

The social competence of internationally-adopted and institutionalized children throughout childhood: a comparative and longitudinal study

Isabel Cáceres^{a,*}, Carmen Moreno^a, Maite Román^a, Jesús Palacios^a

^a Department of Developmental and Educational Psychology, University of Seville. Calle Camilo J. Cela, s.n. 41018. Seville, Spain

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ABSTRACT

In a previous study, Palacios et al. (2013) explored the social competence of international adoptees, institutionalized children and a community group of peers during early childhood, mean age 6.5 years. As reported by caregivers and teachers, institutionalized children were found to have lower social skills than children growing up in family contexts. This paper presents the longitudinal follow-up of these 3 groups of children at a mean age of 11 years, as well as between-group and cross-informant comparisons in the second wave of the study. Parents/caregivers and teachers rated the children's social skills, while their sociometric status was reported by teachers. Adoptive parents reported normative social skills in their children, while teachers offered a more negative view. Institutionalized children scored significantly lower than the community group, from caregivers' and teachers' perspectives. The probability of having a good friend was statistically similar in all 3 groups, although adoptees tended to have a more negative sociometric status. Compared with the previous data collection, teachers reported a significant decrease in social skills for the adopted group, while the social difficulties remained stable over time in the institutionalized group. This study highlights the importance of studying social competence from a developmental and multi-contextual perspective, especially among children exposed to experiences of early adversity.

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1. Introduction

Social competence derives from a long developmental construction, changes with age and with the requirements of the environment (Quinn & Hennessy, 2010; Waters & Sroufe, 1983). During the first years of life, early attachment experiences are the foundations on which children will build future relationships with others. Meta-analytic research has confirmed that secure attachment and experiences of sensitive care in early relationships are associated with more positive peer relationships during childhood (Pallini, Baiocco, Schneider, Madigan & Atkinson, 2014). On the contrary, available empirical evidence is unanimous in recognizing that early adversity, particularly child maltreatment and institutionalization, represents a serious threat to children's health, well-being and psychological development (van Ijzendoorn et al., 2020). More specifically, experiences of early family adversity affect social competence during childhood in a variety of ways, including diffi-

culties in social skills (Matheson et al., 2016) and lower acceptance in the peer group (Anthonysamy & Zimmer-Gembeck, 2007).

This study aims to explore the impact of adverse early experiences and institutionalization on social competence. To this end, participants were children with experiences of early adversity (abuse and neglect), some of whom were adopted, while others continued to live in residential care. By studying the social skills and peer relationships of these children longitudinally, our aim is to document the impact of early adversity, residential care and adoption on social competence. The research described here forms part of a longitudinal project on the development of internationally adopted and institutionalized children in Spain, studied for the first time between the ages of 4 and 8 years (e.g., Palacios, Moreno & Román, 2013), and then between the ages of 8 and 13 years (Cáceres, Román, Moreno, Bukowski & Palacios, 2021, and this paper).

2. Social competence among internationally-adopted children

A recent meta-analysis found that, globally, adoptees were generally less likely than biologically reared individuals to report the

* Corresponding author.

E-mail address: icaceres2@us.es (I. Cáceres).

presence of close peer relationships (DeLuca, Claxton & van Dulmen, 2018). Empirical research focused on international adoptees has shown that these children generally have more limited social skills, as well as more difficulties maintaining positive peer relationships during both middle childhood (Glennen & Bright, 2005; Stams, Juffer, Rispen & Hoksbergen, 2000) and late childhood and adolescence (Howard, Smith & Ryan, 2004). Specifically, children adopted from Eastern Europe tend to have lower social skills and fewer interpersonal relationships than both adoptees from other countries and non-adopted community peers (Barcons et al., 2012; Caprin, Benedan, Ballarin & Gallace, 2017; Gunnar et al., 2007; Hoksbergen, Rijk, Dijkum & Laak, 2004; Paniagua et al., 2020; Petranovich, Walz, Staat, Chiu & Wade, 2015). These social difficulties might be specially important among Eastern European children adopted after the age of 18 months, a cutoff found in some studies for the detrimental effect of early adversity on child development (Hawk & McCall, 2011).

