Asia	6.31	0.02**	(1.19; 11.43)
Africa	9.06	0.01**	(2.07; 16.06)
<i>Age at adoption of the case (in months)</i>			
per unit	−0.11	0.04**	(−0.21; −0.01)
<i>Sex of the child</i>			
Masculine <sup>a</sup>			
Femenine	0.98	0.64	(−3.20; 5.16)
<i>Attachment pattern categories</i>			
Secure <sup>a</sup>			
Insecure	−4.04	0.05**	(−8.16; 0.08)

<sup>a</sup> Baseline category.

\*\* p ≤ .05.

These results are not in line with some other studies where the children have been reported with more insecure and disorganized attachments (Marcovitch et al., 1997), though are in line with the Van den Dries et al. (2009) meta-analysis (2009) where when using self-report measures, such as questionnaires and interviews, as has been done in the present research interviewing the child about their own attachment relationships, adoptees had similar attachment relationships with their adoptive parents as their non-adopted counterparts.

It would be logical to expect less attachment security in adopted children, because of the separation and loss of their birth parents and multiple caregivers during the first years of life. But in this research we find a similar percentage of secure attachment pattern and a very high level of insecure attachment pattern, indicating that the adopted children develop an adaptive attachment pattern, being secure or insecure, and very few children are categorized as disorganized. Therefore, we hypothesize that there may be some factors – such as a close primary relationship with a caregiver before the adoption (information that usually adoptive families are not aware of, because of the lack of information that they have), or the relationship with the adoptive parents – that mitigate the effects of the adverse pre and post adoptive experiences, and provides them with the skills to develop an attachment pattern, that even though, it is insecure in a high percentage, the children are showing some kind of organization.

There appear significant differences depending on the country of origin, being the children from the Eastern European countries who experiment more difficulties in the development of a secure attachment pattern, and these children are suggested to have experienced the most severe deprivation (Miller, 2005; Rutter, O'Connor, & the English and Romanian Adoptees (ERA) Study Team, 2004) and this result was predicted previously in other studies (Van den Dries et al., 2009). This result helps us to identify the groups that are more at risk in developing security in the attachment and provide specific interventions to the families and the children focusing on supporting parental sensitivity to contribute to the family dynamics.

The hypotheses presented in the introduction have been mostly confirmed. The children with a secure attachment pattern obtain better scores in the relationship with the parents and in the interpersonal relationships' scales, but it appears not significant enough in the social stress one. This result indicates the strong effect that the attachment security has on the confidence of the children to create stable relationships with their parents and their peers, confirming the importance on the development of social skills.

We secondly hypothesized that the age at adoption would constitute a factor that influences the development of the social skills of the children, and we can confirm partially this hypothesis because the later age at adoption has a negative effect on the interpersonal relationships scale and in the social stress scale. We do not find this effect on the relationship with the parents, highlighting, as introduced in the first hypothesis, that the main effect on the relationship with the parents is the secure attachment pattern of the child with their adoptive parents independently of the age at the moment of the adoption, suggesting the importance of a warm and nourishing relationship in the development of the bond with the adoptive family.

The third hypothesis was that the children adopted from Eastern European countries would display more difficulties in the social relationships scales compared to the children adopted from other continents. In this research, children from Eastern Europe display more difficulties in developing interpersonal relationships compared with the children adopted from Asia and from Africa, there are no differences though compared with the children adopted from Latin America. This result was also found in a previous research by Barcons et al. (2011). In the social stress scale, children adopted from Eastern Europe appear to experiment higher levels of stress than the children from the other continents – Asia, Africa, and Latin America. These results are in line with the other results presented above, and help the researchers, clinicians and families to identify where the interventions must be focused

on, such as enhancing the security in the attachment relationship; developing specific programs to improve the social skills of the children adopted at an older age and providing early support to the families and children adopted from Eastern European countries to prevent and benefit their social development.

There are several limitations in this research and all the results must be interpreted with caution. The first limitation is the incidental sampling, families were recruited through an invitation, and only those who accepted are the final participants of the study. This incidental sampling contributed to the fact that the groups are not paired in age, sex and country of origin completely, and some countries of origin are more represented than others.

Another limitation of this study could be represented by the number of observations. The total number from each country of origin was relatively small (55 for Eastern Europe, 16 for Latin America, 33 for Asia, 13 for Africa) making it hard to draw strong conclusions from the data despite the sample sizes being large enough for statistical inference using a multivariate regression model.

The third limitation is that results cannot be compared with a non-adopted sample and the attachment rates are judged against results from normative samples. It will be useful to include a control sample in a future analysis.

## 5. Conclusion

The research explores the social relationships of a sample of adopted minors depending of the attachment pattern of the child, the age at adoption, the sex of the minor and the country of origin. Results show significant differences in the attachment pattern depending of the countries of origin and the impact of the secure attachment pattern over the interpersonal and parental relationships of the children is highlighted, supporting the body of research that a secure base contributes to the proper social skills development of the children. Results help us to identify the groups that are at risk in developing their skills for social relationships – children adopted from Eastern European countries, children adopted at an older age, and children with an insecure attachment pattern – in order to design specific and preventive interventions.

## Acknowledgments

This research started in the Research project MEC R+D SEJ 2006–2009 15286 *International Adoption: social and familial inclusion of the internationally adopted children. Interdisciplinary and comparative perspectives*, and continues in the framework of the research Project *National and international adoption: family, education and pertinence: interdisciplinary and comparative perspectives (MICINNCSO2009-14763-C03-01 subprogram SOCI)*, both financed by the Spanish Ministry of Science and Innovation.

