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Domestic adoption in Romania: behavioral adjustment in a sample of adolescents

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Abstract

A considerable body of research has analyzed the development of children internationally adopted from Romania. However, domestic adoption remains largely uninvestigated. Our study examined the behavioral adjustment of 52 Romanian adolescents domestically adopted. Adoptive mothers and their children completed ASEBA school-age assessment forms. While overall our sample did not differ from the normative population, the rate of subjects obtaining clinical scores was higher. Behavioral problems did not appear to be linked to the considered pre-adoption risk factors. The overall positive adjustment of this rare sample of domestic adoptees encourages a deeper understanding of the mechanisms involved in the success of this child-welfare policy.

Key-words:

Domestic adoption; institutionalization; age at adoption; placement instability; behavioral adjustment; ASEBA.

Introduction

The adoption of children is a major topic in social work research and intervention either at international or national level. Lot of children are adopted all over the world and in 1990 and following years, the fall of the communisms made Romania the most important pool for child adoption focused on institutionalized children.

Longitudinal studies monitoring the outcomes of institutionalized children following adoption have found evidence of developmental catch up in several areas. Once a child enters family-based care, striking recovery takes place in terms of physical growth (i.e., weight and height) (Canzi, Rosnati, Palacios, & Román, 2017; Judge, 2003; Rutter, 1998), IQ (Beckett et al., 2006; Palacios & Brodzinsky, 2010; Rutter, 1998) and self-esteem (Juffer & van IJzendoorn, 2007).

Depending on the comparison group used, studies within this line of enquiry have focused on different aspects of the recovery process. Although the most interesting comparison would be with non-adopted peers who remained in their at-risk biological family or in institutions, it is difficult to find such longitudinal studies: a notable exception is the controversial *Bucharest Early Intervention Project* in which half of a sample of children living in Romanian institutions was randomly selected and placed in foster-care created as part of the study (Zeanah, Egger, Smyke, Nelson, Fox, Marshal, Guthrie, 2009). At follow up about two years later, the children who had been removed from institutional care were less likely to have developed depression and anxiety.

Nevertheless, when both institutional and foster-care groups were compared with a

normative sample, it emerged that having ever been placed in an institution was associated *per se* with a higher incidence of psychiatric disorders (Zeanah et al., 2009). Indeed, studies comparing adoptees to peers raised by their biological parents (non-adopted) offer a different perspective on adoption. A meta-analysis (Wierzbicki, 1993) of 66 studies comparing adoptees with non-adopted individuals suggested no differences between the two groups in terms of internalizing (anxiety, depression, attention problems), neurological, and psychotic issues, but adoptees were over-represented in mental health units, as well as displaying more frequent externalizing behaviors (hyperactivity disorders, oppositional-defiant conduct problems, and substance abuse) and less efficient psychological functioning.

In general, adoptees appear to mainly present externalizing behavioral problems and this is true especially for boys (Bimmel, Juffer, van IJzendoorn, & Bakermans-Kranenburg, 2003, Brodzinsky, Smith, & Brodzinsky, 1998). Meta-analytic results reported higher rates of behavioral problems among domestic adoptees, compared to international adoptees (Juffer & van IJzendoorn, 2005).

Studies analyzing the behavioral adjustment mostly focus on adopted adolescents (Barroso, Barbosa-Ducharne, Coelho, Costa, Silva, 2017). All teenagers face rapid physical changes, while their psychological development is characterized by major shifts in their cognitive and emotional capacities. Socio-emotional issues become particularly sensitive at this age, especially among adoptees (Bimmel et al., 2003; Harf, Taieb, & Moro, 2006). The literature has shown that the typical issues of adolescence tend to arise earlier for adoptees than for their non-adoptive peers (Juffer & van IJzendoorn, 2005). In

addition to these normative changes, adopted teenagers also face the further burden of identity issues, such as who they are and where they come from (Bimmel et al., 2003).

The review and meta-analytic papers suggested that adopted children and adolescents appear to be quite well integrated into their new contexts, although they are more likely to be referred to mental health services (Bimmel et al., 2003; Juffer & van IJzendoorn, 2005). However, the latter outcome might be attributable both to a tendency on the part of adoptive parents to seek professional help, and to the effect of adoptees in the extreme tails of the distribution. In other words, it may be that adopted adolescents display a disproportionate rate of severe mental health problems due to the negative pre-adoptive backgrounds of some. In sum, adoptees display an impressive rate of recovery, but it appears that their pre-adoption experiences leave a mark on their later neuro-psychological adjustment (van IJzendoorn & Juffer, 2006; Beckett et al., 2006; Chugani et al., 2001; Barroso et al., 2017). **These findings suggest the need to analyze and compare the effects of the different risk factors such age at adoption, number and type of placements, institutional care, that can come into play in the behavioral and socio-emotional adjustment of internationally and domestically adopted adolescents.**

Although many studies have treated age at adoption as a sensitive factor for adjustment (Beckett et al., 2006; Chisholm, 1998; Gunnar, van Dulmen, & the International Adoption Project Team, 2007; Judge, 2003; Juffer & van IJzendoorn, 2005; Julian, 2013; Habersaat et al., 2010; Kim, Shin, & Carey, 1999; O'Connor, Rutter, Beckett, Keaveney, & Kreppner, 2000; Verhulst, Althaus, & Versluis-den Bieman, 1990a, 1990b), researchers have not yet reached full consensus about the precise nature of its role (Bimmel et al., 2003; Juffer & van IJzendoorn, 2005). Age at adoption did not affect the behavioral

adjustment of a sample of adolescents who were born in Romania and adopted in the Netherlands during early childhood (Rijk et al., 2010). Groza, xxx, & Ungureanu (2012) found no association between attachment and age at placement among Romanian domestic adoptees. It has been argued that the effect of age at adoption should be conceived as the impact of time spent in adverse circumstances, and not of age *per se* (Howe e Wass, 2003; van IJzendoorn et al., 2011).