Longitudinal research into the social competence of adoptees is limited and results are mixed. Some studies have reported that adopted children's social difficulties, as assessed by their parents and teachers, do not seem to decrease over time (Jaffari-Bimmel, Juffer, Van Ijzendoorn, Bakermans-Kranenburg & Mooijjaart, 2006; Rijk, Hoksbergen & Laak, 2010; Tan, 2009), remaining stable between the ages of 7 and 15 years (Smith et al., 2018). However, other authors suggest that, among children adopted after adverse institutional experiences, social difficulties increase notably as they approach adolescence (Hawk & McCall, 2011; Julian & McCall, 2016), with clinical scores affecting approximately 35% in late childhood and adolescence (Sonuga-Barke, Schlotz & Kreppner, 2010). In short, research into the social competence of adoptees has reported contradictory results in relation to both the magnitude of the difficulties themselves and their development over time. Longitudinal studies such as that presented in this paper are essential to achieving greater insight into the effects of early adversity on social competence during childhood.

The data from our first study with internationally adopted children from the Russian Federation in Spain when they were on average 6.5 years old (Palacios et al., 2013), revealed no significant differences between adoptees and their community peers in terms of social skills. Regarding their sociometric status reported by teachers, less than 15% of the adoptees had negative sociometric positions (rejected, neglected). When this same sample of children were aged between 8 and 13 years, sociometric status assessed by classmates was explored by Cáceres et al. (2021), revealing a significantly more unfavorable profile for adoptees than for their community peers, with 50% being in negative sociometric positions (46% rejected, 4% neglected). In the present article, the perspectives of parents/caregivers and teachers are considered.

3. Social competence among children in residential care

Compared with adoption, research into the social competence of children in residential care is scarcer. In Spain, around 45% of children and adolescents under the Child Protection System are placed in residential care (Ministerio de Sanidad, Consumo y Bienestar Social, 2020) and this percentage is much higher in some other Western countries (e.g., Portugal), as well as in Latin America and the Middle East. Although being in residential care may facilitate the emergence of what Keil et al. (2019) termed hyper-cooperative behaviors aimed at diffusing situations of hostility among peers, most studies point that children in residential care are more likely to experience difficulties in their social competence. Research has shown that children in residential care are more likely to have social relationship difficulties within the clinical range (García-Quiroga, Hamilton-Giachritsis & Ibañez-Fanés, 2017; Simsek, Erol, Öztıp & Münir, 2007; Zhang, Cecil, Barker, Mori

& Lau, 2019). Also, in the school context, children in residential care have been reported as more likely to be rejected by their peers as partners in academic tasks, although they may have reciprocal friends for leisure and free time activities (Martín, Muñoz De Bustillo, Rodríguez & Pérez, 2008).

Few studies have sought to explore developmental changes in the social competence of children in residential care. Some studies found that their initial difficulties remain stable throughout middle and late childhood (García-Quiroga et al., 2017; Roy, Rutter & Pickles, 2004). In a study of eight to sixteen years US children with some contact with child protective services, about 80% failed to show consistently positive adaptation at all 3 time points considered in the study with respect to mental health, school achievement or social competence (Jaffee & Gallop, 2007).

When the group of children that are a part of this study were originally assessed by Palacios et al. (2013), aged between 4 and 8 years, those in residential care displayed lower social skills than those growing up in family contexts. Regarding their sociometric status, they were significantly more neglected (37%) than their community peers, according to teachers' assessments. When assessed by their classmates four and a half years later, 26% were classified as rejected, while only 5% were neglected by their peers (Cáceres et al., 2021).

4. Convergence between informants

Given that our study included multiple informants of children's social skills, it is important to study the convergence between them. The majority of studies that have analyzed the level of inter-informant agreement in non-adoptive samples have reported a moderate degree of convergence between parents and teachers in relation to both social skills (Renk & Phares, 2004) and emotional and behavioral difficulties (Van der Ende, Verhulst & Tiemeier, 2012). In adoptive samples also, the level of parent-teacher agreement has been found to be moderate (Rosnati, Barni & Montiroso, 2010), although teachers might perceive more relational difficulties than parents of adopted children, maybe because some relational skills are likely more valued in the classroom setting (Glennen & Bright, 2005).