## References

- Barcons, N., Fornieles, A., & Costas, C. (2011). International adoption: assessment of adaptive and maladaptive behavior of adopted minors in Spain. *The Spanish Journal of Psychology*, 14, 123–132.
- Barth, R., Berry, M., Yoshikami, R., Goodfield, R., & Carson (1988). Predicting adoption disruption. *Social Work*, 33, 227–233.
- Beckett, C., Maughan, B., Rutter, M., Castle, J., Colvert, E., Groothues, C., et al. (2006). Do the effects of early severe deprivation on cognition persist into early adolescence? Findings from the English and Romanian Adoptees Study. *Child Development*, 77, 696–711.
- Bimmel, N., Juffer, F., Van IJzendoorn, M. H., & Bakermans-Kranenburg, M. J. (2003). Problem behavior of internationally adopted adolescents: a review and meta-analysis. *Harvard Review of Psychiatry*, 11, 64–78.
- Brodzinsky, D. M. (1993). Long-term outcomes in adoption. *The Future of Children*, 3, 153–166.
- Brodzinsky, D. M., Schechter, M. D., & Henig, R. M. (1992). *Being Adopted: The Lifelong Search for Self*. New York: Doubleday.
- Cassidy, J., & Shaver, P. R. (Eds.). (1999). *Handbook of Attachment: Theory, Research, and Clinical Applications*. New York: Guilford Press.
- Chisholm, K. (1998). A three year follow-up of attachment and indiscriminate friendliness in children adopted from Romanian orphanages. *Child Development*, 69, 1092–1106.
- Colvert, E., Rutter, M., Beckett, C., Castle, J., Groothues, C., Hawkins, A., et al. (2008). Emotional difficulties in early adolescence following severe early deprivation: findings from the English and Romanian adoptees study. *Development and Psychopathology*, 20(2), 547–567.
- Dalen, M., Hjern, A., Lindblad, F., Odenstad, A., Ramussen, F., & Vinnerljung, B. (2008). Educational attainment and cognitive competence in adopted men: a study of international and national adoptees, siblings, and a general Swedish population. *Children and Youth Services Review*, 30, 1211–1219.
- Erich, S., & Leung, P. (2002). The impact of previous type of abuse and sibling adoption upon adoptive families. *Child Abuse & Neglect*, 26, 1045–1058.
- González-Marqués, J., Fernández-Guinea, S., Pérez-Hernández, E., Pereña, J., & Santamaría, P. (2004). *Sistema de evaluación de la conducta en niños y adolescentes: BASC [Behavior Assessment System for Children: BASC]*. Madrid: TEA.
- Goodman, R., & Scott, S. (2005). Fostering and Adoption. *Child Psychiatry* (pp. 305–311). Oxford: Blackwell Publishing.
- Hague Conference on Private International Law (1993). Convention on protection of children and co-operation in respect of intercountry adoption. Retrieved from [http://www.hcch.net/index\\_en.php?act=conventions.text&cid=69](http://www.hcch.net/index_en.php?act=conventions.text&cid=69) on October, 11th, 2011
- Hodges, J., & Tizard, B. (1989). Social and family relationships of exinstitutional adolescents. *Journal of Child Psychology and Psychiatry*, 30, 77–97.
- Johnson, D. (2000). Adopting a post-institutionalized child: what are the risks? In T. Tepper, L. Hannon, & D. Sandstrom (Eds.), *International Adoption: Challenges and Opportunities* (pp. 5–8). (2nd ed.). Meadowlands: PA: Parent Network for Post Institutionalized Children.
- Juffer, F., & Van IJzendoorn, M. H. (2005). Behavior problems and mental health referrals of international adoptees: a meta-analysis. *Journal of the American Medical Association*, 293, 2501–2515.
- Lindblad, F., Hjern, A., & Vinnerljung, B. (2003). Intercountry adopted children as young adults: a Swedish cohort study. *The American Journal of Orthopsychiatry*, 73, 190–202.
- Marcovitch, S., Goldberg, S., Gold, A., Washington, J., Wasson, C., Krekewich, K., et al. (1997). Determinants of behavioral problems in Romanian children adopted in Ontario. *International Journal of Behavioral Development*, 20, 17–31.
- Miller, L. C. (2005). *The handbook of international adoption medicine: A Guide for Physicians, Parents, and Providers*. Oxford: Oxford University Press.
- Miller, L., Chan, W., Tirella, L., & Perrin, E. (2009). Outcomes of children adopted from Eastern Europe. *International Journal of Behavioral Development*, 33, 289–298.
- Miller, B. C., Fan, X., Grotevant, H. D., Christensen, M., Coyle, D., & van Dulmen, M. (2000). Adopted adolescents' overrepresentation in mental health counseling: adoptees' problems or parents' lower threshold for referral? *Journal of the American Academy of Child and Adolescent Psychiatry*, 39, 1504–1511.
- Morison, S. J., Ames, E. W., & Chisholm, K. (1995). The development of children adopted from Romanian orphanages. *Merrill-Palmer Quarterly: Journal of Developmental Psychology*, 41, 411–430.
- Reynolds, C. R., & Kamphaus, R. W. (1992). *Behavior Assessment System for Children manual*. Circle Pines, MN: American Guidance Service [Spanish adaptation: TEA] 2004.
- Rutter, M. (1985). Family and school influences on cognitive development. *Journal of Child Psychology and Psychiatry*, 26, 683–704.
- Rutter, M. (1987). Psychosocial resilience and protective mechanisms. *The American Journal of Orthopsychiatry*, 57, 316–331.
- Rutter, M. (1990). Psychosocial resilience and protective mechanisms. In J. Rolf, A. S. Masten, D. Cicchetti, K. H. Nuechterlein, & S. Weintraub (Eds.), *Risk and Protective Factors in the Development of Psychopathology* (pp. 181–214). New York: Cambridge University Press.
- Rutter, M. (2007). Resilience, competence and coping. *Child Abuse & Neglect*, 31, 205–209.
- Rutter, M., & O'Connor, T. G., & the English and Romanian Adoptees (ERA) Study Team. (2004). Are there biological programming effects for psychological development? Findings from a study of Romanian adoptees. *Developmental Psychology*, 40, 81–94.
- Scroggs, P. H., & Heitfield, H. (2001). International adopters and their children: birth culture ties. *Gender Issues*, 19, 3–30.
- Selman, P. (2009). The movement of children for international adoption: developments and trends in receiving states and states of origin, 1998–2004. In D. Marre, & L. Briggs (Eds.), *International Adoption: Global Inequalities and the Circulation of Children*. New York: New York University Press.
- Stams, G. J. J. M., Juffer, F., Rispen, J., & Hoksbergen, R. A. C. (2000). The development and adjustment of 7-year-old children adopted in infancy. *Journal of Child Psychology and Psychiatry*, 41, 1025–1037.
- Steele, H., & Steele, M. (2005). The construct of coherence as an indicator of attachment security in middle childhood, the friends and family interview. In K. A. Kerns, & R. A. Richardson (Eds.), *Attachment in middle childhood* (pp. 137–160). New York, NY, US: Guilford Press.
- Steele, H., Steele, M., & Kriss, A. (2009). *The Friends and Family Interview (FFI) Coding Guidelines*. Unpublished manuscript.
- Tan, T. X. (2006). History of early neglect and middle childhood social competence'. *Adoption Quarterly*, 9(4), 59–72.
- Tieman, W., van de Ende, J., & Verhulst, F. (2006). (2006) Social functioning of young adult intercountry adoptees compared to nonadoptees. *Social Psychiatry and Psychiatric Epidemiology*, 41, 68–74.
- United Nations (1989). Convention on the rights of the child. Retrieved from <http://www.2ohchr.org/english/law/crc.htm> on October, 11th, 2011
- Van den Dries, L., Juffer, F., Van IJzendoorn, M. H., & Bakermans-Kranenburg, M. (2009). Fostering security? A meta-analysis of attachment in adopted children. *Children and Youth Services Review*, 31(3), 410–421.

