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### Late adoptions

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## **Late adoptions: attachment security and emotional availability in mother–child and father–child dyads.**

A growing body of research suggests that a history of neglect, abuse and institutionalization can negatively affect late-adopted children's attachment representations, and that adoptive parents can play a key role in enabling adopted children to earn secure attachments. Still, only a few studies have explored the quality of caregiver–child interaction in adoptive families. The present study aimed at verifying both the concordance of attachment in adoptive dyads (mother–children and father–children) and the relationship between attachment representations and parent–child interaction. The research involved 20 adoptive families in which the child's arrival had occurred between 12 to 36 months before the assessment, and where children were aged between 4.5 and 8.5 years. Attachment was assessed through the Adult Attachment Interview for parents and through the Manchester Child Attachment Story Task for children. The emotional quality of parent–child interaction was assessed through the Emotional Availability Scales. Our results pointed out the presence of a relation between attachment representations of late-adopted children and their adoptive mothers (75%,  $K = 0.50$ ,  $p = .025$ ). In addition, we found that both insecure children and mothers showed lower levels of EA than secure ones. Some explanations are presented about why, in the early post-adoption period, child attachment patterns and dyadic emotional availability seem to be arranged on different frameworks for the two parental figures.

**Keywords:** Late-adoptions; Attachment; Emotional availability; Adoptive mothers and fathers; Parenting.

## Introduction

Adoption, as a non-traditional family model, has gained increasing visibility in recent decades, both in North America and Europe, and this practice, as a social intervention, has been transformed (Palacios and Brodzinsky 2010). Specifically, in recent years some changes in adoption characteristics in Italy have been recognized: there has been a decrease in domestic adoptions in the face of an increase in international ones (which now account for 75% of the total), and an increase in the age of children at time of placement, which ranges between 3 and 8 years, with a mean of 5.5 (CAI 2014). While early-adopted children have the opportunity to build their first attachment bonds with their adoptive parents, presenting similar developmental outcomes to those of the general population, late adopted children have suffered at least one relational disruption with their primary attachment figures or the complete absence of stable affective figures in the crucial period of formation of primary attachment bonds (van IJzendoorn and Juffer 2006).

Attachment perspective provides a well-suited framework for adoption research, since it provides validated methodology that is widely accepted by the international scientific community. It allows for specifically focusing on how a new relational environment can impact adopted children's attachment patterns and consequently contribute to their adjustment and development, both healthy and pathological (Barone et al. 2011; Bowlby 1988; Groth, 2016; Lyons-Ruth and Jacobvitz 2008; van IJzendoorn et al. 1999).

Several studies have highlighted the potential consequences of separation from or loss of the primary caregiver on the attachment system. Some of the children raised in institutions suffer from a severe socioemotional deprivation and do not form attachments towards their institutional caregivers (Smyke et al. 2002; Zeanah et al. 2005). Adopted children have been described as showing reactive attachment disorders and indiscriminate friendly behavior (Zeanah 2000; Zeanah et al. 2004): adverse preadoption rearing settings can, therefore, lead to insecure or disorganized attachment representations (Chisholm et al. 1995; Hodges et al. 2011; Pace et al. 2014; Pace et al. 2015a; Palacios et al. 2005; van IJzendoorn and Juffer 2006; Vorria et al. 2003), which, in turn, can result in adverse developmental outcomes (Juffer and van IJzendoorn 2005; Van den Dries et al. 2009; van IJzendoorn et al. 2005).

With regard to late-adoptions, research has rejected the conception of childhood experiences as determinants of subsequent development, and has highlighted the potential of the adoptive experience as a specific protective factor with a reparative function for children who have been abandoned, abused or maltreated (Beijersbergen et al. 2012; van der Voort et al. 2014; van IJzendoorn and Juffer 2006). More specifically, adoption is considered

an opportunity to experience a new relational environment that offers children the possibility of improving their socio-emotional adjustment. Research shows that it is not adoption itself that ensures this possibility, but certain characteristics of adoptive parenting. Some studies emphasize the role of parental sensitivity (Beijersbergen et al. 2012; Schoenmaker et al. 2015), while other studies point to the opportunity to be adopted by mothers with secure attachment states of mind, who are competent and available to relate empathically with their children and to encourage their emotion regulation (Dozier et al. 2001; Pace et al. 2012; Pace and Zavattini 2011; Steele et al. 2008; Verissimo and Salvaterra 2006).