5. The present study

As mentioned earlier, in a previous work we explored the social competence of internationally-adopted and institutionalized children, in comparison with a community group of their peers, when they were, on average, 6.5 years old (Wave 1) (Palacios et al., 2013). Globally, results were more favorable for adoptees (who were closer in their scores to the community group) than for children in residential care, who had lower social skills and a more negative sociometric status.

By following these children 4.5 years later using similar informants, the present study aims to explore if the effects of early adversity have been now buffered by the more positive and protective post-adoption family environment. In the case of institutionalized children, given the considerable difficulties observed in early childhood, it is especially important to study if their institutional lives allowed them to catch up with their community peers in terms of social competence. So, for the present study, the same children were assessed again when they were, on average, 11 years old (Wave 2). The first goal of this study was to compare the social skills of the 3 groups of children 4.5 years after the first assessment, from the perspective of their parents/caregivers and teachers. The second goal was to explore children's peer relationships in the second wave of the study (W2), using teachers as informants. Finally, our third goal was to study the longitudinal changes in social competence in the 3 groups of children. This longitudinal study

adds to our knowledge about the lasting effects of early adversity on social competence and peer relationships, as well as the potential of adoptive families and other care environments for overcoming them.

6. Method

6.1. Participants

The participants in this study were 95 children, their principal caregivers and their teachers, all living in Southern Spain. The children fell into three different groups: 32 international adoptees from Russia, with data contributed by 32 parents and 28 teachers; 26 children in institutional care, with data from 26 caregivers and 20 teachers; and a comparison community group of 37 children, with data provided by 37 parents and 33 teachers. The parents/caregivers and teachers provided the information about the children in the two waves of data collection, with an average interval of 4.40 years between the two assessments ($SD = 0.55$). The first assessment (W1) took place when the children were aged between four and eight years ($M = 6.47$, $SD = 1.29$) and the second assessment (W2), reported here, was carried out when they were between 8 and 13 years old ($M = 10.88$, $SD = 1.41$).

The adoptive group (75% boys, 25% girls) comprised children who were born in Russia and adopted by Spanish families at an average of 36 months ($SD = 17$). The gender imbalance in the sample is typical of adoptions from Russia (AIPAME, 2013). All the children in this group had experiences of institutionalization in their country of origin ($M = 27$ months, $SD = 14$), as typical in adoptions from Eastern European countries (Selman, 2012). The main reason for selecting Russia was that, at the beginning of the project, this was one of the main countries of origin for international adoption in Spain (Selman, 2012).

Institutionalized children (42.3% boys, 57.7% girls) were living in residential care facilities in Spain at the time of the study. They had been separated from their birth families due to experiences of abuse and/or neglect. These children entered residential care at an average age of 5.97 years ($SD = 1.56$) and they had been in the Protection System for an average of 5.71 years ($SD = 1.20$) when they participated in W2. These children experienced some degree of instability between W1 and W2: while only 15.4% ($n = 4$) had been in the same center since their entry, 26.9% ($n = 7$) had lived in 2 centers, 23.1% ($n = 6$) lived in 3 centers and 30.8% ($n = 8$) lived in 4 or more different centers between W1 and W2. Additionally, 4 children (15.4%) lived in family foster care for some time between W1 and W2, but they all returned to residential care. The residential care facilities were staffed by qualified caregivers who rotated in shifts. All the children attended schools in their community. A review of the residential care model in Spain can be found in Bravo and Del Valle (2009).

The comparison community group (56.8% boys, 43.2% girls) comprised Spanish children who were living with their biological families in the same geographical areas as most of the adoptees and institutionalized children. These children had never had any contact with the Child Protection System.

The principal caregiver was identified as the adult who spent most time with the child (at home or at the residential facility). In the adoptive and community groups, mothers answered the questions in all cases except one –an adoptive family in which the father did the assessment. In the residential care group, the principal caregiver was the adult who spent most time with the child in question. At school, children were assessed by their main teachers.

Sample selection. This work forms part of the LAIS.US project (*Longitudinal Adoption and Institutionalization Study from the University of Seville*), a broad study of child welfare and protection in Spain. For the first wave of data collection (W1), adoptive fami-

lies were contacted through 2 agencies specialized in international adoptions from Russia in Spain. Of the 50 adoptive families who were approached, 10 decided not to participate in the study. Families from the community were contacted through schools selected randomly from the areas in which most of the adopted and institutionalized children lived, representing different socioeconomic levels. The schools sent letters inviting families from the community to participate in the study and 10% of the families approached decided not to do so. In the case of institutionalized children, both contact and assessment took place with the authorization and mediation of the Child Protection System of the region in which the study was carried out.