Few studies have analyzed whether and how prior placement instability and the resulting number of attachment disruptions, such in the case of a child placed in a series of foster care families, adversely affect the socio-emotional development of adopted children. However, in one study with children adopted by age two years, the stability of the pre-adoption care (i.e. fewer changes in care) was shown to be more important than length or quality when analyzing attachment security six months after adoption (Niemann & Weiss, 2012). Similarly, in a study conducted with a sample of 45 adopted children (aged 5 to 6 years), those who had experienced placement instability displayed poorer inhibitory control and were also more likely to be rated as oppositional (Lewis, Dozier, Ackerman, & Sepulveda-Kozakowsky, 2007). With regard to adolescents, a unique and interesting study showed that number of placements prior to adoption was inversely correlated with adoptees' levels of attachment (Erich, Kanenberg, Case, Allen, Bogdanos, 2009).

Institutional care is also believed to act as a risk factor for later adjustment. The low accessibility of caregivers and their frequent turnover seem to have an impact on cognitive and social development (Smyke et al., 2007). Meta-analyses have shown that intercountry adoptees who experienced pre-adoption adversity, for example while in

institutional care, manifested a higher level of overall and externalizing behavior problems than others without an adverse background of this kind, whereas no significant association emerged between internalizing behaviors and early adverse experience (Juffer & van IJzendoorn, 2005).

The earlier-cited Romanian study by Zeanah and colleagues showed that children who were randomly selected to be removed from institutions and placed in foster families were less likely to develop internalizing and psychiatric disorders than children who remained institutionalized (Zeanah et al., 2009). However, the association identified between length and severity of deprivation and attachment disorders in Romanian-born children was found to remain stable through adolescence (O'Connor, Bredekamp, & Rutter, 1999). Furthermore, the duration of institutionalization is often significantly correlated with age at adoption, suggesting that there is a close relationship between these two predictors of attachment (Palacios, Moreno, & Román, 2013).

Romanian adoptees

Prior to 1990, some 100,000 children were placed in orphanages in Romania as a consequence of the policies enforced by the Romanian dictator Ceausescu. Due to a lack of funding, there were few caretakers present in these institutions and the quality of care was often very poor (Roby & Ife, 2009). Children were severely deprived of basic material resources (food, heat, medical care, and hygiene), cognitive and emotional stimulation, and stable interpersonal relationships (Gunnar, Bruce, & Grotevant, 2000). Following the large-scale international adoption of these children (taking in consideration the official existing data over 20,000 children were internationally adopted between 1990

and 2001), researchers set out to examine the effects of early severe deprivation, identifying developmental delays (Rutter, 1998), attachment disturbances (O'Connor et al., 1999), quasi-autistic patterns (Rutter et al., 2007; ter Laak, Rijk, van Dijkum, & Stoutjesdijk, 2005), inattention/over-activity, cognitive impairments (Rutter, Kreppner, & O'Connor, 2001), and in some cases even poor physical health (Hoksbergen, Rijk, Dijkum, & ter Laak, 2004; Johnson et al., 1992). Insecure attachment patterns and indiscriminate friendliness persisted three years after adoption (Chisholm, 1998), as did ADHD symptoms and externalizing behaviors (Hoksbergen, ter Laak, van Dijkum, Rijk, Stoutjesdijk, 2008). Even several years later, children whose overall conditions had improved appeared to retain a certain level of disadvantage: specifically, they were at greater risk of obtaining clinical scores for behavior patterns (Hoksbergen, et al., 2004; Rijk, Hoksbergen, & ter Laak, 2010) and mental health (Groza, Nedelcu, & Proctor, 2017). Following the critics of the European Parliament, in 2001, the Romanian government moved to halt the foreign adoption of the country's institutionalized children, **introducing a so-called *moratorium* on intercountry adoptions, with a view to offering them homes with Romanian families.** Since then, domestic adoption has remained largely unstudied, despite its status as a national priority (especially since 2004, when the first national law on adoption was approved), and despite the fact that it has given homes to around 1,000 children each year between 2004 and 2015, as reported on the webpage of the Romanian Ministry of Labor and Social Justice¹. Very few follow-up studies were conducted on these domestically adopted children prior to 2009, when the FISAN (Factors that Influence Successful National Adoptions) research project was funded by

¹ www.copii.ro

the Romanian Ministry of Education. This study, on which the present paper is based, was aimed at investigating the level of adjustment of adolescents growing up in domestic adoptive families (Groza, et al., 2012; Pierrehumbert, xxx, Tomita, Ungureanu, Habersaat, 2011).

Submitted to ISW for peer review

Objectives of the present study

The aim of the present exploratory study was to investigate the behavioral adjustment of Romanian adolescents who had been domestically adopted as children. Our research design used cross-informant ASEBA measurements (Achenbach, McConaughy, & Howell, 1987) to test for the presence of behavioral problems in this sample of Romanian domestic adoptees. The study's specific aims were:

1. To assess the behavioral adjustment of our sample, by confronting the different informant's agreement and by comparing the scores with the normative standards (Achenbach, et al., 1987; Roskam et al., 2017).
2. To identify possible relationships between pre-adoption conditions (age at placement, number of changes in caregiving arrangements, and institutional care), and adoptees' current levels of behavioral adjustment and post-traumatic symptoms.
3. Tentatively, since this topic is not often addressed, we have tried to compare the level of adjustment achieved by our sample of domestic adoptees with that shown by the inter-country adoptees. Consequently, we searched for papers using ASEBA measurement with teenagers who were born in Romania and adopted abroad. To the best of our knowledge, these conditions were found uniquely in Rijk and colleagues' study (2010), whose findings were used as our basis for a first confrontation between samples originated from these two child-welfare practices.

Method

Recruitment

Given that adoptees tend to go through the typical issues of adolescence earlier than their non-adoptive peers (Juffer & van IJzendoorn, 2005), key eligibility criteria for inclusion in the sample were to be between the ages of 11 and 16 years old at assessment, and to have been adopted between birth and 4 years of age.

