



Social competence in Russian post-institutionalized children: A comparison of adopted and non-adopted children



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ABSTRACT

The study examined the social skills of 92 Russian children (males = 64) adopted by Italian families. The children, aged between 8 and 14 years, were compared with a control group of children who grew up with the biological family. Evaluation by both parents and children of the children's social competence were investigated. The results showed that, according to the parents' reports, the adopted children had more problems in social functioning than peers in the control group, along with a greater propensity to use maladaptive behaviors such as Opposite Behavior, Rule-Breaking Behavior, Aggressive Behavior and Externalization. By contrast, according to the children's assessments, the adopted children were less aggressive and used prosocial behaviors to a greater extent than children raised in the biological family. The views of the parents and the children about the children's aggressive behavior were mutually conflicting. Finally, the influence of adoption related variables on the social competence of children was examined. Contrary to our expectations, there were no significant relationships between social competence and age of adoption, the duration of institutionalization and the time spent in the adoptive family.

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1. Introduction

1.1. The effect of early social interactions on the development of social competence

Decades of studies on the joint effects of nature and nurture in accounting for the development of social competence have shown that humans are biologically predisposed to interact with their social world in a complex specie-specific way (Kagan, 2013; Plomin, DeFries, Knopik, & Neiderhiser, 2013). This means that children have an innate ability to adapt to the social world (Baumeister & Leary, 1995; Fox & Rutter, 2010; Reddy, 2008). Infants are born with a limited behavioral repertoire that is sufficient to ensure the development of increasingly sophisticated communication tools. In contrast to other species, humans are born with a biological predisposition to experience different states of inter-subjectivity, on the cognitive, emotional, affective and social level (Fonagy, Gergely, Jurist, & Target, 2002; Reddy, 2008; Tronick, 2008). Recent studies of prosocial behavior have shown that humans are biologically predisposed to the development of increasingly complex skills in relation to cooperation and altruistic behavior (Knafo & Plomin, 2006; Tomasello, 2009). The likelihood or not of using positive social behavior interacts at various levels with the simultaneous

presence of a biological predisposition to aggressive and antagonistic behavior (Peterson & Flanders, 2005). In fact, in line with Eibl-Eibesfeldt (1970), human nature is characterized by the simultaneous existence of these opposite behavioral tendencies (prosocial and cooperative vs. aggressive and antagonistic) which are indissolubly linked to the individual's personal history (Rubin, Bowker, & Kennedy, 2009).

However, even though human beings are born predisposed to the development of sociality, they become socially competent, but this is not the case for everyone. Social competence grows due to learning processes and to social modeling. The microsystems directly experienced by the child, such as the family, are a primary agent of socialization and condition the development of the affective area (Bronfenbrenner, 1979; Schaffer, 1996). This influence addresses the paths and the trajectories of social development of the child during the first years of life (Rubin et al., 2009). Children are born with a basic need to feel to "belong to others", to develop intense and complex interactions with several partners even though selective, and to establish profound attachment bonds (Baumeister & Leary, 1995).

Several studies have evidenced that early social experiences have a profound effect on the development of the social competence of children (Fox & Rutter, 2010), that takes place in a different but predominant way in all affective, socio-cognitive and socio-emotional skills (Berens & Nelson, 2015; Hostinar, Stellern, Schaefer, Carlson, & Gunnar, 2012; Merz, McCall, & Groza, 2013; van den Dries, Juffer, van IJzendoorn, & Bakermans-Kranenburg, 2009; van IJzendoorn, Juffer, & Klein Poelhuis, 2005). We may wonder what happens if the experiences

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of the child during this period are not optimal, or if the experiences are awful. One of the most corroborated hypotheses argues that the experiences that occur in the first years of life are very important since this is a sensitive period for the development of social competence (Zeanah, Gunnar, McCall, Kreppner, & Fox, 2011). That is, in early development, social experiences have a stronger effect than they would have in another period (Fox & Rutter, 2010). Given that care settings are usually stable and “good enough” (Winnicott, 1965), to assess the importance of early experiences of care, studies in which children experience a significant change in their caregiving situation are needed. Studies of children raised in institutions provide a unique opportunity to study sensitive periods in brain development and their specific links with social competence (Julian, 2013; Zeanah et al., 2011). Institutionalized children are often reared in conditions of social and material privation (Zeanah et al., 2011). Situations particularly involving deprivation from a socio-affective point of view are detected in the institutions of the Russian Federation. The increase in adoption of post-institutionalized children has heightened concerns about the long-term effects of early social deprivation. Despite the fact that only a few studies have examined the consequences of early social deprivation on the development of children's social competence, it is now clear that institutionalized children have deficits in social skills. According to adoptive parents' reports, these children have difficulty in interacting with both adults and peers. Post-institutionalized children have aggressive behavior and transgress rules frequently. Furthermore, they have more externalizing problems than children raised in the biological family (Hawk & McCall, 2011; Muhamedrahimov et al., 2014).