Several studies have specifically explored the relation between the attachment representations of late adopted children and those of their adoptive parents. (Barone and Lionetti 2011; 2013; Kaniuk et al. 2004; Ongari and Tomasi 2013; Pace 2014; Pace et al. 2011; 2012; 2015b; Steele et al. 2008), highlighting as a whole a concordance of attachment features in adoptive mother–child dyads and suggesting that the new social environment can ease the impact of negative past experiences and positively contribute to children’s postadoption adjustment.

Moreover, the current scientific literature points out that mothers’ and fathers’ roles as attachment figures may be different and their influences on child outcomes complementary (Bretherton 2010). Despite the increased interest in the contribution of fathers in biological families (Tamis-Lemonda and Cabrera, 2012), the aspects that promote the foundation of a secure father-child relationship are still unclear (Brown et al. 2012) and to date very few works have explored fathers in adoption research, producing conflicting results regarding the presence of a correlation between father and child attachment (Barone and Lionetti 2011; Ongari and Tomasi 2013). Yet social changes, with increasing involvement of fathers as caregivers, requires a re-conceptualization of the paternal role and it becomes increasingly crucial to explore the specificities of the father-child attachment bonds mostly within adoptive families, where mother's biological primacy fades in favour of a greater interchangeability of roles.

A secure attachment relationship is concretely shaped by the recurring emotional and cognitive exchanges that take place within the interaction between a parent and a child, when they are characterized by the adult's ability to understand and respond in a timely and appropriate way to the child's signals, providing him or her with responses that lead to shared positive emotional states and facilitating the control of negative ones (Beebe and Lachmann 2003; Tronick 2007). However, a child is not just a passive receiver of the parental proposals: every human being is always engaged in a continuous co-regulation process with significant others, characterized by the co-creation of meanings and mutual affective attunement. Child and parent belong to an interactive

regulative system in which auto- and eco-organization influence each other (Morin 1992) and whose organization is an emerging systemic property (Stern 2004). Emotional Availability (EA) is a multidimensional construct, which attempts to capture the dyadic quality of parent–child relationships, including both parental features, such as sensitivity, ability to structure the environment and lack of intrusiveness or hostility, and children’s features, such as a child's ability to respond to a parent’s biddings and to involve their parent in their activities.

Although several researches have shown that some factors of emotional availability correlate with the quality of parents’ and children’s attachment (Easterbrooks et al. 2000; Easterbrooks and Biringen 2000; 2005; Ziv et al. 2000), only a small number of works on adoptive families took the view of this construct. In fact, adopted children’s emotional availability can be affected by their history of deprivation and lack of adequate stimulation, so that they may present passive, hyperactive or non-responsive behaviors in the relationship with their new parents (Gunnar et al. 2000; MacLean 2003). Nevertheless, positive relational experiences, which may result from placement in an appropriate relational environment, such as a sensitive parenting and a positive emotional relationship with a stable caregiver, may help to reduce the delays in social competencies of these children and to increase their responsiveness (Van den Dries et al. 2012).

Some recent studies have observed emotional availability in adoptive parent–child dyads (Garvin et al. 2012) or have specifically focused on the relation between attachment and emotional availability in adoptive and foster families (Altenhofen et al. 2013; Van den Dries et al. 2012 ). As a whole, they showed a good level of emotional availability in adoptive/foster families and provided some data in support of an association between child attachment and emotional availability. They present, nonetheless, some limitations, such as the absence of parental attachment assessment and the lack of father–child dyads assessment.

In relation to the state of the art of adoption research described so far, the goal of our study was to evaluate the attachment concordance between both child–mother and child–father dyads, and to measure the relations between parent–child interactions and their attachment representations. We stated the following hypotheses: (1) late-adopted children placed with mothers/fathers showing secure attachment representations are expected to show more secure patterns than the ones adopted by non-secure mothers/fathers;(2) late-adopted children who were securely attached are expected to show higher quality of the parent-child interactions than insecure ones; and (3) adoptive mothers/fathers who show secure attachment representations are expected to show higher quality of the parent-child interactions than insecure ones.