- Van IJzendoorn, M. H., Juffer, F., & Klein Poelhuis, C. W. (2005). Adoption and cognitive development: a meta-analytic comparison of adopted and non-adopted children's IQ and school performance. *Psychological Bulletin*, *131*(2), 301–316.
- Van IJzendoorn, M. H., Schuengel, C., & Bakermans-Kranenburg, M. J. (1999). Disorganized attachment in early childhood: meta-analysis of precursors, concomitants, and sequelae. *Development and Psychopathology*, *11*, 225–249.
- Verhulst, F. C., Althaus, M., & Versluis-den Bieman, H. J. (1990). Problem behavior in international adoptees: I. An epidemiological study. *Journal of the American Academy of Child and Adolescent Psychiatry*, *29*, 94–103.
- Welsh, J. A., Viana, A. G., Pettrill, S. A., & Mathias, M. D. (2007). Interventions for internationally adopted children and families: a review of the literature. *Child and Adolescent Social Work Journal*, *24*, 285–311.
- Werner, E. E. (1993). Risk, resilience, and recovery: perspectives from the Kauai longitudinal study. *Development and Psychopathology*, *5*, 503–515.
- Werner, E. E. (2000). Protective factors and individual resilience. In J. P. Shonkoff, & S. J. Meisels (Eds.), *Handbook of Early Childhood Intervention* (pp. 115–132). New York: Cambridge University Press.
- Wierzbicki, M. (1993). Psychological adjustment of adoptees: a meta-analysis. *Journal of Clinical Child Psychology*, *22*, 447–454.
- Zeanah, C. H. (2000). Disturbances of attachment in young children adopted from institutions. *Developmental and Behavioural Pediatrics*, *21*(3), 230–236.



# **PART IV**



## 5. Discussion

This thesis has been structured around three articles that constitute the core of the research to study the factors that interact in the development of the internationally adopted children's resilience.

In the first article, the emotional and behavioural characteristics of a sample of 52 adopted children were examined and the outcomes were compared with those of 44 non adopted children. Children were assessed with the *Behavior Assessment System for Children – Parents and Self Questionnaires* (BASC: Reynolds & Kamphaus, 1992; González-Marqués, Fernández-Guinea, Pérez-Hernández, Pereña, & Santamaria, 2004).

According to the results of this first explorative article about the adaptive and maladaptive behaviour of adopted minors in Spain, it is remarkable to take into account that the psychological adjustment of the internationally adopted children does not differ significantly, in the scales assessed, when compared with their non adopted peers within the research sample of the study. There are only significant differences for the *Somatisation* scale, in which the non adopted children were more affected, and in the *Adaptability* scale, where the adopted children obtained lower scores.

When comparing the results among the adopted children, the adopted children from Eastern European countries encountered more difficulties in attention, adaptive skills and interpersonal relationships, results that are in line with other international



researches (Miller et al., 2009; Stams et al., 2000; Verhulst et al., 1990).

In relation to the age at adoption, children adopted after 3 years of age have more attention problems than their non adopted counterparts and than minors who were adopted at earlier ages, but no significant differences were found in the remaining scales of the BASC.

It is relevant to emphasize, though, that the time spent in institutions seems to be related to diverse developmental areas: the onset of behaviour problems, attention problems, atypicality, depression, poorer adaptability, poorer social skills, less leadership capacity, more externalized and internalized problems, and, in general, poorer adaptive skills, as well as more feelings of inadequacy, thus confirming the unfavourable effects of institutionalization found in other international studies (Gunnar et al., 2007; Merz & McCall, 2010; Rutter et al., 1998).

Despite the results found among the adopted children, differences on adaptive and maladaptive behaviour between the adopted children and their non adopted peers are scarce. These few differences, together with the results from several international investigations, support the scenario of the existence of a series of factors that counterbalance the negative effects of adverse either pre and/or post adoptive experiences, strengthening the resilience of the adopted minors (Rutter, 1985, 1987, 1990; Scroggs & Heitfield, 2001; Welsh et al., 2007; Werner, 1993, 2000).

As mentioned in the Introduction, there is a lot of research focused on the psychological adjustment differences between adopted and non adopted children, but few research is focused on how the adoptees function in other areas such as global adaptation and social relationships.

In order to explore the factors that interact in the strengthening of the children's resilience, this research has focused on the resilience expression through the development of adaptive skills and the social relationships of the internationally adopted children in Spain.

The research article "*Attachment and adaptive skills in children of international adoption*" has explored, in first instance, the attachment pattern of 168 internationally adopted children aged 7-11 and results indicate that 58.9% of the sample obtained a secure attachment pattern classification, while the remaining 41.1% obtained an insecure attachment pattern. The attachment pattern has been obtained interviewing the child with the semi-structured *Friends and Family Interview* (FFI; Steele & Steele, 2005). The percentages of the secure attachment pattern are slightly higher in normative samples, and the percentage of the insecure attachment pattern is slightly lower (Van IJzendoorn et al., 1999). These results are independent of the age at adoption and the time spent with the adoptive family; age at adoption does not come up as a relevant factor in the development of a secure attachment pattern, in contrast with some other previous researches (Marcovitch et al., 1997; Van den Dries et al., 2009; Vorria et al., 2006).

The second interesting and relevant finding is related to the percentage of disorganized attachment of the sample of our research. Only a 3% of the sample displayed a disorganized attachment pattern, compared to the 31% obtained in Van den Dries et al.'s meta-analysis (2009) on the attachment pattern of adopted children, and to the 15% in normative samples (Van IJzendoorn et al., 1999).