1.2. Post-institutionalized adopted Russian children

Post-institutionalized Russian children constitute a special group in which it is possible to distinguish the effect exerted by social and emotional deprivation while controlling for the presence of good material care (MacLean, 2003; Zeanah et al., 2011). Several studies have shown that growing up in Russian institutions may be a significant risk factor for the development of problems in different areas, both in the short term and throughout the life cycle (Haugaard & Hazan, 2003; Hawk & McCall, 2011; Merz & McCall, 2010). The Russian Federation's institutions boast acceptable medical care, adequate nutrition and sanitation, may provide children with toys and equipment, and may offer an absence of abuse. Nevertheless, these institutions are primarily deficient in social-emotional experiences for children and the opportunity for adult-child relationships (McCall, 2011; The St. Petersburg-USA Orphanage Research Team, 2008), because of the high turnover and the low number of staff in relation to the number of children. Most Russian children are institutionalized from birth, others shortly after. Premature institutionalization may result in deficits in general brain development (Cohen et al., 2013; Gunnar & Loman, 2011; Pollak et al., 2010; Tottenham et al., 2010). The frequency and quality of the social-emotional relationships with the main caregiver determine the level of stress to which the child is exposed, at different stages of development, causing cascade effects on both the neurobiological, social-cognitive and social-affective plan (McCall, 2013). The Russian Federation's adoption policies complicate the phenomenon: children are firstly entrusted to domestic families and later intercountry adoption is considered as a chance to offer permanent family care to those children who may not find it in their country of origin (McCall et al., 2016). As a result, children can be adopted by a foreign family after age two, even though studies have shown that adoption after 18 months of age is an important risk factor for the emergence of specific problems in several areas of development (Hawk & McCall, 2011; Merz & McCall, 2010; Merz et al., 2013). In particular, when children enter into the adoptive family, they often exhibit social problems such as indiscriminate sociability and deficits in social cognition (Bruce, Tarullo, & Gunnar, 2009; Lawler, Hostinar, Milner, & Gunnar, 2014; Tarullo, Bruce, & Gunnar, 2007), but also social withdrawal (Dollberg & Keren, 2013) and

difficulty in adapting to the new environment (Hegar, Verbovaya, & Watson, 2015; Tan, Major, Marn, Na, & Jackson, 2015). Finally, these children often show externalizing problems (Gunnar, van Dulmen, & The International Adoption Project Team, 2007; Hawk & McCall, 2011; Juffer & van IJzendoorn, 2005; Merz & McCall, 2010; Miller, Chan, Tirella, & Perrin, 2009; Muhamedrahimov et al., 2014). Since the presence of serious behavioral problems is frequently associated with adoption disruptions (Palacios, Sanchez-Sandoval, & Leon, 2005), it is crucial to deepen the knowledge of the phenomenon in adopted children. Moreover, post-institutionalized children may be more likely to have poor social skills, as shown by Julian and McCall's (2016) study, which points out that post-institutionalized children assessed in the secondary years have poorer social skills than non-post-institutionalized peers. In terms of studies of prosocial behavior, these are still limited in number. This could be a point to consider, especially because in the last decade the importance of prosocial behavior in order to maintain good relations with others has been increasingly highlighted. Very few studies have been conducted on this issue. These include the Sharma, McGue, and Benson (1998) study which highlighted that adopted teenagers, especially females, showed a greater degree of prosocial behavior compared to the control group.

1.3. International adoption in Italy

Italian laws (L.184/83; L.476/98; L.149/2001; D.P.R. 108/2007; CC sentence 283/99) allow couples that have been married for at least three years, or that have lived together in a stable and continuous way for at least three years, to adopt a child through national or international channels. They have to be able to give an education to and maintain the child they are going to adopt. Adoptive parents must be between 18 and 45 years older than the child. Exceptions are permitted if this limit is overstepped by only one of them by up to 10 years, and in cases in which the adoption concerns a brother or sister of a child already adopted by them (L.184/83).

International adoption is a very long process. Candidate adoptive parents must follow several bureaucratic steps: first of all, they submit a statement of willingness to proceed with international adoption to the Juvenile Court in their district of residence, asking for a declaration of suitability to adopt. Thereafter, the judge requests local authorities to meet the couple to evaluate their parenting skills. This results in a written report that will guide the decision of the Juvenile Court. If the couple obtains the suitability to adopt the procedure for international adoption starts. Local authorities authorized by the Commission for International Adoptions provide information concerning the practices and the adoptive laws, specific to each country, and collect the necessary documents for the adoption process. These documents are examined by the Court of the child's native country and the verdict is transmitted to the Italian Central Commission for International Adoptions. If the decree of approval is affirmative, after verifying that the measure complies with the conditions provided for by the Hague Convention, the child receives a visa and becomes an Italian citizen. If the country of origin does not adhere to the Hague Convention, as in the case of Russian Federation that signed but not ratified this Convention, the Juvenile Court has to verify that the necessary requirements were respected (L.476/1998).

