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Highlights

Social relationships in children from intercountry adoption

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► We examine social relationships of 116 internationally adopted children aged 8–11. ► Adoptees from Eastern Europe struggle in developing a secure attachment pattern. ► A secure attachment pattern correlates on the children's social relationships. ► Adoptees from Eastern European countries struggle in developing social skills. ► Later age at adoption has an effect on interpersonal relationships and social stress.

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Social relationships in children from intercountry adoption

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ABSTRACT

In this study we aim 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, 2006) and the social relationships have been assessed with the *Behavioral 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.

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

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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 live 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 craneoencephalic 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, 2006) and via the *Behavioral Assessment System for Children — Self Questionnaire* (Reynolds & Kamphaus, 1992; Spanish adaptation TEA, 2004). Q4 Q5

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 *Behavioral 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).
  - Mean age at adoption was 21.27 months ($SD = 12.26$).
  - 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 ($SD = 21.44$).

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- 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 (Unpublished manuscript, 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 ant 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. 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. 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 (α = .81), negative attitude towards teachers (α = .72), atypicality (α = .79), locus of control (α = .77), *social stress* (α = .72), anxiety (α = .81), depression (α = .83), and sense of inadequacy (α = .72); 5 adaptive scales: *interpersonal relations* (α = .83), *relations with parents* (α = .56), self-esteem (α = .75), and self-reliance (α = .61); it also provides 4 global dimensions: clinical maladjustment (α = .90), academic maladjustment (α = .85), personal adjustment (α = .84), and index of emotional symptoms (α = .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 the number of expected observations in any of the cells was always greater than five).

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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%

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

	Coef.	p-Value	95% Conf. Interval
Country of origin by groups			
Eastern Europe[a]			
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)
Age at adoption of the case (in months)			
per month	0.11	0.04**	(0.00; 0.21)
Sex of the child			
Masculine[a]			
Femenine	1.31	0.56	(−3.06; 5.68)
Attachment pattern categories			
Secure[a]			
Insecure	0.59	0.79	(−3.72; 4.90)

[a] 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 2
Attachment pattern by sex, country of origin and age at adoption.

		Sex 4.518 (p = .034)[a]		Country of origin by groups 11.840 (p = .008)[a]				Age at adoption 2.571 (p = .276)[a]		
		Masc.	Fem.	Eastern Europe	Latino 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%

[a] Chi-square test (χ^2).

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

	Coef.	p-Value	95% Conf. Interval
Country of origin by groups			
Eastern Europe[a]			
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)
Age at adoption of the case (in months)			
per month	−0.03	0.6	(−0.12; 0.07)
Sex of the child			
Masculine[a]			
Femenine	0.87	0.67	(−3.13; 4.86)
Attachment pattern categories			
Secure[a]			
Insecure	−4.09	0.04**	(−8.03; −0.15)

[a] 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
Country of origin by groups			
Eastern Europe[a]			
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)
Age at adoption of the case (in months)			
per unit	−0.11	0.04**	(−0.21; −0.01)
Sex of the child			
Masculine[a]			
Femenine	0.98	0.64	(−3.20; 5.16)
Attachment pattern categories			
Secure[a]			
Insecure	−4.04	0.05**	(−8.16; 0.08)

[a] 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 hypothesis presented in the introduction has 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

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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.

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