## Method

### Participants

The study involved 20 Italian adoptive families, including 60 participants, consisting of 20 late-adopted children, 20 adoptive mothers and 20 adoptive fathers, with the following inclusion criteria: international adoption; age of children between 4.5 and 8.5 years; time spent by the child in the adoptive family between 12 and 36 months; absence of special needs.

The group of families initially identified by the Agencies for international adoption based in Rome who have joined the project was initially composed of 30 families, 10 of which did not agree to participate. Refusals mainly occurred because of shortage of time and, secondarily, for fear that the children could be emotionally stressed by the assessment.

In our group, 65% of late-adopted children were male. Children at time of assessment had a mean age of 81.8 months, (SD = 13,4) and they were adopted at a mean age of 63.5 months (SD = 16,7; Min. = 37,0, Max. = 93,0). At the time of the assessment, the time spent in the adoptive families was on average 18.8 months. 40% of internationally adopted children came from Eastern Europe, 35% from Latin America, 20% from Asia and only 5% from Africa. 65% of them (N = 13) spent time in their biological families, on average for 25.2 months; while only 5.3% (N = 1) had the experience of foster care. All children had spent time in institutions, for an average time of 37.8 months.

With regard to demographic variables of adoptive parents, the mean age was 44.8 (SD = 2,5) years for mothers and 46 (SD = 4,4) for fathers. With respect to educational level, mothers have mainly achieved a Bachelor's Degree (50%), while fathers had mainly achieved a High School diploma (60%). Parents were predominantly employees (75% of mothers and 75% of fathers), and families show heterogeneity in household composition, even if most of them (50%) only have one adopted child.

### Procedure

The study has been approved by the Sapienza University of Rome's Department of Dynamic and Clinical Psychology's Research Ethics Committee. After obtaining informed consent from both of the parents, **the participation protocol included three data collection sessions, which took place in the family homes, and one feedback session with every parental couple, which took place at the University Department. In the first session,**

play interactions for both mother–child and father–child dyads, parent self-reports and children’s receptive vocabulary test were carried out. In the second session, the mother or father AAI and the MCAST-with-mother or the MCAST-with-father were administered. In the third session, the AAI with the other parent and the remaining MCAST were carried out. The MCAST-with-mother and the MCAST-with-father were balanced across the sample with respect to the order of administration.

## Measures

**Child attachment representations.** The *Manchester Child Attachment Story Task* (MCAST) (Green et al. 2000) was used for the assessment of children attachment patterns to a specific caregiver. It is a story completion test based on a semi-structured play procedure for children aged between 4 and 8 years, structured to evoke, in a controlled and repeatable setting, narratives and behavioral patterns that arise from children’s internal working models of attachment. The child is presented a warm-up “breakfast” vignette, four attachment-related vignettes (“nightmare”, “hurt knee”, “tummy ache” and “shopping”) and a final free-play vignette to cool down the emotional arousal elicited by the attachment-related vignettes. The child is asked to complete the stories and, at the end of each one, to answer some stimulus-questions on mentalizing ability.

The coding system is based both on narratives and on the content of behavior observed during the procedure. The 21 coding scales fall into four dimensions (Green et al. 2000; 2005): (1) attachment-related behaviors; (2) narrative coherence; (3) disorganized phenomena; (4) mentalization skills. Aside from the first dimension, which is categorical, the others are quantitative and expressed on a scale from 1 to 9 points. The MCAST coding scheme provides the identification for each vignette of four attachment classifications: B (Secure), A (Insecure/Avoidant), C (Insecure/Ambivalent), D (Insecure/Disorganized). The four vignettes’ categories are then combined to form the child’s overall attachment classification. **The MCAST measures disorganization as a separate category, characterized by a total collapse of the organized attachment strategies or by the use of multiple and mutually incompatible strategies.** Coding also includes dimensional disorganization, mentalizing and coherence scores.

The MCAST showed acceptable psychometric properties, especially with respect to Disorganization and Coherence scales (Barone et al. 2009). Raw agreement on security vs. insecurity was 86% (Cohen’s  $\kappa = .72$ ,  $p < .001$ ), and 78% on the 4-way classification (A, B, C, D). All scales except four (Proximity-seeking, Self-care, Reversal, and Exploratory play) showed intra-class correlations between .51 and .70, proving moderate, although respectable, consistency values.