Sample retention. Of the 40 adoptive families which participated in W1, 80% ($n = 32$) participated again in W2, while 20% ($n = 8$) did not. The adopted children not retained at W2 ($n = 8$) did not differ statistically from the rest ($n = 32$) on gender distribution ($P = 0.316$), age at W1 ($P = 0.758$), age at adoption ($P = 0.890$) and social skills reported by parents at W1 ($P = 0.676$). In the community group, of the original 58 families from W1, 63.79% ($n = 37$) participated again in W2 and 36.21% ($n = 21$) did not. The community children not retained at W2 ($n = 21$) did not differ statistically from the rest ($n = 37$) on gender distribution ($P = 0.162$), age at W1 ($P = 0.667$) and social skills reported by their parents at W1 ($P = 0.120$). The non-retained adoptive and community families did not participate due mainly to the impossibility of reaching them as a result of changes in address or phone number; in a few other cases, they claimed not to have time to participate. Of the 27 children who were still in residential care in W2, 26 (96.30%) took part in the study and one child did not.

6.2. Measures

Social Skills. Children's social skills were assessed using the parent and teacher versions of the *Social Skills Rating System* (SSRS; Gresham & Elliott, 1990) in W1 and the *Social Skills Improvement System* (SSIS; Gresham & Elliott, 2008), a revision of the previous instrument, in W2. Both questionnaires have different forms for parents (used with the adoptive and community groups, as well as with the children's caregivers at the residential facilities) and for teachers.

An example of an SSRS item is "He/She controls temper in conflict situations with adults" (item 12, Social Skills scale, Teacher Form). Informants rate the frequency of each behavior on a 3-point scale (*Never*, *Sometimes* and *Very often*). For this study, the original version of the SSRS was translated into Spanish and then back-translated by a native speaker to ensure equivalence. The results of the Social Skills' scales in W1 were published in Palacios et al. (2013) and the present paper presents the longitudinal analysis of these data. For the sample used in this study, the reliability indexes for the scale of Social Skills were high (parents – preschool form: $\alpha = 0.831$; parents – school form: $\alpha = 0.890$, teachers – preschool form: $\alpha = 0.920$, teachers – school form: $\alpha = 0.912$).

The SSIS (Gresham & Elliott, 2008) comprises three main scales: Social Skills (including subscales for communication, cooperation, assertion, responsibility, empathy, engagement and self-control), Problem Behaviors and Academic Competence. In this study, only the Social Skills scale and subscales were analyzed. An example of an SSIS item is "Takes turns in conversations" (item 10, Parent form, Communication subscale). Informants rate the frequency of each behavior on a 4-point scale (*Never*, *Seldom*, *Often* and *Almost Always*). For the sample used in this study, reliability indexes were high ($\alpha = 0.952$ for the Social Skills parent form and $\alpha = 0.949$ for the Social Skills teacher form). Children's direct scores on the global Social Skills scale were standardized, in W1 and W2, in accordance with the tables provided by the instrument's authors (M

=100, SD = 15; Gresham & Elliott, 1990, 2008). This standardization enabled the children's scores from the two waves to be compared. The Social Skills subscales (i.e., communication, cooperation, assertion, responsibility, empathy, engagement and self-control) were analyzed using direct scores in W2.

Teachers' Assessment of Sociometric Status and Friendships. As in W1 of the study, in W2 teachers assessed again children's sociometric status and reported whether or not they had any friendship relationships with other children in their class. This technique, used in previous studies (e.g., Andrade et al., 2005), has proved to be a valid methodology, convergent with peer ratings (Wu, Hart, Draper & Olsen, 2001). Other studies have also reported significant overlaps between teachers reports and peer nominations methods (e.g., McKown, Gumbiner & Johnson, 2011; Van den Berg, Lansu & Cillessen, 2015). For the purpose of this study, teachers were given a written description of the four sociometric categories most frequently used in previous literature (preferred, rejected, neglected and average) and were asked to identify which best described the target child. To assess the presence of friendship relationships, teachers answered the question "Does this child have any special friends in class?" and answers were coded Yes (presence of close peer relationships) or No (absence of close peer relationships). These measures were also used in the first wave of the study (Palacios et al., 2013) and this paper presents the results from the second wave and the longitudinal analysis.