According to the Italian Commission for Intercountry Adoption (2013), in the period from 2000 to 2013, entry into Italy for the purpose of adoption was authorized for 42,048 foreign children (adopted by 33,820 couples). As regards the characteristics of adoptive couples, the average age was quite high: 42.7 years for the husbands and 40.7 years for the wives. The adoptive families who also had biological children represented only a small proportion of the total adoptive couples (12.1% had only one child while 1.8% had more than one child). Regarding the number of children adopted per family, the majority of the couples adopted one child, 16% two children and 3.6% three or more. The level of education of the couples was high and appears to be higher

than that of the Italian population, showing a clear prevalence for couples with a high school diploma, followed by couples with a university degree. National adoption involves far fewer children. In 2013, 2825 internationally adopted children entered to Italy compared with 1013 cases of national adoption and, in the period from 2001 to 2013, the number of national adoptions in Italy was only 13,694 whereas in the same period, there were 37,566 international adoptions in Italy (Italian Juvenile Justice Department, 2015).

In terms of origin, the most important country of origin for children who entered Italy in 2013 for the purpose of adoption was the Russian Federation, with 730 children authorized to enter, (25.8% of the total). It was followed by Ethiopia (10.4%), Poland (7.2%), Brazil (6.6%), Colombia (6.3%), People's Republic of China (5.7%) and Democratic Republic of Congo (5.6%). As regards gender, the children adopted in 2013 were boys in 60.7% of the cases and girls in 39.3% of the cases. The average age was 5.5 years. 42.1% of the children were between 1 and 4 years of age, 43.8% were between 5 and 9 years of age, 8.8% were aged 10 or over, and only 5.4% were less than a year old.

1.4. Aims

This study concerns the evaluation of different areas of social functioning of post-institutionalized children adopted from the Russian Federation.

Most of the previous studies that have been conducted have not investigated the social skills of children, but focused only on maladaptive behaviors as a global category and not on individual components. Moreover, these studies rarely collected information directly from children.

The investigation focused on different aspects: the quality of social interactions with adults and peers, expressed in terms of aggressive and prosocial behavior, as well as social maladaptive behaviors, such as oppositional behavior, rule-breaking and aggression. Measures were obtained from parents reports and child self-reports.

First, we aimed to investigate whether post-institutionalized adopted children were less socially skilled than children that grew up in the biological family, based on the reports of parents and children.

Second, we aimed to assess whether and how variables such as adoption age, length of institutionalization and time spent in a foster family influence the development of social competence.

2. Method

2.1. Participants

The participants were 92¹ post-institutionalized Russian children adopted by Italian families and 92 Italian children raised in their biological family. The children in the two groups were similar in terms of age, gender and socio-economic status: each group comprised 64 males and 28 females and the children were aged between 8 and 14 years (G1: $m = 10.888$, $sd = 1.402$; G2: $m = 10.869$, $sd = 1.393$). The socio-economic status was estimated taking into consideration the educational qualifications and the employment of both parents. The socioeconomic status was mainly medium (56%) and high (34.2%).

The adopted children all came from the Russian Federation and were adopted by Italian families. They all experienced an early period of social deprivation in Russian Federation institutes. The age at adoption varied from 20 to 108 months ($m = 65$ months; $sd = 23$ months). The adopted children had been living in Italy for at least two years and they had passed from 30 and 113 months ($m = 65$ months; $sd = 22$ months) with their Italian adoptive family. They spent from 12 to 96 months ($m = 33$ months, $sd = 15$ months) in an institution. Some of these children spent time with the biological family in the early stages

of their life, but information is available for only 43 of them: these children stayed 0–84 months with their biological family ($m = 27$ months, $sd = 25$ months). None of the children had ever presented severe sensory-motor disabilities or mental retardation. Although there may have been some variability in terms of pre-adoption experiences, Russian institutions, of which the Accredited Body has direct knowledge, are very similar in several respects regarding material living standards and caregiving. Therefore, the post-institutionalized adoption group could be considered homogeneous in terms of pre-adoption conditions. NADIA Onlus association in Verona (Italy) managed the adoption process for all of these children. All of the children had a level of schooling and a mastery of the Italian language such as to allow the correct understanding of the questionnaires.

2.2. Procedure

The data for this study were collected as part of a broader project within the Convention between the association NADIA Onlus of Verona and the Department of Psychology of Milan-Bicocca.

The adopted children were recruited by NADIA Onlus association (Italy). The adoptive families were firstly contacted by telephone for a presentation of the study; the parents and the adopted children who agreed to take part in the research had to complete the questionnaires at home, using a link created with the software SurveyMonkey.

The adoptive families' participation rate was quite low. Indeed, about 400 adoptive families were contacted and only 118 (29.5%) of them completed the questionnaires. Seemingly a strong spontaneous selection occurred and may be ascribed to several factors, such as the large number of questions to be answered, however, this could also be considered to be indicative of the presence of a sampling bias. Moreover, it should be noted that some participants were excluded at a later stage since they did not complete all the questionnaires and that some exclusion criteria were then applied, i.e. families who already participated in the first phase of the research or children with documented sensory-motor disabilities or mental retardation. The questionnaires were completed by mothers (56.7%), by fathers (42.2%), or by both parents (1.1%).