In this study, the MCASTs were coded by two accredited independent judges, whose agreement with respect to the four attachment patterns (A, B, C, D) was found to be 83% ( $k = .74, p < .001$ ).

**Adult attachment states of mind.** Parents' states of mind with respect to attachment were assessed through the semi-structured *Adult Attachment Interview* (AAI) (George et al. 1985), consisting of 18 questions about attachment, investigating relationships with parents during childhood, and whose administration takes approximately one hour. The AAI explored different experiential areas related to the quality of early relationships with caregivers, including physical illness, emotional distress and experiences of separation, loss, rejection and abuse.

The coding system (George et al. 1985; Main et al. 2002) included three systems/stages of analysis: the *Scales for Inferred Experience with Parents*, the *Scales for the Current State of Mind* (organized or unresolved/disorganized) and the overall *Classification System*, based on general category descriptors. The final classification includes the dimensional Unresolved Mourning/Abuse score and Coherence Score, and provides for the inclusion of the subject in one of the five major classifications: Free/Autonomous (F/A), Dismissing (Ds), Entangled (E), Unresolved/Disorganized (U) and Cannot Classify (CC).

Psychometric testing of the AAI proved stability, as well as discriminant and predictive validity, in both clinical and non-clinical populations (Bakermans-Kranenburg and van IJzendoorn 1993; Hesse 2008; van IJzendoorn and Bakermans-Kranenburg 2008). The test–retest stability of the three major organized classification resulted of 77–90% across 1-15 months in absence of interviewer effects (Bakermans-Kranenburg and van IJzendoorn 1993; Benoit and Parker 1994; Sagi et al. 1994).

In this study, the AAIs were coded by two accredited independent judges, whose agreement with respect to the four general attachment classifications (F, Ds, E, U) was 83.3% ( $k = .77; p < .001$ ).

**Emotional availability.** Dyadic emotional availability was assessed through *Emotional Availability Scales*, 4th ed. (EAS) (Biringen 2008), the framework of which includes an integration of attachment theory (Bowlby 1969; 1980), emotional perspectives (Emde 1980; Mahler, Pine and Bergman 1975) and systemic theories (Guttman 1991), in order to assess the quality of parent–child emotional exchanges through observation. Dyads should be observed for a minimum of 20 min. EAS are composed of six scales, four of which related to parent's emotional availability (Sensitivity, Structuring, Non-intrusiveness, Non-hostility) and two to the child's emotional availability (Responsiveness, Involving). **As specified in the manual, the coding system requires that each Emotional Availability dimension is measured using a Likert-type continuous scale**



that assigns a score between 1 (non-optimal) and 7 (optimal). Scores between 1 and 3 are indicated as impaired, scores between 5 and 7 as adaptive and the score of 4 as a still critical threshold level.

The Sensitivity scale considers, in addition to parental responsiveness, the quality and range of expressed emotions, the awareness of the relational timing, the variety and the creativity in the play, the spontaneity of behavior and the flexibility in negotiating conflict. The Non-hostility scale assesses the level of hostility manifested by the parent towards the child. The Non-intrusiveness scale refers to the ability of the adult not to interfere with the activities that the child is carrying out. The Structuring scale evaluates the degree to which the parent structures the environment in which the interaction takes place in an appropriate manner. The Child Responsiveness scale assesses the child's desire to get involved with the parent and to follow his suggestions or his communications in a syntonic way. The Child Involvement scale regards the initiative of the child, or their ability, to actively involve the parent in their play activities.

Several studies demonstrated the reliability and validity of the EAS from different nations and children of different ages and genders, from normative and special needs samples, and from low and high social-risk populations (Bornstein et al. 2006; 2008). Retest reliability ranged from .59 to .67 over 5 months, and dyadic EA mean levels were stable in mother–infant normative dyads over 1 and 2 week intervals across contexts (Bornstein et al. 2006; 2008).

In this study the EAS has been coded through the scales by two accredited independent judges, whose agreement on 20% of the coding ranged from .77 ( $p = .024$ ) for the Child Involving scale to .91. ( $p = .002$ ) for the Sensitivity scale.