Subjects were adopted between 1998 and 2000, the sample encompass around 5% of children adopted at that time, **according to official data.**

At the request of the central authorities, participants were initially selected by the local Agencies for Child Protection (*Directia Generala de Asistentia Sociala si Protectia Copilului* – DGASPC), who considered to exclude clinical situations and adoption crisis. Of the families whose contacts were provided to the researchers by associations and state agencies, 100% agreed to take part in the study. These adoptive families were considered by the agencies' personnel as being successful due to the lack of parents' complaints about the adoption matching and due to the overall positive development of children. Unfortunately, it was not possible to track the rate of families' acceptance at the earlier step. Participants were identified in 12 out of 45 Romanian counties. The project was submitted **to and approved by** the Ethical Committee of the West University of xxx. Parents and adolescents were fully briefed about the study's aims and method before the

data was collected; informed parental consent was obtained; and the adolescents were asked for their assent at all stages of the data collection process.

Adolescents whose adoptive status had not yet been disclosed to them, as well as those with health or psychological impairments, were not included in the research sample. For the purposes of the current study, only families with complete datasets for all the variables of interest were included. The final sample comprised 52 adopted adolescents and their parents.

Procedure

Forty-six families were interviewed at home, and the remaining six at the Child Protection Services office nearest to their residence. The data was collected by two researchers working in parallel with the parent and the adoptee. The questionnaires were administered using the paper-and-pencil method, to the adoptee and the mother separately, immediately after they had been interviewed. The members of the research team were all university-trained, with either a master's or a doctoral degree in psychology.

Measures

Information about the adolescents' pre-adoption experiences were assessed via a semi-structured interview, that was developed by the research team for administration to parents, and included questions about previous placements and the child's level of awareness about his or her adoption, as well as personal and family data.

In order to evaluate the participants' behavioral problems, the Romanian version of the *Achenbach System of Empirically Based Assessment (ASEBA) – School Age (6-18)* was adopted (Achenbach & Rescorla, 2001). This instrument offers the possibility to conduct a multi-informant evaluation: the adoptees completed the self-report form (YSR: *Youth Self-Report*), and the principal caregivers, in this case, the mothers, completed the parent-report form (CBCL: *Child Behavior Check-list*). Both versions of the questionnaire comprised 20 competence items and 118 problem items. The present study focuses on the second part, which consists of a pool of questions rating the child's behavior or emotional problems and symptoms, and is the measure most commonly used to evaluate behavior problems. The problem items section produces a *Total* score, which provides an overall indication of the level of symptomatic problems expressed by the child, as well as two broadband syndrome scores (i.e., *Internalizing* and *Externalizing* problems), and scores for a number of subscales. *T*-scores (Mean = 50, Standard Deviation = 10) were calculated for *Internalizing*, *Externalizing*, and *Total problems* scales, following the multicultural norms provided with the instrument (Achenbach & Rescorla, 2007). In relation to each of the broadband scales, subjects' scores were categorized, using pre-selected clinical thresholds, as either clinical, borderline, or normal. Furthermore, given the traumatic nature of the separation from biological family experienced by every adopted child, scores were also calculated for the *Post-Traumatic Stress Problems (PTSP)* Scale which comprises 14 items from the CBCL form (Ruggiero & McLeer, 2000).

Participants

The sample was composed of 52 adoptees (33 girls, i.e. 64%), and their adoptive mothers.

The adolescents' mean age at assessment was 13 years ($SD = 2$ years), while the mothers' mean age at adoption was 37 years ($SD = 8$ years). All the adolescents in our sample were born in Romania and adopted by a Romanian family different to their biological one. At the time of data collection, the adoptees had spent an average of 11 years in their adoptive families (min = 7; max = 15).

With regard to the presence of brothers and sisters, around half of the sample (52%) had no siblings (either biologically related to them, or adopted from elsewhere), while six subjects were firstborns.

All the primary caregivers interviewed were mothers and 19% of these were single mothers (including women who were divorced, had been widowed, or had applied for adoption as single parents); 52% of the mothers held a high school diploma or university degree.

In relation to pre-adoption risk factors (see Table 1), participants' average age at adoption was 22 months ($SD = 16$ months, range 0-51 months), such that some children had been adopted right after birth, while others were 4 years old when placed with their new family.

Insert Table 1 about here

Only two children (4 %) had come directly from their biological family to their adoptive one, while the remaining adoptees had experienced additional separations.

Although adoption directly from the biological family was uncommon, 44 % of adoptees had lived for a period of time with their biological parents before entering institutions or foster care. Most of children (79 %) had spent a lengthy period of time in hospital, waiting to be issued a birth certificate following parents' decision to renounce to care for the child. The care environment in which the largest proportion of adoptees had lived immediately before entering their new family was the institutional one (44 %). Eleven children (21 %) had been in foster care, and all of these had been adopted by their former foster families.

As hypothesized, age on adoption and changes in placements were significantly correlated ($r = .407$, $p < .005$), meaning that the older the child at adoption, the higher the likelihood he/she had experienced more disruptions in significant relationships.

Results

Agreement between informants

The scores obtained by the different groups of informants (i.e., mothers and adolescents) were compared (Achenbach et al., 1987). The correlation between adolescents' and mothers' evaluations was large and significant: $r = .34$ ($p < .05$), $.63$ ($p < .001$), $.52$ ($p < .001$) respectively for *Internalizing*, *Externalizing* and *Total* problems scales,

although the scores were significantly different (see Table 2). Specifically, mothers reported significantly greater levels of difficulty than their children ($t = 2,455, p < .05, t = 3,278, p < .005, t = 3,372, p < .005$ for *Internalizing*, *Externalizing* and *Total* scores, respectively). This means that mothers and adolescents agree in identifying the problems of behavior of the adolescents themselves, but the mothers believe that the problems are more serious than their children think.

Behavioral adjustment

To establish the behavioral adaptation, we referred to the scales of problematic behaviors derived from the ASEBA questionnaires, and considered our sample “adjusted” if their average scores were not significantly different from the general population’s scores, i.e. the norm considered by the Multicultural Manual of the ASEBA (Achenbach and Rescorla, 2007) for the Romanian population: see Table 2.

Insert Table 2 about here

Regarding the maternal ratings, our sample did not significantly differ from the general population with respect to the *Internalizing* and *Externalizing* scores, and differed only slightly albeit significantly with respect to the *Total* scores. The adolescents’ self-report ratings were slightly lower than but not significantly different from standard mean values for the general population. Mean scores on the *PTSP (Post-Traumatic Stress Problems)* scale did not significantly differ from those of the general population, except for boys aged over 11 years, which in our sample scored higher than the norms.