6.3. Procedure

The families were visited in their homes and institutionalized children were visited in their residential care facilities. Teachers who agreed to participate in the study were visited at their schools. Four years after the first data collection, all participating families were contacted by telephone in preparation for the second wave of the study (W2). Families who agreed to take part in the study were visited in their homes and signed a written consent form to enable the research team to contact their child's tutor or principal teacher. Following assessments at the children's homes or residential facilities, the research team contacted each child's teacher to request their participation. The teachers of 85% of the sample agreed to participate. The regional Ethics Committee approved the research project in accordance with the regulations currently in force in Spain and the European Union for studies involving human participants.

6.4. Data analyses

Missing data. Some of the children had missing data in some measures, especially for the longitudinal analysis. When that happened, missing data were not included in the analysis.

Cross-Sectional Analyses and Group Differences in W2. The mean scores obtained in the scales by the 3 groups of children were compared separately from parents/caregivers' and teachers' perspectives. Comparisons were made through one-way ANOVAs based on Welch's F; effect sizes were based on partial eta-squared (0.01 small, 0.06 medium and 0.14 large; Cohen, 1988) and post hoc analyses were based on Games-Howell's correction. Cross-informant analyses were explored using Spearman's correlations (r_s). A series of 2×3 mixed ANOVAs were run to explore the combined influence of care group (between subject factor: adoptive, institutionalized, community) and informant (within subject factor: main caregiver, teacher) on the global Social Skills scale. To ensure the assumption of sphericity, Maunchly's W test was applied and the Greenhouse-Geisser correction was used. Post hoc between-group comparisons were based on Games-Howell's correction. To explore the association between categorical variables

we used the Chi-squared test (χ^2) and effect sizes were obtained using Cramer's V (0.10 small, 0.30 medium, 0.50 large).

Longitudinal Analyses from W1 to W2. Two 2×3 mixed ANOVAs were run to assess changes in global scores for social skills: one using the information reported by parents/caregivers and the other with the information reported by teachers. In both analyses, the model included 2 independent variables: the group of children as a between-subject factor (with 3 levels: adoptive, institutionalized, community) and time as a within-subject factor (with 2 levels: W1, W2). In both cases, the direct effect of each variable was analyzed and reported along with the interaction effect. The statistical measures used in the cross-sectional analyses were also applied to the longitudinal models (i.e., Maunchly's W test, Greenhouse-Geisser corrections, post hoc test based on Games-Howell's correction and effect size based on η^2_p). The stability of peer relationships was explored using the Cohen's kappa coefficient and the proportion of overall, positive and negative agreement between W1 and W2 ratings was analyzed.

7. Results

The results are presented in three sections, in accordance with the study aims. The first section presents the between-group comparisons of the scores obtained for social skills, as reported by parents/caregivers and teachers in W2. The second section presents teachers' assessments of the peer relationships of the target children in W2. Finally, we explore the longitudinal stability of social skills and peer relationships in the three groups of children from W1 to W2.

7.1. Social skills of international adoptees and children in residential care in W2

Before comparing the three groups of children, we performed preliminary analyses to examine the effect of gender on the dependent variables in 2 separate 2 (gender) × 3 (group) ANOVAs on the global scales of social skills. In the scale of social skills reported by parents, we found non-significant effects of gender ($P = 0.372$, $\eta^2_p = 0.009$) and gender*group interaction ($P = 0.406$, $\eta^2_p = 0.020$) with small effect sizes in both cases. The same was found in the scale reported by teachers, with non-significant effects of gender ($P = 0.184$, $\eta^2_p = 0.024$) and gender*group ($P = 0.137$, $\eta^2_p = 0.054$). Table 1 presents the mean scores obtained by the 3 groups of children in the global scale and subscales measuring social skills, according to their parents/caregivers' ($n = 31$ adoptive, 26 institutionalized and 37 community), and teachers' ($n = 28$ adoptive, 20 institutionalized and 30 community) perceptions.