**Control measures.** Parents were administered the SCL-90-R (Derogatis 1994), a psychiatric self-report inventory for the screening of general psychiatric symptomatology. Children's receptive vocabulary was assessed through the PPTVT-R (Dunn and Dunn 1999; Stella et al. 2000), to ensure children's Italian language comprehension was sufficient for eligibility for the administration of the MCAST.

### **Data Analyses**

Data were processed by Statistical Package for Social Science (SPSS, Version 22.0). Non-parametric statistics were chosen as the most appropriate because of our small sample size, and because the distribution of the outcome could not be assumed to be approximately normally distributed.

Chi-squared exact test was used for two-sample comparisons of categorical data; Mann–Whitney U test was used for two-sample comparisons of ordinal variables; Wilcoxon test was used for two-sample comparisons of

ordinal variables for paired samples; Spearman's correlation coefficient was chosen for rank variables correlation.

Some of the data analysis was carried out by categorizing the MCAST and the parental AAI classifications into secure and insecure groups, as follows: B versus A, C, and D for children and F versus Ds, E and U/CC for parents. The level of significance for all analyses was  $p \leq .05$ .

## Results

### Descriptive results

**Late-adopted children's attachment representations (MCAST.)** Diversifying children attachment distributions in relation to the two parental figures, as for the relationship with the mother figure, 55% ( $n = 11$ ) showed a secure pattern, 20% children ( $n = 4$ ) an avoidant pattern, 15% children ( $n = 3$ ) an ambivalent pattern and 10% children ( $n = 2$ ) a disorganized pattern. As for the relationship with the father figure, 31.6% ( $n = 6$ ) children were classified as secure, 26.3% ( $n = 5$ ) as avoidant, 15.8% ( $n = 3$ ) as ambivalent and 26.3% children ( $n = 5$ ) as disorganized.

No significant differences were revealed between the distributions of attachments toward mothers and fathers, ( $\chi^2_{(1, N=39)} = 2.174$ ;  $p = 0.14$ ). A comparison with the normative Italian sample's attachment pattern distribution (Barone et al. 2009) showed, as regards the attachment to mothers, no significant differences between the two samples, both with reference to the 2-way ( $\chi^2_{(1, N=250)} = .507$ ;  $p = .467$ ) and the 4-way ( $\chi^2_{(3, N=250)} = .818$ ;  $p = .845$ ) distributions. As for the attachments to the father figure, data show significant differences with respect to both the 2-way ( $\chi^2_{(1, N=249)} = 7.280$ ;  $p = .007$ ) and the 4-way ( $\chi^2_{(3, N=249)} = 7.993$ ;  $p = .046$ ) distributions, highlighting, in our group of children, an under-representation of secure attachments and an over-representation of disorganized attachment, when compared to the normative sample.

**Adoptive parents' attachment representations (AAI).** Adoptive mothers' attachment models were distributed as follows: 50% ( $n = 10$ ) FA; 35% ( $n = 7$ ) Ds; 5% ( $n = 1$ ) E and 10% ( $n = 2$ ) U. Adoptive fathers' attachment models were distributed as follows: 50% ( $n = 10$ ) FA; 40% ( $n = 8$ ) Ds; 10% ( $n = 2$ ) E and 0% ( $n = 0$ ) U.

No statistical differences were found between the two groups of **adoptive** mothers and fathers ( $\chi^2_{(3, N=40)} = 2.40$ ;  $p = .494$ ). The comparison between our group of parents with that of the Italian normative non-clinical sample (Cassibba et al., 2013) showed no significant differences.

**Parent-child interactions (EAS).** Considering a cut-off score of 4, the free play interaction assessed by the EAS showed an adequate average level of emotional availability, both for mother–child and for father–child dyads; **no significant differences were found between the two groups of dyads compared to average scores using the Wilcoxon test for paired analysis (Table 1)**. Focusing specifically on parental Sensitivity, 55% of mothers and 75% of fathers showed adequate scores.

#### Insert Table 1

**Control variables.** As for the presence of psychopathological symptoms, no parent has reported clinical scores ( $M = .20$ ;  $SD = .16$ ;  $Min. = .00$ ;  $Max. = .60$ ;  $Cut-off\ score = 1$ ). Receptive vocabulary skills were found to be adequate to the administration of the MCAST for all children ( $M = 97,30$ ;  $min. = 80,00$ ;  $max. = 118,00$ ), whose equivalent ages were equal to or greater than 4 years.