However, the percentage of adolescents falling into borderline or clinical ranges and displaying post-traumatic stress problems was higher than in the general population,

according to both mothers' and adolescents' ratings: while in the general population we expect 5% of borderline scores, and 2% of clinical scores, in our sample these percentages were always higher (see Table 3).

Insert Table 3 about here

Behavioral adjustment and pre-adoptive conditions

No differences were found among adolescents as a function of the following pre-adoptive experiences (see Table 4):

- age at adoption, whether taking two years or six months as the age threshold;
- instability of the caregiving environment: children directly adopted from their biological family or having experienced only one placement did not differ – in terms of behavioral outcomes – from children who experienced two or more pre-adoptive placements;
- institutionalization: adolescents who had lived in institutions did not display significantly different levels of behavioral adjustment to those who had not.

Insert Table 4 about here

Finally, adolescents' behavioral adjustment did not vary as a function of the overall score for pre-adoptive risk-factors obtained by summing the scores for the individual factors listed above.

Behavioral adjustment of domestic and inter-country adoptees

The data collected by Rijk and colleagues (2010) on Romanian-born adoptees in the Netherlands is the most suitable for direct comparison with the current sample's scores for behavioral adjustment, given the similarity of the sample sizes and ages at assessment, as reported in Table 5. In both studies the sample was not composed of relinquished newborns, even if the average age at adoption was slightly higher for intercountry adoptees (31 months in Rijk and colleagues' VS 22 months in the present study).

Insert Table 5 about here

These two different samples of adoptees displayed similar levels of *Internalizing* behaviors, as confirmed by the *t*-test comparison. However, domestic adoptees obtained significantly lower scores for *Externalizing* and *Total* behavioral problems. In terms of the percentage of adolescents falling into borderline or clinical score ranges, again fewer domestic adoptees displayed such levels of externalizing and overall problems: in our sample, nine (17%), nine (17%), and six (12%) adolescents fell into the clinical ranges for *Internalizing*, *Externalizing* and *Total* problems, respectively vs 11 (15%), 20 (28%), and 25 (35%) in the Dutch sample.

Discussion and Conclusions

The present study allowed the analysis of domestic adoptees long-term outcomes during the sensitive adolescence period. The level of behavioral adjustment in this adolescents'

sample is comparable to that of peers raised in their biological family: the mean scores for *Internalizing* and *Externalizing* problems of our sample do not differ significantly from the normative standards, and are even somewhat lower when assessed by the teenagers themselves. Internalizing problems are known to be higher among (adopted) girls, but despite the majority of females composing our sample, internalizing problems are not significantly higher. However, the level of *Total* problems rated by the mothers is higher than the norm (despite falling within the non-clinical range). This result is in line with the existing literature (Palacios & Brodzinsky, 2010) on the effectiveness of adoption for developmental recovery and might be strengthened by the success of the adoptions included in this specific sample.

However, the traumatic nature of pre-adoptive experiences can sometimes leave a mark, as shown by the post-traumatic behavioral patterns found among boys aged 11-16 years. Indeed, the number of subjects with borderline/clinical scores for behavioral adjustment was higher than in the normative population. This may mean that while adoption offers effective protection against pre-adoption risks for most children, for some it is not enough to support full recovery and this pushes them out to the extreme tails of the distribution (Bimmel et al., 2003; Juffer & van IJzendoorn, 2005).

Considering the relationship with pre-adoptive risk-factors, no differences were found in adoptees' levels of behavioral adjustment as a function of pre-adoptive experience, and this held true even for a cumulative risk measure (Rutter, 1979). The 2-years-old-at-adoption threshold, which was taken as the cut-off for defining late adoptions, did not account for different outcomes. Placement instability, measured via the number of changes in caregiving arrangements undergone by the child, did not differentiate between

various levels of behavioral adjustment either. One possible explanation may be that being adopted in any case by four years of age allowed the children to establish solid bonds with their adoptive parents, thus mitigating the effects of previous instability of care. Our results did not support the hypothesis that Romanian children who had spent a period of their life in institutions would report a higher rate of behavioral problems.

There are different possible explanations for this outcome. It may reflect the potential for recovery offered by adoption, such that the more years spent with adoptive parents, the greater the extent to which the negative effects of early institutionalization are overcome. On the other hand, it might also be due to the fact that it was impossible to control for the amount of time the children had spent in institutions or the type of care received there.

Furthermore, children separated at a later age, after spending the first two years of their lives with their biological families, are better equipped at the neuro-psychological level to cope with severe conditions in institutions. Finally, it is only fair to note that institutional care in Romania has improved in recent years.

Lastly, the comparison between our sample of domestic adoptees and their peers adopted abroad as assessed in the work of Rijk and colleagues, suggested similar or lower levels of behavioral problems among children born and raised within the same country. This finding is in contrast with meta-analytic results (Juffer & van IJzendoorn, 2005) and it appears to bear out the positive effect of enabling adopted children to remain in the cultural context with which they are familiar. We presume that being adopted within one's own cultural context can facilitate a stronger and easier recovery process, as suggested by *The Hague Convention's* principle of subsidiarity (1993), which requires member states to consider national solutions before initiating an intercountry adoption

procedure. However, some caveat must be pointed out. First, we should note that since the publication of well-known studies concerning Romanian institutions, the broader cultural and social context has improved considerably. Nonetheless, the present findings concern adoptions that took place around 10 years ago, when this positive transformation was not yet complete and while clinical problems were still being detected among children who had been internationally adopted from Romania (Hoksbergen et al., 2008). Second, especially in the early years of the internal adoption program, domestic adoption procedures in Romania allowed adoptive parents to choose healthier and easier children. Third, selection bias may have played a role. Given that in this study health / psychological impairments were exclusion criteria, results concerning the level of adjustment might be considered as higher than in the overall domestic adoption population. Also, the adoptive status was disclosed in the entire sample and it is known that the adoptive family's level of communicative openness about adoption plays a role in the adjustment of the adoptee (Brodzinsky, 2006). Transparency and the ability within the family to address issues relating to the adoption can impact on the adoptee's identity formation and acceptance processes, facilitating a broader recovery from pre-adoptive adversity. One final remark: the ASEBA instruments can be sensitive to cultural difference. Given that Romanian culture might be characterized by a high tolerance of aggressive behavior than the Dutch culture, the responses of the adolescents and their mothers to the YSR and CBCL questionnaires may have reflected this cultural bias, contributing to the different outcomes obtained vis-à-vis the Dutch sample. It should be noted however that the cross-cultural norms provided with the instrument do not suggest

differences between Romanian populations and the original US standardization sample (Achenbach & Rescorla, 2007).