The control group of Italian children raised in their biological family were recruited by the Department of Psychology of Milan-Bicocca. They were selected from a larger sample of 700 children enrolled in different schools of Northern Italy. The children completed the printed questionnaires at school and their parents completed them at home. The selection criteria were designed to enroll children similar to the adopted children in terms of age, gender and socio-economic level.

The Ethics Committee of the University of Milano-Bicocca approved the project.

2.3. Instruments

This study was multi-informant: both the children and their parents completed questionnaires.

The parents filled in some scales of the CBCL 6/18 (Achenbach & Rescorla, 2001; Italian version: Frigerio et al., 2004 - Aggressive Behavior, Rule-Breaking Behavior & Externalizing scales) and some scales of the CPRS-R:L (Conners, 1997; Italian version: Nobile, Alberti & Zuddas, 2007 - Social Problem & Opposite Behavior scales). Although both the tools are intended to investigate several aspects of the child's behavior, this study focused only on the most purely social and externalizing perspective of the child's behavior. The children filled in the Forms and Functions of Aggression Questionnaire (Little, Jones, Henrich, & Hawley, 2003) and Prosocial Behavior Questionnaire (Caprara & Pastorelli, 1993).

Conners' Scales (Conners, 1997) are questionnaires created to evaluate the presence of problems in different areas for subjects aged from 3 to 18 years. The parents' version long form consists of 80 items, but in this study we considered only two scales. The *Social Problems*

¹ The sampling occurred in two phases: 37 children of the first cohort were enrolled in 2012 and their data were used in the study by Caprin et al. (2015). Children in the second cohort participated in the study in 2015.

Scale assesses the child's difficulties in establishing and maintaining friendship with peers (i.e. "Has no friends"). The *Opposite Behavior Scale* evaluates the tendency to argue in a difficult way with adults and often to be irritable (i.e. "Deliberately does things that annoy other people"). Parents have to estimate the frequency with which children carry out specific behaviors from 0 ("never") to 3 ("very often"). High scores indicate the presence of problems in this respect.

The internal consistency (Cronbach's alpha) of the Conners' scales, calculated separately in the present study for adoptive parents and non-adoptive parents respectively, was satisfactory for Opposite Behavior ($\alpha = 0.895$; $\alpha = 0.828$), while it was quite low for Social Problems in the non-adopted group ($\alpha = 0.789$; $\alpha = 0.529$).

The *Child Behavior Checklist 6–18* (Achenbach & Rescorla, 2001; Italian version: Frigerio et al., 2004) is a questionnaire for the evaluation of social competence and behavioral and emotional problems in subjects aged from 6 to 18 years. In this study we considered three scales. The *Rule-Breaking Behavior Scale* assesses the tendency to violate social rules, for example to skip off of school, to lie or to steal (i.e. "Breaks rules at home, school or elsewhere"). The *Aggressive Behavior Scale* examines the inclination to behave in an aggressive and threatening way or to show violent anger outbursts (i.e. "Gets in many fights"). The *Externalization Scale* is an overall measure given by the sum of the previous scale scores, which provides a total score of externalizing problems.

Parents have to evaluate if specific affirmations are suitable in describing their child's behaviors from 0 ("not true") to 2 ("very true"). High scores indicate the presence of problems in each specific domain.

The internal consistency (Cronbach's alpha) of the CBCL scales, calculated separately in the present study for adoptive parents and non-adoptive parents respectively, was satisfactory for Aggressive Behavior ($\alpha = 0.820$; $\alpha = 0.793$) and Externalization ($\alpha = 0.861$; $\alpha = 0.822$), while it was quite low for Rule-Breaking Behavior ($\alpha = 0.650$; $\alpha = 0.590$).

The *Forms and Functions of Aggression Questionnaire* (Little et al., 2003) is a 36-item child self-reported measure developed to assess forms (overt or relational) and functions (reactive or instrumental) of aggression. This questionnaire includes six subscales. Participants have to respond on a 4-point scale from "not at all true" to "completely true". For this study the authors created an Italian version of the questionnaire with 32 items (Caprin, Ballarin, Benedan, & Castelli, 2015), that was then back-translated by a native speaker to ensure equivalence. Only the total score was considered, intended to be an overall estimate of the child's inclination to act aggressively.

High scores indicate the presence of a tendency to be harmful towards others (i.e. "I'm the kind of person who often fights with others"). The internal consistency (Cronbach's alpha) of the Forms and Functions of Aggression Questionnaire, calculated separately in the present study for adopted and non-adopted children, was good: the alpha coefficients ranged from 0.875 to 0.933.

The *Prosocial Behavior Questionnaire* (Caprara & Pastorelli, 1993) is a 15-item child and adolescent self-reported questionnaire. It examines the child's inclination to provide help, to take care of others and to share his own objects (i.e. "I try to help others"). The child has to evaluate how often he/she uses a specific behavior on a 3-point scale from "never" to "very often". High scores in the total score represent an estimate of the inclination to behave in a socially adaptive and prosocial way while low scores express a penchant for selfishness. The internal consistency (Cronbach's alpha) of the Prosocial Behavior Questionnaire, calculated separately in the present study for adopted and non-adopted children, was good: the alpha coefficients ranged from 0.829 to 0.933.