The question that arises is whether the attachment pattern, when obtained directly from the information gathered through an interview with the adopted child, as in our study, differs significantly from the attachment pattern obtained from observational measures, questionnaires or projective measures, and this fact points to the relevance of the information that the child him/herself can provide from middle childhood onwards.

Significant differences were found in the attachment pattern between the children adopted from Eastern European countries and the children adopted from other continents, confirming the results of other investigations (Van den Dries et al., 2009) and suggesting that Eastern Europe children encounter more difficulties in developing a secure attachment pattern. The main hypothesis to explain these differences is that it is possible that these children experienced more severe deprivation and prenatal risks, such as prenatal alcohol exposure (Johnson, 2000).

In second instance, the factors that interact in the development of the adaptive skills in children of international adoption –assessed with the *Behavior Assessment System for Children- Parents*

*Questionnaire* (BASC: Reynolds & Kamphaus, 1992; González-Marqués et al., 2004) - have been studied and three factors appear significant:

—The *t-tests* indicate that a secure attachment pattern constitutes a factor that facilitates the development of these skills that include the ability to adapt to changes in routine and new teachers, changing from one task to another and sharing toys or belongings with other children; social skills- which include the interpersonal aspects of social adaptation which research associates significantly to the resilience of the subject (Collishaw et al. 2007)- and leadership skills, including elements that are closely related to social skills, and others related to cognitive skills involved with problem solving, as having many ideas, suggestions and easily making good decisions. When conducting the logistic regression, though, the effect of the non-secure attachment pattern is not strong enough to have a direct effect on obtaining a risk score in the scales, although the sensitivity analysis indicates that these results may be due to a sampling deficiency.

—The age at adoption constitutes a factor that influences the development of the adaptive skills: for each year of the child's life that elapsed before the adoption, the risk that the child's scores would be lower increased significantly.

—The third factor that has an effect over the development of the adaptive skills is the continent of origin: the children from Eastern European countries were twice as likely to receive low scores on the adaptive skills scale as were children from the other continents. Within this group of Eastern European adoptees, it is remarkable the fact that the socioeconomic status of the adoptive family is a further predictor of adaptive skills. Children adopted into low and medium-low socioeconomic status families scored lower in the adaptive skills' scales than Eastern European children adopted into medium and medium-high socioeconomic status families. The hypothesis to explain this effect is that, perhaps, it is more difficult for these lower socioeconomic status families to allocate economic and educational resources to their children in order to deal with any adaptation difficulty that may arise.

In the third research, when analysing the social relationships among the internationally adopted children, the sample is 116 children aged 8-11. The information has been gathered from the adoptees themselves only, via interview about their attachment relationships (FFI, *Friends and Family Interview*, Steele & Steele, 2005) and via the *Behavior Assessment System for Children — Self Questionnaire* (BASC: Reynolds & Kamphaus, 1992; González-Marqués et al., 2004).

The results of the attachment pattern are very similar to the previous article because it is the same sample, as explained before, and very similar to those estimated in normative samples according to Van IJzendoorn et al. meta-analysis (1999). These results are in line with the Van den Dries et al. meta-analysis (2009) where when using self-report measures, such as questionnaires and interviews, adoptees had similar attachment relationships with their adoptive parents as their non-adopted counterparts.

These results are especially relevant due to the fact that most of the studies about the psychological adjustment of the adopted minors have been based on the answers of the parents or teachers which can constitute a bias based on the perceptions of adult people around the adoptees but not on the adoptees themselves.

Despite this similarity in the attachment pattern of the adopted children compared with normative samples, results show significant differences in the attachment pattern depending of the countries of origin, being the children from the Eastern European countries the ones who encounter more difficulties to develop a secure attachment pattern. The impact of the secure attachment pattern over the interpersonal and relationships with the parents of the children is underlined.

The three main research questions have been answered:

— Children with a secure attachment pattern obtain better scores in the scales related to their social relationships – relationships with the parents and

interpersonal relationships- than the children with an insecure attachment pattern;

—The age of adoption is a factor that influences the development of the social skills of the adopted children - the interpersonal relationships and the social stress scale- but the age at adoption exerts no effect in the relationship with the parents scale, highlighting that the main effect on this scale is the secure attachment pattern of the child independently of the age at the moment of the adoption,

—The children adopted from Eastern European countries display more difficulties in the interpersonal relationships and the social stress scale than the children adopted from other continents.

## 6. Conclusion

The research has been focused on the study of the factors that promote the resilience in internationally adopted children taking into account the theoretical model (see Figure 2).

Due to the large amount of factors implied in the psychological adjustment of children of international adoption, this research has focused on the main factors that literature describes as exerting an effect over the child's psychological development, as detailed in the Introduction.

The **secure attachment pattern** appears as a relevant factor that promotes the development of adaptive skills, and children with a secure attachment pattern obtain higher scores in the scale; it appears to be a relevant factor, as well, in the development of interpersonal relationships and in the relationships with the parents. In fact, it is the only factor relevant in this last scale, indicating the direct relation between the attachment with the parents and the relationship with them.

The rates on security of the attachment pattern are very similar to those of normative samples (Van IJzendoorn et al., 1999). It would be logical to expect less attachment security in adopted children, because of the separation and loss of their birth parents and multiple caregivers during the first years of life; but in this research we find a similar percentage of secure attachment pattern and a very high level of insecure attachment pattern, indicating that the adopted



children develop an adaptive attachment pattern, being secure or insecure, and very few children are categorized as disorganized.

The time spent with the adoptive family does not appear to have a significant effect on the development of a secure attachment pattern; three hypotheses arise from this fact. The first one is that favorable pre-adoption conditions have influenced the child's emotional development, such as a close relationship with a primary caregiver, but due to the lack of information from the families, this hypothesis cannot be confirmed. The second one, is that there are some other factors, such as the family parenting styles, that promote the development of a secure relationship with the adoptive parents; this hypothesis should be tested in future research. The third hypothesis, and as mentioned in the Introduction, adoptive families perceive themselves as more affectionate and communicative than non adoptive families do, a factor which might support the development of a secure attachment relationship for the child (Bernedo et al., 2007), and the quality of parent-child relationships in adoptive families can promote healthy development for adoptees that may protect against risk factors (Whitten & Weaver, 2010).

The **younger age at adoption** appears to be a relevant as well as a factor that promotes the development of adaptive and social skills, in line with Tan & Camras research (2011). In fact, children placed from 3 years of age, encounter more attention difficulties, and for every year before the adoption, the risk to obtain scores within the risk range on adaptive skills, increases; as it does per every month before the adoption over the interpersonal relationships scale and

over the stress experienced by the child in the social relationships scale. It is relevant to point, that the age at adoption does not exert any effect on the development of a secure attachment pattern neither on the relationships with the parents scale.