Overall, our findings suggest that domestic adoption is effective in helping children to recover from negative pre-adoptive experiences, confirming the resilience displayed by most adopted children. The individual differences observed in behavioral adjustment were not explained by the pre-adoptive risk factors we analyzed and may be related to other variables, especially those that support the construction of secure emotional ties within the new family. For this reason, future research will be undertaken to explore the relationship between behavior problems and attachment representations, while taking into account the length of time that the adoptee has spent with his/her permanent family.

This study has limitations that need to be acknowledged and discussed. The most significant of these concern the sample size and the sample recruitment method, which are always critical aspects in studies of specific populations such as adoptees.

Recruitment was influenced by the fact that adoption is regulated by stringent privacy rules that place constraints on how adoptive families may be contacted. Furthermore, the complex data collection method implemented in the present study (which involved being interviewed and video-recorded) required a high level of commitment from informants and may have led to reduced levels of participation. Finally, given that in Romania the adoptive status of children is not always disclosed (Groza, 1999), families who were willing to talk about their family relations may form a specific subsample that is not representative of the broader population of adoptive families. Nevertheless, for the

reasons just outlined, it would be virtually impossible to select participants randomly, although this would have enhanced the generalizability of the results.

In conclusion, the present findings have implications for practice and social policies. The positive behavioral adjustment shown by this sample of domestic adoptees indicates that, despite the lack of tradition in domestic adoption in Romania, there are great possibilities for successful adoptions of children relinquished by their biological parents.

Nevertheless, it must be noted that the inclusion in the sample of difficult adoption would have helped to underline the problems of adaptation that young adopted people have to face up. Thus, future research studies should apply exclusion criteria that are less restrictive, so that a wider and more representative overview of the phenomenon can be shown.

In the future, a more comprehensive analysis of the various pre-adoptive and post-adoption risk and protective factors may shed further light on the longitudinal impact of social policy choices, which in turn may be adjusted to better protect the development and futures of adopted children.

Overall, our findings suggest that domestic adoption is effective in helping children to recover from negative pre-adoptive experiences, confirming the resilience displayed by a significant number of adopted children. However, in planning a decision about child's placement, practitioners should offer a stable and reliable environment and pay great attention to his/her characteristics and background, analyzing possible indicators of post-traumatic stress.

References

- Achenbach, T. M., McConaughy, S. H., & Howell, C. T. (1987). Child/adolescent behavioral and emotional problems: Implications of cross-informant correlations for situational specificity. *Psychological Bulletin*, *101*(2), 213–232.
<https://doi.org/10.1037/0033-2909.101.2.213>
- Achenbach, T. M., & Rescorla, L. (2001). *Manual for the ASEBA School-Age Forms & Profiles*. Burlington, VT: University of Vermont, Research Center for Children, Youth, & Families.
- Achenbach, T. M., & Rescorla, L. (2007). *Multicultural Supplement to the Manual for the ASEBA School-Age Forms & Profiles*. Burlington, VT: University of Vermont, Research Center for Children, Youth, & Families.
- Barroso, R., Barbosa-Ducharne, M., Coelho, V., Costa, I.-S., Silva, A. (2017). Psychological Adjustment in Intercountry and Domestic Adopted Adolescents: A Systematic Review. *Child Adolesc Soc Work J.*, *33*(6), doi: 10.1007/s10560-016-0485-x
- Beckett, C., Maugham, B., Rutter, M., Castle, J., Colvert, E., Groothues, C., Kreppner, J., Stevens, S., O'Connor, T., 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*(3), 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*(2), 64–77.
- Brodzinsky, D. (2006). Family Structural Openness and Communication Openness as Predictors in the Adjustment of Adopted Children, *Adoption Quarterly*, *9*(4), 1–18.
<http://doi.org/10.1300/J145v9n04>
- Brodzinsky, D., Smith, D., & Brodzinsky, A. (1998). *Children's adjustment to adoption: Developmental and clinical issues* (Developmen). Sage Publications.
- Canzi, E., Rosnati, R., Palacios, J., & Román, M. (2017). Internationally adopted children's cognitive and social-emotional development during the first post-adoption year: A longitudinal study. *European Journal of Developmental Psychology*, 1–14.
<http://doi.org/10.1080/17405629.2017.1316257>
- Chisholm, K. (1998). A Three Year Follow-Up of Attachment and Indiscriminate Friendliness in Children Adopted from Romanian Orphanages. *Child Development*, *69*(4), 1092–1106. <http://doi.org/10.2307/1132364>