Parents' and Caregivers' Reports. As shown in Table 1, according to parents' and caregivers' reports, between-group differences in social skills were statistically significant in both the global score ($P < 0.001$) and the scores for all subscales (P between 0.045 and < 0.001) and effect sizes were medium to large in all cases (η^2_p from 0.066 to 0.353). Post hoc comparisons indicated that adoptees did not differ significantly from the community group in their scores for either the global scale or any of the subscales, while children in residential care scored significantly lower than the community group for social skills (in both the global scale and in all the subscales). Adoptees scored higher than children in residential care in the global social skills scale, as well as in the assertion, responsibility, empathy, engagement and self-control subscales (Table 1).

Teachers' Reports. According to teachers' reports, between-group differences in social skills were statistically significant in both the global score ($P < 0.001$) and the scores for all subscales (P between 0.023 and < 0.001), and effect sizes were medium to high in all comparisons (η^2_p from 0.104 to 0.251, Table 1). In the

Table 1
Parents/caregivers' and teachers' reports of children's social skills and comparisons between the groups in W2.

	A(n=31/28 ¹)	I(n=26/20 ¹)	C(n=37/30 ¹)	Comparison			A – C	I – C	A – I
	M (SD)	M (SD)	M (SD)	Welch's F	P	Effect size ²	post hoc P	post hoc P	post hoc P
Parents/Caregivers' reports									
Social skills (global score)	98.71 (13.36)	79.15 (18.40)	102.22 (13.20)	15.19	< 0.001	.306	.528	< 0.001	< 0.001
Communication	15.00 (3.36)	12.87 (4.65)	15.86 (3.30)	3.96	0.025	.099	.538	.019	.136
Cooperation	11.71 (3.52)	11.08 (3.36)	13.16 (3.29)	3.29	0.045	.066	.197	.046	.769
Assertion	15.81 (2.94)	12.73 (3.24)	16.43 (3.24)	10.74	< 0.001	.201	.682	< 0.001	.001
Responsibility	11.97 (3.55)	8.83 (3.61)	13.86 (3.39)	15.42	< 0.001	.257	.073	< 0.001	.005
Empathy	14.23 (3.00)	8.81 (3.91)	13.86 (2.85)	18.96	< 0.001	.353	.869	< 0.001	< 0.001
Engagement	16.26 (3.54)	12.50 (4.28)	16.43 (4.03)	7.99	0.001	.165	.980	.002	.002
Self-control	11.06 (3.71)	6.71 (4.30)	11.41 (4.03)	10.94	< 0.001	.211	.930	< 0.001	.001
Teachers' reports									
Social skills (global score)	92.39 (12.37)	88.00 (10.26)	104.97 (14.39)	12.19	< 0.001	.251	.002	< 0.001	.380
Communication	13.89 (3.85)	14.00 (3.43)	16.57 (4.07)	4.09	0.023	.104	.034	.052	.994
Cooperation	10.57 (3.13)	10.75 (3.43)	14.30 (3.53)	10.45	< 0.001	.225	.000	.003	.981
Assertion	9.86 (4.01)	10.95 (4.15)	12.97 (3.68)	4.83	0.012	.111	.009	.197	.636
Responsibility	11.46 (4.06)	10.60 (2.64)	15.03 (3.39)	14.24	< 0.001	.244	.002	< 0.001	.648
Empathy	10.68 (3.85)	9.55 (2.28)	12.70 (3.23)	8.09	0.001	.139	.088	.001	.419
Engagement	12.36 (4.38)	12.55 (4.16)	15.37 (3.54)	5.28	0.009	.116	.016	.045	.987
Self-control	11.50 (4.54)	9.90 (3.46)	14.63 (4.25)	9.48	< 0.001	.185	.024	< 0.001	.358

Note: A = international adoptees, C = community group, I = residential care group.
¹ A: n = 31 parents and 28 teachers, I: n = 26 caregivers and 20 teachers, C: n = 37 parents and 30 teachers.
² Effect sizes = η^2_p (0.01 small, 0.06 medium, 0.14 large).

Table 2
Results from the mixed ANOVA for predicting children's social skills in W2 as a function of group (adopted, residential care and community group), informant (principal caregiver and teacher) and the group*informant interaction.