A notable fact related to pre adoptive circumstances, such as institutionalization, is that the time spent in institutions seems to be associated to diverse developmental areas: the onset of behaviour problems, attention problems, atypicality, depression, poorer adaptability, poorer social skills, less leadership capacity, more externalized and internalized problems, and, in general, poorer adaptive skills, as well as more feelings of inadequacy, thus confirming the unfavorable effects of institutionalization found in other international studies (Rutter et al., 1998).

The results of the three articles indicate that children adopted from **Eastern European countries** encounter, in general, attention problems; more difficulties in developing a secure attachment pattern, to develop adaptive skills; they have more difficulties in the interpersonal relationships and display higher scores in the social stress scale. There are no differences in the relationships with the parents, because it is the secure attachment pattern the factor that has a direct effect on those, but it is logical to infer that if children adopted from Eastern European countries have more difficulties in developing a secure attachment pattern, they have more difficulties in the relationship with the parents, as predicted in other studies (Stams et al., 2000; Van den Dries et al., 2009; Verhulst et al., 1990).

As mentioned in the Introduction, the socioeconomic and political peculiarities of international adoption in the countries of origin can provide some data about the life conditions of these minors before being adopted (Selman, 2002) and children from Eastern Europe are suggested to have experienced the most severe deprivation (Miller, 2005; Rutter, O'Connor, & the English and Romanian Adoptees (ERA) Study Team, 2004), display more neurological symptomatology, higher rates of prenatal exposure to tobacco and to alcohol. The long-term impact of such exposure and its effects on the fetus, and the prevalence of these problems among the institutionalized minors in Eastern Europe is more pronounced (Miller et al., 2009).

Alcohol consumption rate in Russia is one of the highest in the world (WHO: World Health Organization, 2011). The recent research by Balachova et al. (2012) examined drinking patterns among pregnant and non-pregnant women of childbearing age in Russia and they found that 89% of non-pregnant women reported consuming alcohol and 65% reported binge drinking in the past 3 months and women who might become pregnant consumed alcohol similarly to women who were not likely to become pregnant.

Alcohol consumption during pregnancy produces a series of developmental abnormalities in the fetus leading to expressions encompassed in the term FASD (the acronym refers to the Fetal Alcohol Spectrum Disorders). The most severe form of this disorder includes a number of craniofacial characteristics and is known as Fetal Alcohol Syndrome (FAS). The spectrum of involvement may

include partial fetal alcohol syndrome (PFAS), Alcohol-Related Neurodevelopmental Disorder (ARND), and Alcohol-related birth defects (ARBD).

Studies indicate that the number of institutionalized children in Eastern Europe with FASD is high, although the prevalence is still unknown. The study by Landgren Svensson, Strömland, and Andersson Gronlund, in a sample of 71 children adopted from Eastern Europe in Sweden in 2010, reports that 52% of children were diagnosed with Fetal Alcohol Syndrome, PFAS and ARND, and 51% of children were diagnosed with Attention Deficit Disorder / Hyperactivity. Robert et al. (2009) in Canada reported that 69% of children adopted from Eastern Europe have physical parameters and / or neurological abnormalities compatible with FASD; and Miller et al. (2009) report that 45% of children in Russian orphanages have facial intermediate phenotypes consistent with prenatal alcohol exposure.

This literature review supports the hypothesis that some of the difficulties that encounter the children adopted from Eastern European countries might be related to alcohol related neurodevelopmental disorders among the Eastern European sample, not being yet diagnosed, to the best of our knowledge; and a proper neuropsychological assessment of the children should be one of the future research objectives.

The factors considered in this research, studying the children's resilience expressions through their adaptive and maladaptive behavior, their adaptive and social skills, is a modest but significant

contribution in the resilience studies. Adoption is a complex situation that implies the interaction of multiple factors: individual and environmental ones, such as the adoptive family parenting styles. Each of these factors shall be studied in detail in order to study the importance of the factor on the child development; and shall be studied in the interaction with the other factors, where each factor plays a crucial role.

## **7. Final considerations and future research**

Results should be interpreted with caution due to diverse limitations that appear in each paper. The main limitations are: that the sampling was incidental, families were recruited through an invitation, and only those who accepted are the final participants of the study; and that some of the results could not be compared with those of a non adopted children sample, though this research continues obtaining data and the intention is to be able to compare the data in the near future.

Regarding the findings on the difficulties that the children from Eastern European countries encounter, research about the Alcohol Related Neurodevelopmental Disorders among this sample is needed.

As mentioned before, research on the interaction of the factors implied in the Theoretical Model (Figure 2) is needed to complement this research. Future research objectives include the analysis of more factors that interact in the theoretical model and whose data is already collected: individual factors such as cognitive ability and temperament, and post adoptive factors such as the adoptive family parenting styles.



# PART V





## 8. References

- Ainsworth, M. D., Blehar, M. C., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the strange situation*. Hillsdale, NJ: Laurence Erlbaum.
- Balachova, T., Bonner, B., Chaffin, M., Bard, D., Isurina, G., Tsvetkova, L. and Volkova, E. (2012), Women's alcohol consumption and risk for alcohol-exposed pregnancies in Russia. *Addiction*, *107*, 109–117.
- Barcons, N., Fornieles, A., & Costas, C. (2011). International adoption: Assessment of adaptive and maladaptive behavior of adopted minors in Spain. *Spanish Journal of Psychology*, *14*, 123 -132.
- Barcons, N., Abrines, N., Brun, C., Sartini, C., Fumadó, V., & Marre, D. (2012). Social relationships in children from intercountry adoption. *Children and Youth Services Review*, *34*, 955-961.
- Barcons, N., Abrines, N., Brun, C., Sartini, C., Fumadó, V., & Marre, D. (in press). Attachment and adaptive skills in children of international adoption. *Child and Family Social Work*.
- Barth, R., Berry, M., Yoshikami, R., Goodfield, R., & Carson. (1988). Predicting adoption disruption. *Social Work*, *33*, 227-233.