The Conners' and CBCL raw scores were converted to standardized scores based on normative data by gender and age provided in the manuals; the raw scores were considered for data concerning the aggressive and prosocial behavior questionnaires, since there were no normative data.

3. Results

The data analysis was performed using the software SPSS/23. The software Statistics/6 was used for the difference in proportions test which aimed to compare risk and clinical percentages in adopted and non-adopted children. The results are presented in three sections: the children's inclination to use maladaptive social behaviors according to parents' reports; the children's self-evaluation of aggressive and prosocial behavior; the relationship between social behavior and adoption-related variables, such as age at the time of adoption, duration of institutionalization and time with biological and adoptive parents.

3.1. Children's inclination to use maladaptive social behaviors according to parents' reports

A series of analyses were conducted on the data relating to the parents' evaluations, in order to investigate differences in the use of maladaptive behaviors. Several scales were considered: Social Problems and Opposite Behavior (CPRS), Rule-Breaking Behavior, Aggressive Behavior and Externalization (CBCL).

Since the variables taken into account did not show a normal distribution, non-parametric tests were used.² A series of Mann-Whitney U Tests for independent samples showed a greater frequency of maladaptive behaviors in adopted children (see Table 1).

Adopted children seem to show more difficulty than non-adopted children in all the scales considered. Therefore, it was interesting to investigate whether adopted children presented greater pathological levels of problems than children in the control group. The difference in proportions test was conducted to compare risk and clinical percentages of clinical behaviors³ showed by adopted and non-adopted children (see Table 2). This analysis confirmed the hypothesis that adopted children have more problems than non-adopted children in the areas investigated, with the exception of rule-breaking behavior.

3.2. Children's aggressive and prosocial behaviors according to children's self-evaluations

A series of analyses were conducted on the data relating to the children's self-evaluations, in order to investigate differences in the implementation of both aggressive and prosocial behaviors.

The variables taken into account did not show a normal distribution, therefore non-parametric tests were used.⁴ A series of Mann-Whitney U Tests for independent samples showed a greater frequency of aggressive behaviors in non-adopted children and a greater aptitude for prosocial behavior in adopted-children (see Table 3).

Moreover, in order to take into account the effect of age, since there are no standardized scores for these scales, an ANCOVA was conducted. The main effect of the group on the aggressive behavior was confirmed ($F(1135) = 22.311$, $p < 0.001$, $\eta^2 = 0.142$), while the effect of gender ($F(1135) = 0.211$, $p = 0.646$, $\eta^2 = 0.002$) and the interaction ($F(1135) = 0.161$, $p = 0.689$, $\eta^2 = 0.001$) were not significant.

Regarding the prosocial behavior, an ANCOVA was performed by showing that the effect of the group was not confirmed ($F(1125) = 1.370$, $p = 0.244$, $\eta^2 = 0.011$), while the effect of gender ($F(1125) = 3.956$, $p = 0.049$, $\eta^2 = 0.031$) and the interaction ($F(1125) = 16.954$, $p < 0.001$, $\eta^2 = 0.119$) were significant.

² Kolmogorov-Smirnov's Tests of Normality, $p < 0.001$.

³ regards CPRS scores the same criteria suggested in the CBCL manual were followed: T scores lower than 65 were considered within the normal range, T scores between 65 and 69 were considered borderline while T scores above 70 were of clinical relevance.

⁴ Kolmogorov-Smirnov's Tests of Normality, $p < 0.001$.

Table 1

Descriptive statistics and *p* values regarding maladaptive behaviors in the two groups according to the parents' assessments (*N* = 92).

	Adopted children			Non-adopted children			<i>p</i>
	Range	M	sd	Range	M	sd	
Social Problems							
Males	43 – 96	57,143	13,877	43 – 66	46,984	6155	<0.001
Females	43 – 98	61,518	16,116	43 – 71	48,481	7547	0.002
Total	43 – 98	58,456	14,632	43 – 71	47,433	6596	<0.001
Oppositive Behavior							
Males	36 – 76	51,317	11,103	36 – 74	47,032	7748	0.042
Females	39 – 91	54,926	14,223	38 – 69	48,074	8940	0.068
Total	36 – 91	52,400	12,155	36 – 74	47,344	8087	0.006
Aggressive Behavior							
Males	50 – 72	55,672	5865	50 – 63	51,534	2867	<0.001
Females	50 – 70	55,125	6292	50 – 60	51,375	2683	0.006
Total	50 – 72	55,512	5959	50 – 63	51,488	2799	<0.001
Rule-breaking Behavior							
Males	50 – 67	54,210	4503	50 – 60	51,105	2209	<0.001
Females	50 – 64	54,261	4721	50 – 59	50,783	1930	0.002
Total	50 – 67	54,225	4537	50 – 60	51,013	2126	<0.001
Externalization							
Males	33 – 74	53,9140	8,2490	33 – 61	45,741	7654	<0.001
Females	34 – 70	52,0833	9,5230	34 – 61	43,875	7792	0.001
Total	33 – 74	53,3780	8,6219	33 – 61	45,195	7694	<0.001

3.3. Comparison between parents' and children's point of view about the children's aggressive behavior

Given the different pictures that emerged from the assessment by the children of their own aggressive behavior and the reports of their parents, we conducted a series of Spearman correlations to evaluate the relationship between parents' and children's assessments.