Source	Social Skills (global score) in W2				
	df	MS	F	P	EffectSize
Group effect (A)	2	4751.15	18.81	<0.001	.337
Informant effect (B)	1	151.11	1.04	0.312	.014
AxB	2	471.67	3.23	0.045	.080
Error	74	145.98	-	-	-

Note: MS = Mean squares, effect size = η^2_p (0.01 small, 0.06 medium, 0.14 large).

global score for social skills, post hoc comparisons indicated non-significant differences between adopted and institutionalized children ($P = 0.380$), and both groups scored lower than the community group ($P = 0.002$ in the adoptive-community comparison and $P < 0.001$ in the institutionalized-community comparison). In the subscales, post hoc comparisons revealed a similar tendency: no significant differences were observed between adopted and institutionalized children in any of the subscales, and both groups scored lower than the comparison group in most of them (Table 1).

Cross-Informant Analysis. To explore the degree of agreement between parents/caregivers' and teachers' reports of children's social skills, between-informant correlations were explored using the raw scores obtained on the global social skills scale. In the comparison group, agreement between parents' and teachers' reports was high and statistically significant ($n = 30$, $r_s = 0.533$, $P = 0.002$). However, in both the adoptive and institutionalized groups, the correlation between parents/caregivers' and teachers' reports was low and non-significant (Adoptive: $n = 27$, $r_s = 0.012$, $P = 0.951$; Institutionalized: $n = 20$, $r_s = 0.105$, $P = 0.658$).

Combined Effect of Group and Informant on Children's Social Skills. The direct effect of group, informant and their interaction on children's social skills were explored by means of a 3×2 mixed ANOVA ($n = 27$ adoptive, 20 institutionalized, 30 community). The results of the model (presented in Table 2) confirmed that the group effect was statistically significant with a large effect size ($P < 0.001$, $\eta^2_p = 0.337$). Post hoc differences were significant between adoptive-community ($P = 0.007$), institutionalized-community ($P < 0.001$) and adoptive-institutionalized groups ($P = 0.005$). The

group-informant interaction effect was also statistically significant with a medium effect size ($P = 0.045$, $\eta^2_p = 0.080$), indicating that children's social skills significantly differed between both groups and informants. In the community group, parents' and teachers' perceptions of children's social skills were similar ($P = 0.334$, $\eta^2_p = 0.032$), while in the adoptive group, although not reaching statistical significance, the differences between informants did have a medium effect size ($P = 0.198$, $\eta^2_p = 0.063$), suggesting a tendency among parents to perceive a higher level of social skills in their adopted children than teachers. In the institutionalized group, differences between informants were not statistically significant but did have a large effect size ($P = 0.095$, $\eta^2_p = 0.140$), suggesting that caregivers tend to perceive lower social skills in the children in their care than their teachers.

7.2. Sociometric status and friendship relationships according to teachers' reports in W2

Teachers' perceptions were used to study children's sociometric status in W2. Table 3 shows the number and percentage of children from each group in each sociometric category. To meet the sample size criteria for applying a χ^2 test, the 2 non-problematic statuses (preferred and average) were merged into a single category. The results revealed statistically significant differences in the distribution of sociometric status among the three groups of children, $\chi^2(4) = 9.55$, $P = 0.049$, $V = 0.25$. According to teachers' reports, adoptees were more likely to be rejected by their classmates ($z = 2.0$) and less likely to be preferred/average ($z = -2.6$)

Table 3
Distribution of the sociometric status of children from each group, according to teachers' assessment in W2.

	Adoptive group(n = 28)	Residential care group(n = 20)	Community group(n = 28)
Preferred	0	1 (5%)	11 (39%)
Average	14 (50%)	13 (65%)	13 (47%)
Neglected	9 (32%)	4 (20%)	4 (14%)
Rejected	5 (18%)	2 (10%)	0