- Beckett, C., Maughan, B., Rutter, M., Castle, J., Colvert, E., Groothues, C.,... Sonuga-Barke, E. J. S. (2006). Do the effects of early severe deprivation on cognition persist into early adolescence? Findings from the English and Romanian Adoptees Study. *Child Development, 77*, 696-711.
- Berástegui, A. (2003). *Adopciones Truncadas y en Riesgo en la Comunidad de Madrid*. Madrid: Consejo Económico y Social.
- Berástegui, A. (2005). *La adaptación familiar en adopción internacional*. Madrid: Consejo Económico y Social.
- Bernedo, I. M., Fuentes, M. J., Fernández, M., & Bersabé, R. (2007). Percepción de las estrategias de socialización parentales en familias adoptivas y no adoptivas. *Psicothema, 19*, 597-602.
- Berry, M., & Barth, R. (1989). Behavioral problems of children adopted when older. *Children and Youth Services Review, 11*, 221-238.
- Bimmel, N., Juffer, F., Van IJzendoorn, M. H., & Bakermans-Kranenburg, M. J. (2003). Problem behavior of internationally adopted adolescents: a review and metaanalysis. *Harvard Review of Psychiatry, 11*, 64-78.
- Bowlby, J. (1969/1982). *Attachment and loss: Vol. 1. Attachment*. New York: Basic Books.

- Bowlby, J. (1973). *Attachment and loss: Vol. 2. Separation*. New York: Basic Books.
- Bowlby, J. (1980). *Attachment and loss: Vol. 3. Loss*. New York: Basic Books.
- Brodzinsky, D. M., Radice, C., Huffman, L., & Merkler, K. (1987). Prevalence of clinically significant symptomatology in a nonclinical sample of adopted and nonadopted children. *Journal of Clinical Child Psychology, 16*, 350-356.
- Brodzinsky, D. M. (1990). A stress and coping model of adoption adjustment. In D. M. Brodzinsky, & M. D. Schechter (Eds.), *The psychology of adoption* (pp. 3-24). New York, NY: Oxford University Press.
- Brodzinsky, D. M., Schechter, M. D., & Henig, R. M. (1992). *Being Adopted: The Lifelong Search for Self*. New York: Doubleday.
- Brodzinsky, D. M. (1993). Long-term outcomes in adoption. *The Future of Children, 3*, 153-166.
- Cassidy, J., & Shaver, P. R. (Eds.). (1999). *Handbook of Attachment: Theory, Research, and Clinical Applications*. New York: Guilford Press.
- Chisholm, K. (1998). A three year follow-up of attachment and indiscriminate friendliness in children adopted from Romanian orphanages. *Child Development, 69*, 1092-1106.

- Collishaw, S., Pickles, A., Messer, J., Rutter, M., Shearer, C., & Maughan, B. (2007). Resilience to adult psychopathology following childhood maltreatment: Evidence from a community sample. *Child Abuse and Neglect, 31*, 211–229.
- Colvert, E., Rutter, M., Beckett, C., Castle, J., Groothues, C., Hawkins, A., et al. (2008). Emotional difficulties in early adolescence following severe early deprivation: findings from the English and Romanian adoptees study. *Development and Psychopathology, 20*, 547–567.
- Dalen, M., Hjern, A., Lindblad, F., Odenstad, A., Ramussen, F., & Vinnerljung, B. (2008). Educational attainment and cognitive competence in adopted men: a study of international and national adoptees, siblings, and a general Swedish population. *Children and Youth Services Review, 30*, 1211–1219.
- Erich, S., & Leung, P. (2002). The impact of previous type of abuse and sibling adoption upon adoptive families. *Child Abuse & Neglect, 26*, 1045–1058.
- Fernández, M. (2004). La investigación internacional sobre adopción. Análisis, conclusiones y perspectivas de futuro. *Anuario de Psicología Jurídica, 14*, 39-66.
- González-Marqués, J., Fernández-Guinea S., Pérez-Hernández, E., Pereña, J., & Santamaría, P. (2004). *Sistema de evaluación de la conducta en niños y adolescentes: BASC*. Madrid: TEA.

- Goodman, R., & Scott, S. (2005). Fostering and Adoption. *Child Psychiatry* (pp. 305–311). Oxford: Blackwell Publishing.
- Grotevant, H.D., Van Dulmen, M.H., Dunbar, N., Nelson-Christinedaughter, J., Christensen, M., Fan, X., & Miller, B.C. (2006) Antisocial behavior of adoptees and non adoptees: Prediction from early history and adolescent relationships. *Journal of Research on Adolescence*, *16*, 105–131.
- Gunnar, M. R., Bruce, J., & Grotevant, H. D. (2000). International adoption of institutionally reared children: Research and policy. *Development and Psychopathology*, *12*, 677–693.
- Gunnar, M.R., Van Dulmen, M., & the International Adoption Project Team.(2007) Behavior problems in postinstitutionalized internationally adopted children. *Development and Psychopathology*, *19*, 129–148.
- Habersaat, S., Tessier, R. & Pierrehumbert, B. (2011). Influence of attachment and maternal monitoring style in the emergence of behavioural problems in adolescence in relation to age at adoption. *Schweizer Archiv für Neurologie und Psychiatrie*, *162*, 21-26.
- Hague Conference on Private International Law (1993). Convention on protection of children and co-operation in respect of intercountry adoption. Retrieved from [http://www.hcch.net/index\\_en.php?act=conventions.text&cid=69](http://www.hcch.net/index_en.php?act=conventions.text&cid=69) on October, 11th, 2011.

- Hawk, B., McCall, R. (2010). CBCL Behavior Problems of Post-Institutionalized International Adoptees. *Clinical Child and Family Psychology Review*, 13, 199-211.
- Hjern, A., Lindblad, F., & Vinnerljung, B. (2002). Suicide, psychiatric illness, and social maladjustment in intercountry adoptees in Sweden: A cohort study. *Lancet*, 360, 443-448.
- Hodges, J., & Tizard, B. (1989). Social and family relationships of exinstitutional adolescents. *Journal of Child Psychology and Psychiatry*, 30, 77-97.
- Howe, D. (2005). *Child abuse and neglect: Attachment, development and intervention*. Basingstoke: Palgrave Macmillan.
- Johnson, D. (2000). Adopting a post-institutionalized child: What are the risks? In T. Tepper, L. Hannon & D. Sandstrom (Eds.), *International adoption: Challenges and opportunities* (2nd ed., pp. 5-8). Meadowlands: PA: Parent Network for Post Institutionalized Children.
- Johnson, D. (2002). Adoption and the effect on children's development. *Early Human Development*, 68, 39-54.
- Juffer, F. & Van IJzendoorn, M. H. (2009) 'International Adoption Comes of Age: Development of International Adoptees from a Longitudinal and Meta-analytical Perspective'. In G. Wrobel and E. Neil (Eds.), *International Advances in Adoption Research* (pp. 169-192). London: John Wiley.