- Chugani, H.T., Behen, M.E., Muzik, O., Juhasz, C., Nagy, F., Chugani, D.C. (2001). Local Brain Functional Activity Following Early Deprivation: A Study of Postinstitutionalized Romanian Orphans. *NeuroImage*, 14, 1290-1301. doi: 10.1006/nimg.2001.0917. Available online at: <http://www.idealibrary.com>
- Erich, S., Kanenberg, H., Case, K., Allen, T., & Bogdanos, T. (2009). An empirical analysis of factors affecting adolescent attachment in adoptive families with homosexual and straight parents. *Children and Youth Services Review*, 31(3), 398–404.
- Groza, V. (1999). Adoptia Copiilor in Romania: Continuare a unui studiu asupra familiilor care au adoptat copii romani (A follow-up study of Romanian families who adopted Romanian children). *Quality of Life Review*, 10, 3-4, 251-268.
- Groza, V., xxx, A., & Ungureanu, R. (2012). The Adoptive Family Within the Romanian Cultural Context: An Exploratory Study. *Adoption Quarterly*, 15(1), 1–17. <http://doi.org/10.1080/10926755.2012.661327>
- Groza, V., Nedelcu, C., & Proctor, C. D. (2017). Early Adulthood Physical and Mental Health Outcomes for Romanian Adoptees. *Today's Children Are Tomorrow's Parents*, 44, 70–79.
- Gunnar, M. R., Bruce, J., & Grotevant, H. D. (2000). International adoption of institutionally reared children: research and policy. *Development and Psychopathology*, 12(4), 677–693.
- Gunnar, M., van Dulmen, M., & the International Adotion Project Team. (2007). Behavior problems in postinstitutionalized internationally adopted children. *Development and Psychopathology*, 19(1), 129–148.
- Harf, A., Taieb, O., & Moro, M.-R. (2006). Adolescence et adoptions internationales : une nouvelle problématique ? *La Psychiatrie de L'enfant*, 49(2), 543–572. <http://doi.org/10.3917/psy.492.0543>
- Hoksbergen, R., Rijk, K., Dijkum, C., & ter Laak, J. (2004). Adoption of Romanian Children in the Netherlands: Behavior Problems and PARENTING Burden of Upbringing for Adoptive Parents. *Journal of Developmental & Behavioral Pediatrics*, 25(3), 175-80.
- Hoksbergen, R., ter Laak, J. van Dijkum, C., Rijk, K., & Stoutjesdijk, F. (2008) Attention Deficit, Hyperactivity Disorder in Adopted Romanian Children Living in The Netherlands, *Adoption Quarterly*, 6(4), 59-73. http://doi.org/10.1300/J145v06n04_04
- Howe, A., & Wass, V. (2003). How to research how we decide? *Medical Education*, 37(9), 762–763. <https://doi.org/10.1046/j.1365-2923.2003.01600.x>
- Johnson, D. E., Miller, L. C., Iverson, S., Thomas, W., Franchino, B., Dole, K., ...

- Hostetter, M. K. (1992). The health of children adopted from Romania. *JAMA*, *268*(24), 3446–3451. <http://doi.org/10.1001/jama.1992.03490240054036>
- Judge, S. (2003). Developmental recovery and deficit in children adopted from Eastern European orphanages. *Child Psychiatry & Human Development*, *34*(1), 49–62.
- Juffer, F., & van IJzendoorn, M. (2005). Behavior problems and mental health referrals of international adoptees: a meta-analysis. *JAMA*, *293*(20), 2501–2515.
- Juffer, F., & van IJzendoorn, M. (2007). Adoptees do not lack self-esteem: A meta-analysis of studies on self-esteem of transracial, international, and domestic adoptees. *Psychological Bulletin*, *133*(6), 1067–1083.
- Julian, M.M. (2013). Age at adoption from institutional care as a window into the lasting effects of early experiences. *Clin Child Fam Psychol Rev*, *16*(2), 101-145. doi: 10.1007/s10567-013-0130-6
- Kim, W. J., Shin, Y. J., & Carey, M. P. (1999). Comparison of Korean-American adoptees and biological children of their adoptive parents: a pilot study. *Child Psychiatry & Human Development*, *29*(3), 221–228.
- Lewis, E. E., Dozier, M., Ackerman, J., & Sepulveda-Kozakowski, S. (2007). The effect of placement instability on adopted children's inhibitory control abilities and oppositional behavior. *Developmental Psychology*, *43*(6), 1415–1427. <https://doi.org/10.1037/0012-1649.43.6.1415>
- Niemann, S., & Weiss, S. (2012). Factors Affecting Attachment in International Adoptees at 6 Months Post Adoption. *Children and Youth Services Review*, *34*(1), 205–212. <https://doi.org/10.1016/j.childyouth.2011.10.001>
- O'Connor, T. G., Bredenkamp, D., & Rutter, M. (1999). Attachment disturbances and disorders in children exposed to early severe deprivation. *Infant Mental Health Journal*, *20*(1), 10–29.
- O'Connor, T. G., & Rutter, M. (2000). Attachment disorder behavior following early severe deprivation: extension and longitudinal follow-up. English and Romanian Adoptees Study Team.[see comment]. *Journal of the American Academy of Child & Adolescent Psychiatry*, *39*(6), 703–712.
- O'Connor, T. G., Rutter, M., Beckett, C., Keaveney, L., & Kreppner, J. M. (2000). The effects of global severe privation on cognitive competence: extension and longitudinal follow-up. English and Romanian Adoptees Study Team. *Child Development*, *71*(2), 376–390. <http://doi.org/10.1111/1467-8624.00151>
- Palacios, J., & Brodzinsky, D. (2010). Adoption research: trends, topics, outcomes. *International Journal of Behavioral Development*, *34*(3), 270–284.
- Palacios, J., Moreno, C. & Román, M. (2013). Social competence in internationally