First at all, we examined the total sample, and found an absence of significant associations ($\rho = 0.026$, $p = 0.754$). We then repeated the analysis on the two subsamples separately. We found a significant positive association ($\rho = 0.412$, $p \leq 0.001$) between the adopted-children and their adoptive parents' assessments of aggressive behavior. Conversely, no significant associations emerged for the non-adopted group ($\rho = -0.009$, $p = 0.938$).

3.4. Adoption-related variables and their effect on children's behavior

In-depth analyses were conducted in order to evaluate the effect on behavior of adoption-related variables, such as age at the time of adoption, time spent in institutions, and time with adoptive and with biological parents. The average age at the time of adoption was 5.429 years. 37% of the children were between 1 and 4 years old, 63% of adopted children were aged between 5 and 9. The descriptive statistics are shown in Table 4.

The correlation values regarding the children's social behavior measures as assessed by parents are shown in Table 5 and those as self-assessed by the children are shown in Table 6.

Table 2

Percentage comparison of scores falling into the risk area or psychopathology in the two groups according to the parents' evaluations.

	% Adopted children	% Non-adopted children	<i>p</i>
Social Problems	31.9	5.5	<0.001
Opposite Behavior	15.4	5.5	0.030
Aggressive Behavior	11	0	0.002
Rule-Breaking Behavior	2.44	0	0.156
Externalization	8.54	0	0.007

Table 3

Descriptive statistics and *p* values regarding aggression and prosocial behavior in the two groups according to the children's self-evaluations (*N* = 92).

	Adopted children				Non-adopted children				<i>p</i>		
	Range		M	sd	Range		M	sd			
Aggression											
Males	32	–	52	38.380	5.295	32	–	70	46.380	9.600	<0.001
Females	32	–	54	38.300	6.482	32	–	67	45.050	11.963	0.086
Total	32	–	54	38.357	5.611	32	–	70	46.000	10.258	<0.001
Prosocial Behavior											
Males	16	–	30	25.913	2.943	11	–	30	22.326	4.691	<0.001
Females	18	–	29	24.842	3.270	21	–	30	26.833	2.761	0.053
Total	16	–	30	25.600	3.056	11	–	30	23.644	4.678	0.016

4. Discussion

This study was intended to provide data in support of the hypothesis of Baumeister and Leary (1995) that early and prolonged frustration of the need to belong, especially in the early years of life during certain sensitive periods of development (Zeanah et al., 2011), may cause specific and non-specific deficits in the subsequent development of the child's social competence. Indeed, we examined the social adjustment of children adopted from the Russian Federation who spent the early years of their life in a socially-deprived context such as that of institutes.

The results showed discrepancies on the findings, by highlighting a totally divergent view when considering the parents' and the children's assessments separately.

Adopted children declared a lower frequency of aggressive behavior compared to the control group. This contrasts with previous studies (Wiik et al., 2011), and to the parents' reports. Moreover, adopted children declared a greater use of prosocial behaviors. The result seems to be in agreement with what is reported in lacking previous literature, e.g. Sharma et al. (1998), even though conducted with an older sample.

Interestingly, in this study gender differences emerged. Even though differences between the groups were significant overall in self-evaluations of aggressive and prosocial behavior, it should be noted that girls showed different trends. Adopted-girls reported aggressive behaviors to a lesser extent than non-adopted girls, but this difference was not significant. By contrast, adopted girls reported a lower frequency of prosocial behavior than non-adopted females. This result contrasts with evidence that came to light from the analysis of the males. By keeping under control the effect of age there is no effect of the group but a significant interaction between the group and the gender, such as the non-adopted girls reported to behave in a prosocial way more often than adopted girls, while adopted boys seemed to be more prosocial than non-adopted boys. This complex framework is very interesting and should be deepened in future research.

The results were quite different when parents' assessment were taken into account. The analysis performed on data from the parents' assessments shows that the adopted children demonstrated major problems in social functioning along with a greater propensity to use maladaptive behaviors such as Opposite Behavior, Rule-Breaking Behavior, Aggressive Behavior and Externalization, than the control group. In particular, the adopted children had a higher incidence of scores falling in the risk and psychopathology areas for every scale considered, with the exception of Rule-Breaking Behavior. According to

Table 4

Descriptive statistics regarding adoption-related variables (in months).