- Juffer, F., Stams, G., & van IJzendoorn, M. (2004). Adopted children's problem behavior is significantly related to their ego resiliency, ego control, and sociometric status. *Journal of Child Psychology and Psychiatry*, *45*, 697–706.
- Juffer, F., & Van IJzendoorn, M. H. (2005). Behavior problems and mental health referrals of international adoptees: a meta-analysis. *Journal of the American Medical Association*, *293*, 2501–2515.
- Juffer, F., & Van IJzendoorn, M. H. (2007). Adoptees do not lack self-esteem: A meta-analysis of studies on self-esteem of transracial, international and domestic adoptees. *Psychological Bulletin*, *133*, 1067–1083.
- Kirschner, D., & Nagle, L. S. (1995). Antisocial behaviour in adoptees: Patterns and dynamics. *Child and Adolescent Social Work*, *5*, 300-314.
- Landgren, M., Svensson, L., Stromland, K., & Andersson Gronlund, M. (2010). Prenatal alcohol exposure and neurodevelopmental disorders in children adopted from Eastern Europe. *Pediatrics*, *125*, 1178-85.
- Lindblad, F., Hjern, A., & Vinnerljung, B. (2003). Intercountry adopted children as young adults: a Swedish cohort study. *The American Journal of Orthopsychiatry*, *73*, 190–202.



- Lindblad , F., Ringbäck Weitoft, G., & Hjern, A. (2010). ADHD in international adoptees: A national cohort study. *European Child and Adolescent Psychiatry, 19*, 37-44.
- Main, M., & Solomon, J. (1990). Procedures for identifying infants as disorganised/disorientated during the Ainsworth Strange Situation. In M. T. Greenberg, D. Cicchetti & E. M. Cummings (Eds.), *Attachment in the pre-school years: Theory, research and intervention* (pp.121-160). Chicago: University of Chicago Press.
- Marcovitch, S., Goldberg, S., Gold, A., Washington, J., Wasson, C., Krekewich, K., & Handley-Derry, M. (1997). Determinants of behavioral problems in Romanian children adopted in Ontario. *International Journal of Behavioral Development, 20*, 17-31.
- Marre, D. (2009). Los silencios de la adopción en España. *Revista de Antropología Social, 18*, 97-126.
- Merz E.C. & McCall R.B. (2010). Behavior problems in children adopted from psychosocially depriving institutions. *Journal of Abnormal Child Psychology, 38*, 459-470.
- Miller, B. C., Fan, X., Grotevant, H. D., Christensen, M., Coyle, D., & van Dulmen, M. (2000). Adopted adolescents' overrepresentation in mental health adoptees' problems or parents' lower threshold for referral?. *Journal of the American counseling: Academy of Child and Adolescent Psychiatry, 39*, 1504–1511.

- Miller, L., Chan, W., Tirella, L., & Perrin, E. (2009). Outcomes of children adopted from Eastern Europe. *International Journal of Behavioral Development, 33*, 289-298.
- Moliner, M., & Gil, J. M. (2002). Estudios sobre la adaptación de los menores en la adopción internacional. *Revista de Psicología General y Aplicada, 55*, 603-623.
- Morison, S. J., Ames, E. W., & Chisholm, K. (1995). The development of children adopted from Romanian orphanages. *Journal of Developmental Psychology, 41*, 411-430
- Odenstad, A., Hjern, A., Lindblad, F., Rasmussen, F., Vinnerljung, B., Dalen, M. (2008). Does age at adoption and geographic origin matter? A national cohort study of cognitive test performance in adult inter-country adoptees. *Psychological Medicine, 38*, 1803–1814.
- Orjales, I. (1997). Adaptación familiar, desarrollo intelectual y trastornos psicopatológicos en los niños de adopción internacional. *Psicología Educativa, 3*, 189-201.
- Pierrehumbert, B., Miljkovitch, R., Plancherel, B., Halfon, O. & Ansermet, F. (2000). Attachment and temperament in early childhood; Implications for later behavior problems. *Infant and Child Development, 9*, 17-32.
- Reynolds, C. R., & Kamphaus, R. W. (1992). *Behavior Assessment System for Children manual*. Circle Pines, MN: American Guidance Service.

- Robert, M., Carceller, A., Domken, V., Ramos, F., Dobrescu, O., Simard, M. N., et al. (2009). Physical and neurodevelopmental evaluation of children adopted from Eastern Europe. *The Canadian Journal of Clinical Pharmacology = Journal Canadien De Pharmacologie Clinique*, 16, e432-40.
- Rutter, M. (1985). Family and school influences on cognitive development. *Journal of Child Psychology and Psychiatry*, 26, 683-704.
- Rutter, M. (1987). Psychosocial resilience and protective mechanisms. *American Journal of Orthopsychiatry*, 57, 316-331.
- Rutter, M. (1990). Psychosocial resilience and protective mechanisms. In J. Rolf, A. S. Masten, D. Cicchetti, K. H. Nuechterlein, & S. Weintraub (Eds.), *Risk and protective factors in the development of psychopathology* (181-214). New York: Cambridge University Press.
- Rutter, M., Andersen-Wood, L., Becket, C., Bredenkamp, D., Castle, J., Dunn, J., ... White, A. (1998). Developmental catch-up and deficit, following adoption after severe global early privation. *Journal of Child Psychology and Psychiatry*, 39, 465-476.
- Rutter, M. (2007). Resilience, competence and coping. *Child Abuse and Neglect*, 31, 205-209.

- Rutter, M., & O'Connor, T. G., & the English and Romanian Adoptees (ERA) Study Team. (2004). Are there biological programming effects for psychological development? Findings from a study of Romanian adoptees. *Developmental Psychology, 40*, 81–94.
- Scroggs, P. H., & Heitfield, H. (2001). International adopters and their children: birth culture ties. *Gender Issues, 19*, 3–30.
- Selman, P. (2002). Intercountry adoption in the new millennium: The 'quiet migration' revisited. *Population Research and Policy Review, 21*, 205-225.
- Selman, P. (2009). The movement of children for international adoption: developments and trends in receiving states and states of origin, 1998–2004. In D. Marre, & L. Briggs (Eds.), *International Adoption: Global Inequalities and the Circulation of Children*. New York: New York University Press.
- Selman, P. (2011). Global Trends in Intercountry Adoption: are these in the best interests of the child? 5th International AFIN Congress. Barcelona.
- Smyke, A. T., Koga, S. F., Johnson, D. E., Fox, N. A., Marshall, P. J., Nelson, C. A., et al. (2007). The caregiving context in institution reared and family reared infants and toddlers in Romania. *Journal of Child Psychology and Psychiatry, 48*, 210–218.