- adopted and institutionalized children, *Early Childhood Research Quarterly*, **28**, 2, (357).
- Pierrehumbert, B., xxx, A., Tomita, M., Ungureanu, R., Habersaat, S. (2011). The significant behavioral aspects of adopted children within successful adoption in Romania. *Revista de Cercetare si Interventie Sociala*, 32, 107-130.
- Rijk, C., Hoksbergen, R., & ter Laak, J. (2010). Development of behavioural problems in children adopted from Romania to the Netherlands, after a period of deprivation. *European Journal of Developmental Psychology*, 7(2), 233–248. <http://doi.org/http://dx.doi.org/10.1080/17405620802063339>
- Roby, J. L., & Ife, J. (2009). Human rights, politics and intercountry adoption: An examination of two sending countries. *International Social Work*, 52(5), 661–671. <http://doi.org/10.1177/0020872809337680>
- Roskam, I., van der Voort, A., Stievenant, M., Juffer, F., Bader, M., xxx, A., Escobar M.J., Santelices, M.P., xxx, P., xxx, M., Ongari, B., & Pierrehumbert, B. (2017), Cross-informant ratings of internalizing and externalizing behavior in adolescent-parent pairs. Does being adopted make a difference?, *International Perspectives in Psychology: Research, Practice, Consultation*, 6(1), 32-46. <http://psycnet.apa.org/doi/10.1037/ipp0000063>
- Ruggiero, K. J., & McLeer, S. V. (2000). PTSD Scale of the Child Behavior Checklist: Concurrent and Discriminant Validity with Non-Clinic-Referred Sexually Abused Children. *Journal of Traumatic Stress*, 13(2), 287–299.
- Rutter, M. (1979). Protective factors in children's responses to stress and disadvantage. In M. W. Kent & J. E. Rolf (Eds.), *Primary prevention of psychopathology: Vol. 3. Social competence in children* (pp. 49–74). Hanover: University Press of New England.
- Rutter, M. (1998). Developmental catch-up and delay following adoption after severe global early privation. *The Journal of Child Psychology and Psychiatry*, 39(4), 465–476.
- Rutter, M., Kreppner, J., Croft, C., Murin, M., Colvert, E., Beckett, C., ... Sonuga-Barke, E. (2007). Early adolescent outcomes of institutionally deprived and non-deprived adoptees. III. Quasi-autism. *Journal of Child Psychology & Psychiatry & Allied Disciplines*, 48(12), 1200–1207.
- Rutter, M., Kreppner, J., & O'Connor, T. (2001). Specificity and heterogeneity in children's responses to profound institutional privation. *The British Journal of Psychiatry*, 179(2), 97–103. <http://doi.org/10.1192/bjp.179.2.97>
- Smyke, A. T., Koga, S. F., Johnson, D. E., Fox, N. A., Marshall, P. J., Nelson, C. A., ... Group, B. C. (2007). The caregiving context in institution-reared and family-reared infants and toddlers in Romania. *Journal of Child Psychology and Psychiatry*, (48),

210–218.

- ter Laak, J., Rijk, K., van Dijkum, C., & Stoutjesdijk, F. (2005). Post-Institutional Autistic Syndrome in Romanian Adoptees. *Journal of Autism and Developmental Disorders*, 35(5), 615–623. <http://doi.org/10.1007/s10803-005-0005-x>
- The Hague Convention on *Protection of Children and Co-operation in Respect of Intercountry Adoption* (29 May 1993), HCCP
- van IJzendoorn, M. H., & Juffer, F. (2006). The Emanuel Miller Memorial Lecture 2006: adoption as intervention. Meta-analytic evidence for massive catch-up and plasticity in physical, socio-emotional, and cognitive development. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, 47(12), 1228–1245. <https://doi.org/10.1111/j.1469-7610.2006.01675.x>
- van IJzendoorn, M., Juffer, F., & 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. doi:10.1037/0033-2909.131.2.301.
- van IJzendoorn, M. H., Palacios, J., Sonuga-Barke, E. J. S., Gunnar, M. R., Vorria, P., McCall, R. B., ... Juffer, F. (2011). Children in Institutional Care: Delayed Development and Resilience. *Monographs of the Society for Research in Child Development*, 76(4), 8–30. <https://doi.org/10.1111/j.1540-5834.2011.00626.x>
- Verhulst, F. C., Althaus, M., & Versluis-den Bieman, H. J. (1990a). Problem behavior in international adoptees: I. An epidemiological study. *Journal of the American Academy of Child & Adolescent Psychiatry*, 29(1), 94–103. <https://doi.org/10.1097/00004583-199001000-00015>
- Verhulst, F. C., Althaus, M., & Versluis-den Bieman, H. J. (1990b). Problem behavior in international adoptees: II. Age at placement. *Journal of the American Academy of Child & Adolescent Psychiatry*, 29(1), 104–111.
- Wierzbicki, M. (1993). Psychological Adjustment of Adoptees: A Meta-Analysis. *Journal of Clinical Child Psychology*, 22(4), 447–454. doi: 10.1207/s15374424jccp2204_5
- Zeanah, C., Egger, H., Smyke, A., Nelson, C., Fox, N., Marshall, P. & Guthrie, D. (2009). Institutional Rearing and Psychiatric Disorders in Romanian Preschool Children. *American Journal of Psychiatry*, 166(7), 777–785.

Table 1 : Risk factors before adoption (N.=52)

| | M | SD | Range | N | % |
|-----------------------------|----------|-----------|--------------|----------|----------|
| Age at adoption (in months) | 22 | 16 | 0-51 | | |
| 0-6 months | | | | 12 | 23.1 |
| 7-12 months | | | | 6 | 11.5 |
| 13-24 months | | | | 14 | 26.9 |
| 25-36 months | | | | 9 | 17.3 |
| 37-48 months | | | | 7 | 13.5 |
| 49-51 months | | | | 4 | 7.7 |
| Number of changes | | | | | |
| None | | | | 2 | 3.8 |
| Only one | | | | 21 | 40.4 |
| Two | | | | 27 | 51.9 |
| Three | | | | 2 | 3.8 |
| Institutional care | | | | | |
| - Yes | | | | 23 | 44,2 |
| - No | | | | 29 | 55,8 |

Table 2 : Means of behavioral problems and comparison with general population (N.=52)

Mothers

| CBCL (standardized t-scores) | Mean | SD | <i>t</i> (51) | <i>p</i> |
|------------------------------|-------|-------|---------------|----------|
| Internalising | 52.40 | 10.77 | 1.609 | .114 |
| Externalising | 51.40 | 11.08 | .914 | .365 |
| Total | 53.13 | 10.00 | 2.260 | .028 |

| PTSP (raw-scores) | Mean | SD | <i>t</i> | <i>p</i> |
|-------------------|------|------|----------|----------|
| Boys | | | | |
| 11-year (N=4) | 2.75 | 2.50 | -.600 | .591 |
| > 11-year (N=15) | 6.13 | 4.41 | 2.227 | .043 |
| Girls | | | | |
| 11-year (N=8) | 5.13 | 4.73 | .851 | .423 |
| > 11-year (N=25) | 4.56 | 5.26 | .772 | .477 |

Adolescents

| YSR (standardized t-scores) | Mean | SD | <i>t</i> (51) | <i>p</i> |
|-----------------------------|-------|-------|---------------|----------|
| Internalising | 48.50 | 9.11 | -1.188 | .240 |
| Externalising | 47.04 | 11.19 | -1.909 | .062 |
| Total | 48.31 | 11.01 | -1.109 | .273 |