The MCAST classifications were not associated with other demographical (gender, age), or adoption related (age at placement, country of origin). AAI secure–insecure classifications of adoptive mothers and fathers were not associated with other variables, such as age, educational level, occupation, and the presence of psychopathological symptoms (Table 2).

#### Insert Table 2

##### **Parent-child attachment concordance (AAI – MCAST)**

The concordance between mothers' and children's attachment classifications ( $N = 20$ ) was 75% ( $K = 0.50$ ,  $p = .025$ ) with respect to secure/insecure classification and 50% ( $K = 0.22$ , ns) with respect to 4-way attachment distribution (table 2).

No significant concordance was found between fathers' and children's attachment classification ( $n = 19$ ), nor for the 2-way (63%;  $K = .249$ , ns) and the 4-way (42%;  $K = .199$ , ns) classifications (Table 2). However, with

regard to the dimensional scales of parental and infant attachments, child disorganization scores were negatively correlated with fathers' Coherence of Transcript ( $r = -.51; p \leq 0.05$ ) and Coherence of Mind ( $r = -.47; p \leq 0.05$ ).

### Insert Table 3

#### **Late-adopted children's attachment representations (MCAST) and quality of caregiver-child interactions (EAS)**

*Classifications.* Splitting mother-child and father-child dyads, dyads with children classified as secure in the MCAST-with-mother were scored significantly higher in the Child Involving scale of the EAS ( $U = 11,000, p = .002$ ), and dyads with children who were secure in the MCAST-with-father showed significantly lower scores in the parental Non-Hostility scale ( $U = 61,500, p = .046$ ).

*Dimensional scales.* Considering the EAS and the MCAST-with-mother scales, Child Responsiveness was positively correlated with child Coherence and negatively correlated with child Disorganization. Child Involving negatively correlated with child Disorganization and positively correlated with child Coherence (table 3). As for the father-child dyads, Child Involving surprisingly positively correlated with Child Disorganization of the MCAST-with-father ( $\rho_s = .47; p \leq .05$ ).

#### **Adoptive parents' attachment representations (AAI) and quality of caregiver-child interactions (EAS)**

*Classifications.* Data analysis highlighted significant differences between some of the emotional availability scales, according to the quality of parents' attachment representations. F/A mothers had significantly higher scores on Sensitivity ( $U = 13,500; p = .004$ ), Structuring ( $U = 20,500; p = .023$ ) and Child Responsiveness ( $U = 19,500; p = .019$ ) scales than Not F/A ones, while no differences were found between F/A and Not F/A fathers.

*Dimensional scales.* Considering EAS and maternal AAI scales (Table 3), maternal Sensitivity negatively correlated with maternal Unresolved loss and positively correlated with Coherence of Transcripts and Mind. Regarding fathers, Child Involving negatively correlated with fathers' Unresolved loss scale ( $S = .530; p \leq .05$ ).

### Insert Table 4

## Discussion

This paper describes a study in which 20 adopted children's attachment (in)security towards mother and father was linked to adoptive parents' attachment (in)security and to parents' and child behavior during a play task. Results suggested that children's attachment distribution was comparable to Italy's normal population, that child and mother attachment were correlated, and that child and parent behavior were linked to child and parent attachment (in)security.