- Stams, G. J. J. M., Juffer, F., Rispen, J., & Hoksbergen, R. A. C. (2000). The development and adjustment of 7-year-old children adopted in infancy. *Journal of Child Psychology and Psychiatry, 41*, 1025–1037.
- Steele, H., & Steele, M. (2005). The construct of coherence as an indicator of attachment security in middle childhood. the friends and family interview. In K. A. Kerns, & R. A. Richardson (Eds.), *Attachment in middle childhood* (pp. 137–160). New York, NY, US: Guilford Press.
- Stryker, R. (2011). The War At Home: Affective Economics and Transnationally Adoptive Families in the United States. *International Migration, 49*, 25–49.
- Tan, T. X. (2006). History of early neglect and middle childhood social competence. *Adoption Quarterly, 9*, 59–72.
- Tan, T. X., & Camras, L. A. (2011). Social skills of adopted Chinese girls at home and in school: Parent and teacher ratings. *Children and Youth Services Review, 33*, 1813-1821.
- Tieman, W., Van der Ende, J., & Verhulst, F. C. (2005). Psychiatric disorders in young adult intercountry adoptees: An epidemiological study. *American Journal of Psychiatry, 162*, 592- 598.
- Tieman, W., van de Ende, J., & Verhulst, F. (2006). Social functioning of young adult intercountry adoptees compared to

nonadoptees. *Social Psychiatry and Psychiatric Epidemiology*, *41*, 68–74.

Ungar, M. (2011). The Social Ecology of Resilience: Addressing Contextual and Cultural Ambiguity of a Nascent Construct. *American Journal of Orthopsychiatry*, *81*, 1-17.

United Nations (1989). Convention on the rights of the child. Retrieved from <http://www2.ohchr.org/english/law/crc.htm> on October, 11th, 2011

Van den Dries, L., Juffer, F., Van IJzendoorn, M.H. & Bakermans-Kranenburg, M. (2009). Fostering security? A meta-analysis of attachment in adopted children. *Children and Youth Services Review*, *31*, 410-421.

Van IJzendoorn, M. H., Juffer, F., & Klein Poelhuis, C. W. (2005). Adoption and cognitive development: a meta-analytic comparison of adopted and non-adopted children's IQ and school performance. *Psychological Bulletin*, *131*, 301–316.


Van IJzendoorn, M.H., Schuengel, C. & Bakermans-Kranenburg, M.J. (1999). Disorganized attachment in early childhood: meta-analysis of precursors, concomitants, and sequelae. *Development and Psychopathology*, *11*, 225–249.

Verhulst, F. C., Althaus, M., & Versluis-den Bieman, H. J. (1990). Problem behavior in international adoptees: I. An epidemiological study. *Journal of the American Academy of Child and Adolescent Psychiatry*, *29*, 94-103.

- Vorria, P., Papaligoura, Z., Dunn, J., van IJzendoorn, M. H., Steele, H., Kontopoulou, A., et al. (2003). Early experiences and attachment relationships of Greek infants raised in residential group care. *Journal of Child Psychology and Psychiatry*, *44*, 1208–1220.
- Vorria, P., Papaligoura, Z., Sarafidou, J., Kopakaki, M., Dunn, J., van IJzendoorn, M. H., et al. (2006). The development of adopted children after institutional care: A followup study. *Journal of Child Psychology and Psychiatry*, *47*, 1246–1253.
- Welsh J. A., Viana A. G., Petrill S. A., & Mathias, M. D. (2007). Interventions for internationally adopted children and families: A review of the literature. *Child and Adolescent Social Work Journal*, *24*, 285-311.
- Werner, E. E. (1993). Risk, resilience, and recovery: Perspectives from the Kauai longitudinal study. *Development and Psychopathology*, *5*, 503-515.
- Werner, E. E. (2000). Protective factors and individual resilience. In J.P Shonkoff & S.J. Meisels (Eds.), *Handbook of early childhood intervention* (pp. 115–132). New York: Cambridge University Press.
- Whitten, K. L., & Weaver, S.R. (2010). Adoptive Family Relationships and Healthy Adolescent Development: A Risk and Resilience Analysis. *Adoption Quarterly*, *13*, 209-226.

- Wierzbicki, M. (1993). Psychological adjustment of adoptees: A meta-analysis. *Journal of Clinical Child Psychology*, 22, 447-454.
- Wiik, K.L., Loman, M.M., Van Ryzin, M.J., Armstrong, J.M., Essex, M.J., Pollak, S.D., Gunnar, M.R. (2011). Behavioral and emotional symptoms of post-institutionalized children in middle childhood. *Journal of Child Psychology and Psychiatry*, 52, 56-63.
- World Health Organization (WHO). Global status report on alcohol and health. WHO 2011. Retrieved from [http://www.who.int/substance\\_abuse/publications/global\\_alcohol\\_report/en/index.html](http://www.who.int/substance_abuse/publications/global_alcohol_report/en/index.html) on 18th, March, 2012.
- Zeanah, C. H. (2000). Disturbances of attachment in young children adopted from institutions. *Developmental and Behavioural Pediatrics*, 21, 230–236.
- Zeanah, C., Egger, H.L., Smyke, A.T., Nelson, C.A., Fox, N.A., Marshall, P.J., & Guthrie, D. (2009). Institutional rearing and psychiatric disorders in Romanian preschool children. *American Journal of Psychiatry*, 166, 777–785.



The background of the page is a dark, atmospheric photograph of a landscape. The upper portion is dominated by a heavy, dark sky with swirling, textured clouds. Below the sky, a range of dark, rugged mountains or hills stretches across the horizon. In the foreground, a body of water reflects the light from the sky, creating a shimmering, textured surface. The overall color palette is monochromatic, consisting of various shades of dark teal, blue, and black.

Departament de Psicologia Clínica i de la Salut  
Facultat de Psicologia  
Universitat Autònoma de Barcelona  
2012