Table 3 : Frequency of scores (*t*-scores) in clinical or borderline ranges (N=52)

| Mothers (CBCL) | Borderline (*) | | Clinical (**) | |
|-----------------------|-----------------------|----------|----------------------|----------|
| | N | % | N | % |
| Internalising | 6 | 11.5 | 9 | 17.3 |
| Externalising | 3 | 5.8 | 9 | 17.3 |
| Total | 7 | 13.5 | 8 | 15.4 |
| PTSP (raw scores) | 7 | 13.5 | 4 | 7.7 |

| Adolescents (YSR) | Borderline (*) | | Clinical (**) | |
|--------------------------|-----------------------|----------|----------------------|----------|
| | N | % | N | % |
| Internalising | 7 | 13.5 | 3 | 5.8 |
| Externalising | 5 | 9.6 | 4 | 7.7 |
| Total | 4 | 7.7 | 6 | 11.5 |

(*) the expected percentage in the general population is 5%

(**) the expected percentage in the general population is 2%

Table 4 : ASEBA *t*-scores and pre-adoptive risk factors

Early vs Late adoption

| | | Before 2 years (N=32) | | After 2 years (N= 20) | | <i>t</i> (50) | <i>p</i> |
|----------------------|-------------------|--------------------------|-----------|--------------------------|-----------|---------------|----------|
| | | Mean | <i>SD</i> | Mean | <i>SD</i> | | |
| Mothers (CBCL) | Internalising | 51.47 | 10.75 | 53.90 | 10.92 | -.789 | .434 |
| | Externalising | 49.81 | 10.92 | 53.95 | 11.12 | -1.320 | .193 |
| | Total | 52.03 | 9.90 | 54.90 | 10.16 | -1.007 | .319 |
| | PTSP (raw scores) | 4.38 | 4.84 | 5.90 | 4.59 | -1.512 | .271 |
| Adolescents (YSR) | Internalising | 47.34 | 9.00 | 50.35 | 9.20 | -1.162 | .251 |
| | Externalising | 45.72 | 10.79 | 49.15 | 11.78 | -1.077 | .286 |
| | Total | 46.97 | 10.58 | 50.45 | 11.61 | -1.112 | .271 |

Number of placements

| | | Just one (N=23) | | More than one (N= 29) | | <i>t</i> (50) | <i>p</i> |
|----------------------|-------------------|--------------------|-----------|--------------------------|-----------|---------------|----------|
| | | Mean | <i>SD</i> | Mean | <i>SD</i> | | |
| Mothers (CBCL) | Internalising | 52.09 | 11.28 | 52.66 | 10.55 | -.187 | .852 |
| | Externalising | 49.35 | 8.96 | 53.03 | 12.42 | -1.197 | .237 |
| | Total | 52.00 | 8.96 | 54.03 | 10.82 | -.725 | .472 |
| | PTSP (Raw scores) | 4.30 | 4.15 | 5.48 | 5.21 | -.885 | .381 |
| Adolescents (YSR) | Internalising | 46.74 | 8.03 | 49.90 | 9.79 | -1.249 | .218 |
| | Externalising | 45.65 | 11.05 | 48.14 | 11.37 | -.793 | .432 |
| | Total | 46.74 | 10.48 | 49.55 | 11.43 | -.914 | .365 |

Institutionalised

| | | No (N=29) | | Yes (N=23) | | <i>t</i> (50) | <i>p</i> |
|----------------------|-------------------|-----------|-----------|------------|-----------|---------------|----------|
| | | Mean | <i>SD</i> | Mean | <i>SD</i> | | |
| Mothers (CBCL) | Internalising | 52.03 | 10.85 | 52.87 | 10.90 | -.275 | .784 |
| | Externalising | 51.62 | 10.21 | 51.13 | 12.32 | .157 | .876 |
| | Total | 53.28 | 9.92 | 52.96 | 10.32 | .113 | .910 |
| | PTSP (Raw scores) | 4.93 | 5.14 | 5.00 | 4.35 | -.051 | .959 |
| Adolescents (YSR) | Internalising | 48.21 | 9.90 | 48.87 | 8.20 | -.258 | .797 |
| | Externalising | 48.21 | 12.78 | 45.57 | 8.84 | -.879 | .384 |
| | Total | 49.21 | 11.92 | 47.17 | 9.88 | .658 | .514 |

Table 5: Parent-report *t*-scores for inter-country and domestic adoptees

| | International adoption (Rijk et al., 2010) : N=72, Years: 1990-1997 | | Domestic adoption: (present study): N=52, Years: 1996-2002 | | | |
|---------------|------------------------------------------------------------------------------------|-----------|---------------------------------------------------------------------------|-----------|-----------------|-----------------|
| | Mean | SD | Mean | SD | <i>t</i> | <i>p</i> |
| Internalising | 52.3 | - | 52.40 | 10.77 | .070 | .945 |
| Externalising | 54.9 | - | 51.40 | 10.08 | 2.275 | .027 |
| Total | 56.6 | - | 53.13 | 10.00 | 2.499 | .016 |
| | % clinical scores | | % clinical scores | | | |
| Internalising | 15 | | 17 | | | |
| Externalising | 28 | | 17 | | | |
| Total | 35 | | 12 | | | |

Supplementary Material

| Number of subjects | No previous placements | 1 placement | 2 placement | 3 placements |
|--------------------|------------------------|---------------------------------|----------------------------------------------------------|--------------|
| 2 | Only biological family | | | |
| 3 | | Institution | | |
| 15 | | Hospital | | |
| 7 | | | Hospital + Institution | |
| 7 | | | Hospital + Biological family | |
| 5 | | | Biological family + Institution | |
| 1 | | Hospital + Foster care | | |
| 1 | | Institution + Foster care | | |
| 1 | | Biological family + Foster care | | |
| 1 | | | Hospital + Biological family | |
| 2 | | | Hospital + Institution + Foster care | |
| 3 | | | Biological family + Institution + Foster care | |
| 2 | | | Hospital + Biological family + Foster care | |
| 1 | | | Hospital + Biological family + Institution | |
| 1 | | | Hospital + Biological family + Institution + Foster care | |
| 52 | TOTAL | | | |

NOTE: Children directly adopted from foster care parents are in red