First of all, the results of this study tried to paint a picture regarding the quality of the attachment relation between 20 late adopted children and their adoptive parents 18 months after adoption. Concerning the mother-child relationship, results pointed out that children's attachment distribution was comparable to Italy's normal population, showing that in 11 out of 20 adoptive families, children were securely attached to adoptive mothers. Nonetheless, 13 out of 19 children turned out to be insecurely attached to their fathers. This data appear encouraging, if compared to the proportion of children cared for in institutions with primary disorganized attachments. If we could attribute these results to the adoption, we could argue that it had allowed children a noticeable recovery from previous traumatic experiences; however, as children's attachment was not assessed upon their arrival in adoptive families, it is necessary to leave room for other interpretations, such as the possibility that families with secure children are mainly available to take part in research projects such as this. Our first hypothesis regarding associations between parents' state of mind and children's attachment patterns was only confirmed for the mother-child dyads. In line with other contributions aimed at investigating inter-generational concordance of attachment (Steele et al. 2003; Barone and Lionetti 2012), the considerable degree of correlation found in the present study between adoptive mothers' mental representations and their children's IWMs, according to the classification secure/insecure, indicates that, in adoptive families, just as in biological ones, mothers and children tend to show similar attachment patterns. As suggested by other research (Barone and Lionetti 2011; Ongari and Tomasi 2013; Pace et al. 2015b; Steele et al. 2008), a secure maternal state of mind regarding attachment could represent a protective factor against adverse outcomes associated with emotional deprivation and trauma, proposing adoption as a potential catch-up opportunity. In light of this assumption, our results would suggest adoptive mothers' security as a favorable experience for late adopted children in terms of their possibility to form new attachment bonds. Still, great caution is needed in interpreting this result as, again because of the lack of an attachment pre-test for children, the revealed association could be coincidental, or explainable by third factors (e.g., selection of children to match with parental couples).

As for the father–child relationship, in line with the findings of other current research (Barone and Lionetti 2011; Ongari and Tomasi 2013), no significant associations were found, even if some dimensional children and fathers' attachment scales were found to be in relation, such as children's Disorganization with fathers' Mind and Transcript Coherence. On the other hand, 75% of adoptive fathers against 55% of adoptive mothers showed adequate Sensitivity during play interactions. Some key contributions on the topic of father–child attachment (Bretherton 2010) have highlighted the role of the father as an attachment figure, able to provide security through sensitive support to the child's exploration, thus, completing the role of the mother as a secure base when the child is in need of comfort and protection. This perspective does not assume that the two parents cannot fill both roles, as indeed often happens, but that they may serve as "specialized" referents for the child attachment or exploration needs (Grossmann et al. 2002). Therefore, the father–child relationship may be more closely linked to the function of sensitive support during exploration and cooperation, and thus may be centered on issues different from those that characterize and define the mother–child relationship (Brown et al. 2012). Or in the early years after placement late-adopted children may be involved in aspects concerning the development of the attachment bond with a primary caregiver, most often embodied by the mother. Data available to us may, therefore, indicate that the time required for children with a non-secure or disorganized attachment to overhaul their IWMs in relation to the father figure can, on average, be longer than those related to the mother figure (Belsky et al. 1984). Moreover, these data could be interpreted in the light of the assumption that the mobilization of affects and the activation of needs, feelings and behaviors related to attachment to the father figures would require a specific path, which is not necessarily consistent with that required for the development of an attachment to mothers, constituting a qualitatively different process based on peculiar emotional and relationship dynamics.

In mother–child relationships, as shown in other studies (Tambelli et al. 2008), most of the interaction assessment scales are related to parent and children attachment variables. With regard to the relationship between attachment and dyadic emotional availability, our second hypothesis, concerning the presence of specific associations between the quality of the state of mind of the children and the quality of the parent–child interactions was confirmed relative to child emotional availability scales: secure children, when compared to non-secure ones, show more skills in terms of their ability to “activate” their mothers and make them part of the emotional exchange. Several studies have found, empirically, that, in the general population, the dyadic emotional availability assessed by the EAS appears to be associated with and predictive with respect to security of attachment in infancy (Easterbrooks and Biringen 2005; Ziv et al. 2000). According to attachment theory,

children who experience positive emotional relationships with their caregivers are better able to regulate their emotions and to keep an accessible and empathetic attitude towards others (Biringen and Robinson 1991). The data highlighted by the present work extends this evidence to adoptive families, and is in line with the trend of studies that even found a relationship between some dimensions of emotional availability and infant attachment security in this type of family (Altenhofen et al. 2013; Stovall and Dozier 2000; Van den Dries et al. 2012).

Our third hypothesis, or the expected presence of specific associations between the quality of the state of mind of the parents and the quality of the parent-child interactions, was only confirmed for the mother-child dyads.