	<i>N</i>	Range		<i>M</i>	<i>sd</i>
Age at time of adoption	92	20.00 –	108.00	65.152	22.911
Time with adoptive family	92	29.36 –	113.23	65.117	22.094
Time in institutions	69	12.00 –	96.00	33.000	14.928
Time with biological family	43	0.00 –	84.00	26.814	25.140

Table 5

Spearman correlation coefficients between adoption-related variables and the children's social behavior according to the parents' assessments.

	Social Problems	Opposite Behavior	Aggressive Behavior	Rule-Breaking Behavior	Externalization
Age at time of adoption	−0.096	0.021	−0.061	−0.068	−0.104
Time with adoptive parents	0.164	−0.043	0.014	0.075	0.016
Time in institutions	−0.003	0.016	0.005	−0.163	−0.043
Time with biological parents	−0.050	0.008	−0.085	−0.009	−0.028

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

parent's assessments, it is clear that adopted children mainly had higher rates of extreme scores than children in the control group. This result implies that adopted children frequently have problems with externalizing behaviors, especially with the aggressive ones. Moreover, they seem to have many difficulties to socialize with peers and to get along with others without trying to deliberately annoy them. It is important to remember that the group of adopted children was a risk sample, since these children were adopted after two years of age and had experienced > 18-months of institutionalization (Hawk & McCall, 2011).

In general, the literature presented similar results when samples were composed of children from Eastern Europe and from the Russian Federation, in terms of both sociality (Hoksbergen, Rijk, Van Dijkum, & Laak, 2004) and the implementation of socially maladaptive behaviors (Gunnar et al., 2007; Hawk & McCall, 2010; Juffer, Stams, & van IJzendoorn, 2004; MacLean, 2003; Merz & McCall, 2010; Miller et al., 2009; Rosnati, Montiroso, & Barni, 2008; Wiik et al., 2011). Some studies showed that the social deprivation experienced in Russian and Eastern Europe institutions led to many social issues; to a greater extent than for post-institutionalized children from areas characterized by greater care towards children (Gunnar et al., 2007; Merz & McCall, 2010). However, whether this also involves socially maladaptive behaviors remains controversial (Hawk & McCall, 2010; Wiik et al., 2011).

In fact, beyond the greater use of maladaptive behaviors, such as aggressive ones, there may be learning factors that were highly adaptive during the institutionalization period (Gunnar et al., 2007).

Again, gender differences emerged. It should be noted that, although the females in the adopted group showed more problems than girls in the control group, the difference was not significant for Opposite Behavior. The issue should be examined in more depth in further studies.

In effect, the adoptive parents declared that their children had a higher rate of aggressive behavior than the control group, while the children said the opposite. Despite the fact that it is worthwhile, this issue has not been investigated using self-report instruments, with rare exceptions such as the Wiik et al. (2011) and Gagnon-Oosterwaal et al. (2012) studies. However, while the first showed that internationally-adopted children used a greater number of externalizing behaviors than non-adopted children, the second detected no differences between adopted and non-adopted children in the propensity to use aggressive behaviors belonging to the oppositional or conduct disorder areas. Nevertheless, unlike the results of our study, in both studies the evaluations of parents and children were in agreement. This result should be considered carefully, since in our study the children's questionnaires were not the same of the parents' ones, that is, even though they were supposed to measure the same constructs, methodological factors could influence the reliability of this result. Therefore, caution due to methodological

reason should be paid. This is a limitation of the work, so we hope future studies will investigate this issue.

Our data are in line with studies of multi-informant agreement, which report frequent inconsistencies between parent and children assessments regarding the same subject, such as the child aggression (Petot, Rescorla & Petot, 2011; Salbach-Andrae, Klinkowski, Lenz & Lehmkuhl, 2009; Vassi et al., 2008; Versluis-den Bieman & Verhulst, 1995). It is interesting to note that the correlations between the evaluations of parents and children were positive and significant for the group of adopted children, while there were no significant associations for the group of children that grew up with their biological parents. However, we are not able to know the correct interpretation of the results, or to know which is the most reliable report, because we do not have direct observations of the children behavior, or a third source of information.

All the same, we will try to comment on the results pending the availability of further studies. Specifically, the discrepancy could be ascribed either to parental bias or to a bias by the children. These assumptions are not disjunctive, as both may be true simultaneously. In the case of parental bias, it could refer to a specific stereotype in which adoptive parents may overestimate their children difficulties, perceiving them to be more aggressive than they actually are due to their dramatic past experiences. Perhaps adoptive parents are more sensitive to adoption issues and the adverse effects of children raising in the institutional care. Alternatively, the bias from the children may be due to post-institutionalized adopted children having less self-awareness or greater compliance to social rules and social desirability than children who grow up with their biological parents.

This issue requires in-depth analysis and it would be desirable, in a hypothetical progression of the study, to consider a third source that had a thorough understanding of the child and mediated between the opinion of parents and children, such as a teacher (Deng, Liu, & Roosa, 2004; Grietens et al., 2004) or a psychotherapist.