The resulting differences in the quality of interaction, according to **adoptive** mothers' attachment quality, suggest that the interactions with Free/Autonomous mothers turn out better than those with Not

Free/Autonomous ones in several aspects of dyadic emotional availability: higher maternal sensitivity to children needs, more adequate parenting skills in structuring the activities and major willingness by children to engage with their mothers in an enjoyable interaction. **These results are in line with other contributions in non-adoptive samples, suggesting that the construction of a secure attachment relationship is realized not only through the capacity of the adult to respond to the child's need for security and protection, but also by his/her ability to understand and timely and appropriately respond to the child's affective signals within an adequate interactive exchange (Beebe and Lachmann 2003; Tronick 2007).** Maternal state of mind with regard to attachment would highlight, therefore, its role as a core component of caregiving. **Yet this interpretative suggestion must be approached cautiously, because the highlighted associations might be coincidental or might run in the opposite direction: it could be easier to be sensitive to a previously securely attached child.**

No significant difference was noticed between Free/Autonomous and Not Free/Autonomous fathers. On average, both groups of fathers showed adequate responsiveness in their interactions with their children, even if at a purely descriptive level, Free/Autonomous fathers obtained higher median scores on EAS scales than Not Free/Autonomous ones. Moreover, Non-intrusiveness and Child Involvement scales appear to negatively correlate with paternal attachment Irresolution scores. Given the small sample size, this finding is not easily interpretable: it could, however, support the results of studies that reported the presence of an association between attachment and paternal interactive style (Cohn et al. 1992; McFarland-Piazza et al. 2012; Ongari and Tomasi 2013), as secure fathers obtained higher mean scores on all EAS scales than Unsecure fathers.

**Overall, with respect to the relationship between attachment and emotional availability, it must be assumed that sharing emotional experiences takes place through a dyadic attunement of motivational systems. The emotional availability may therefore be subject to qualitative and quantitative changes depending on the motivational**

systems turned on within the intersubjective field (Lyons-Ruth 2007). Play interactions, as assessed through EAS, most frequently elicit positive more than negative emotions and do not ensure incurring moments of children distress and the related parent's reactions: sensitively responding to a calm or a happy child is very different from appropriately responding to infant distress.

Although these findings may represent a contribution to the understanding of adoptive families' relational functioning, this research presented several methodological limitations that should be taken into consideration. They include: the small size of the sample; the absence of a longitudinal research design, resulting in a deficiency of attachment evaluation at time of placement; the assessment of dyadic emotional availability only being in a play, and not in a stressful, situation; the lack of a control group consisting of early-adopted children and the variability of the sample with respect to the family composition (presence/absence of biological children and other adopted children). Particularly, the absence of an attachment measure at the start of the adoption period prevents from attributing to the adoption any causal role in relation to the evidence obtained. For this reason, for future confirmation of interpretative proposals provided in the discussion section and for enlargement of this research trend, it would be especially valuable to expand the number of participants and to include a follow-up to observe long-term stability of the acquired data with respect to the mother-child relationship, the parent-child interactions in terms of emotional stress and, finally, the further trajectories of father-child adoptive dyads.

Recognizing not only adoption's extraordinary effectiveness in allowing abandoned and maltreated children a chance of recovery but also the difficulties that characterize many adoptive experiences is an indispensable premise to effectively support families who are in situations of greater vulnerability.

This work revealed the existence of some specific conditions that may require greater support for the successful formation of emotional bonds, such as parents' insecure or unresolved attachments and a poor parent-child interaction quality. In these cases, it is particularly necessary to activate specific psychological assessment and counseling pathways, in order to support parents in understanding and appropriately responding to the needs of their children (Pace et al. 2015c, Pace et al. 2016). For this purpose, this contribution has revealed a valuable multifocal parent-child relationship assessment model that allows for early recognition of risk and protective factors with respect to the development of a positive relationship with the child. In addition, this procedure highlighted the potential of video-feedback sessions in pointing out the crucial moments both in the co-construction of the relationship and in supporting parenting skills in recognizing the child's inner world configuration for the identification of more functional relational strategies.



This paper is offered as a contribution to the understanding of the relational bonds within families with late adopted children. Although literature has emphasized the increased risks for late adoptive children, when compared to their non-adopted peers, that their attachments can constitute a compromise domain, the results of this work surprisingly revealed that their attachment distribution was comparable to Italy's normal population. Moreover, mother and child attachments (in)security turned out to be related, and the quality of their play interaction linked to the (in)security of their attachment representation. As for the father–child relationship, this work highlighted the need to further focus on the specificity of this binding in adoptive families, as it did not overlap with that between mother and child.

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