Adoption-related variables did not seem to be protective factors against the use of aggressive behaviors and externalization problems. In fact, contrary to our expectations, time with the adoptive family did not correlate in a significant way with these scales. However, it is appropriate to point out that the time spent in the adoptive family is a "spurious" variable, which does not allow for detailed considerations and obscures possible effects of the family climate, the attachment between the adoptive parent and the child, and so on. In terms of the latter variable, we recognize a further limitation of the study in that it neglects to assess the attachment pattern either in parents or in children. Previous studies (van IJzendoorn et al., 2005), also conducted in an Italian context (Barone & Lionetti, 2011; Pace, Di Folco, Guerriero, Santona, & Terrone, 2015), highlighted that parental attachment is a protective factor for the overall post-adoption adjustment.

Descriptive data about adoption-related variables are very similar to those reported by the Italian Commission for Intercountry Adoption (2013). This means that our sample can be considered representative of Russian children adopted by Italian families.

The lack of a significant correlation between adoption-related variables and the presence of maladaptive social behaviors contrasted with our expectations. This result could be due to the great variability in these variables. Moreover, it should be noted that information regarding pre-adoption life was lacking and unreliable. In fact, data on

Table 6

Spearman correlation coefficients between adoption-related variables and the children's social behavior according to the children's self-evaluations.

	Aggressive Behavior	Prosocial Behavior
Age at time of adoption	0.095	0.162
Time with adoptive family	−0.114	−0.101
Time in institutions	0.223	0.154
Time with biological family	−0.133	0.038

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

time with the biological family existed for only 46% of the sample. The absence of this information on some children is not dependent on a deliberate omission by the parents, but is due to incomplete reporting on the children's histories that was sent by the Russian Federation to NADIA Onlus. Therefore, the parents did not provide such information because they did not have access to it.

5. Conclusion

In conclusion, the findings from this study are interesting and may have practical consequences for the support provided to post-institutionalized children adopted from the Russian Federation.

The present research relates to the Italian situation, where studies on international adoption of Russian children are still limited. In spite of this it concerns 25.8% of the children who arrived in Italy for international adoption (CAI, 2013).

However, this study was conducted with a relatively small sample, so the results should be considered carefully with respect to generalization to the wider population of children adopted internationally from the Russian Federation. Moreover, this was a risk sample as it included children older than two years at the time of adoption who had spent > 18 months in an institution (Hawk & McCall, 2011). It is interesting to note that in the age group that was considered, in line with previous studies (Hawk & McCall, 2011; Rosnati et al., 2008) as reported by adoptive parents, these children showed lower levels of social competence than peers who grew up with the biological family. This is in agreement with the hypothesis that early and prolonged frustration of the need to belong (Baumeister & Leary, 1995) during developmental sensitive periods (Zeanah et al., 2011) has negative outcomes on the development of the children social competence, in the longer term.

It is impossible to distinguish the effects related to psychosocial deprivation resulting from institutionalization which is a mix of social, intellectual and emotional deprivation, from those related to individual traumatic events and to prenatal and neonatal events (Hawk & McCall, 2010; MacLean, 2003). Despite having collected a lot of information about the children's pre-adoption history, the limited number of participants in the present study makes it impossible to investigate the weight exerted by these variables.

Interestingly, the parents' assessments of the children's aggressive behavior diverged from those reported in the children's self-assessments. Indeed the group of adopted children stated a lower inclination to act aggressively with others than peers in the control group. This discrepancy is a problem that has been found and investigated in several studies (Vassi et al., 2008; Petot et al., 2011; Rosnati, Barni, & Montiroso, 2010; Salbach-Andrae, Klinkowski, Lenz, & Lehmkuhl, 2009; Versluis-den Bieman & Verhulst, 1995). It leads to important methodological and theoretical reflections that may be considered to be limitations of the study. Specifically, the use of questionnaires rather than direct observations of children may be a source of methodological error. Furthermore, the fact that adopted children completed the questionnaires at home could have influenced their answers. Although the parents were asked to leave their children alone, the authors are not able to know for certain whether they did so. The possible presence of the parents could have led the children to depict themselves better than they really are in order to please their parents. Finally, it is important to have multiple sources of information, including teachers and other figures close to the children on a daily basis (Holmbeck, Li, Schurman, Friedman, & Coakley, 2002; McCall, 2011; Salbach-Andrae et al., 2009). The opportunity to involve in the research various adults who hold different roles and have different points of view would allow data to be obtained about children's behavior in different contexts and towards multiple people, in order to better understand the possible difficulties of these children.

From a theoretical point of view, this problem relates to a better understanding of the weight exerted by factors, such as stereotypes and the representations of the adoptive parents about the social problems

of their children. Moreover, it concerns the role of social compliance in the development of the self-structuring in these children, as well as the difficulties in the introjection of social rules after atypical early experiences, such as those related to institutionalization in socially depriving structures during childhood.

Finally, a mention of proposals to improve social policies (McCall, 2013) that are ongoing, along with evidence of encouraging results achieved by some of the intervention projects which have highlighted the great recovery potential of these children (McCall et al., 2013).

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