Table 4
Longitudinal sample size and mean scores of the three groups of children for social skills in accordance with parents/caregivers' and teachers' assessment in W1 and W2

	n	W1 M (SD)	W2 M (SD)	Correlations <i>r_s</i>
Parents/caregivers' reports				
A	31	96.61 (14.75)	98.71 (13.36)	.553***
I	24	79.42 (14.24)	77.83 (18.44)	.236
C	37	98.86 (14.79)	102.22 (13.20)	.554***
Teachers' reports				
A	26	99.08 (10.95)	92.08 (12.80)	.105
I	15	79.87 (13.06)	85.60 (8.74)	.061
C	20	101.70 (12.14)	106.50 (12.52)	.703***

Note: A = international adoptees, I = residential care group; C = community group.
*** $p < 0.001$.

than their counterparts in the other two groups. Children from the community group were more likely to be preferred/average ($z = 2.5$) and less likely to be rejected ($z = -2.1$) than those from the other groups. In the institutionalized group, no sociometric category was observed to stand out in comparison with the other 2 groups. According to teachers' reports, 77.8% of adoptees and 73.7% of institutionalized children had at least one reciprocal friend in the classroom, compared to 89.3% in the community group. These differences were not significant and had a small effect size, $\chi^2(2) = 2.10, P = 0.350, V = 0.168$.

7.3. Longitudinal analysis of social skills from W1 to W2

For those children for whom information was available from both waves of the study, a longitudinal analysis was conducted of social skills from W1 to W2. Table 4 presents groups sizes, children's standard scores for social skills in W1 and W2, as well as the correlations between the 2 waves. Since the sample of children with information provided by teachers in both waves was small, we conducted preliminary retention analyses. Adoptees with longitudinal information provided by teachers ($n = 26$) did not differ from the rest of the original group ($n = 14$) on age at W1 ($P = 0.937$), age at adoption ($P = 0.552$) or social skills at W1 ($P = 0.260$). Institutionalized children with longitudinal data from teachers ($n = 15$) did not differ from the rest ($n = 12$) on age at W1 ($P = 0.120$) or social skills at W1 ($P = 0.251$). The community children with longitudinal data from teachers ($n = 20$) did not differ from the rest ($n = 38$) on age at W1 ($P = 0.316$), nor social skills at W1 ($P = 0.346$).

Correlations in the community group from W1 to W2 (from both parents' and teachers' perspectives) were large and statistically significant. In the adoptive group, the correlations were large and statistically significant only when social skills were reported by parents. In the institutionalized group, the correlations between waves were non-significant (Table 4). A series of 3×2 mixed ANOVAs were carried out to study the effect of time (within-subject effect: W1, W2) and care group (between-group effect: adoptive, institutionalized, community) on children's social skills. The results of the analysis based on parents/caregivers' reports (Table 5) revealed that the mean scores for social skills did not

change significantly over time ($P = 0.442$), although the effect of group was significant ($P < 0.001$), as illustrated in Fig. 1. Differences were found between children in residential care and the other 2 groups ($P < 0.001$ in both cases), while differences between the adoptive and community groups were not statistically significant ($P = 0.999$).

The mixed ANOVA based on teachers' reports (Table 5), revealed a significant interaction effect of care group and study wave ($P = 0.005$), indicating that the social skills curve was different for each group of children (Fig. 1). The post hoc paired test revealed that social skills decreased significantly in the adoptive group ($P = 0.031, \eta^2_p = 0.172$), remained stable among children in residential care ($P = 0.158, \eta^2_p = 0.137$) and increased slightly in the community group, with marginally significant differences and a large effect size ($P = 0.052, \eta^2_p = 0.185$).

7.4. Longitudinal stability of sociometric status and friendship relationships from W1 to W2

Longitudinal information about sociometric status reported by teachers was available for 54 children (22 adoptees, 13 institutionalized, 19 community children). The percentage of children who maintained their sociometric status from W1 to W2 and those who changed are reported in Table 6. While 78.95% of the community group maintained a positive status (preferred/average) in both waves, 45.46% of adoptees went from preferred/average in W1 to the more negative neglected/rejected status in W2, and 38.46% of institutionalized children improved their status from neglected/rejected in W1 to preferred/average in W2. Using Cohen's kappa coefficient, the stability of the ratings from W1 to W2 was non-significant in any of the groups (Adoptive: $k = 0.104, P = 0.474$; Institutionalized: $k = -0.330, P = 0.109$; Community: $k = -0.118, P = 0.608$), suggesting changes in the sociometric status in all the groups.

The longitudinal analysis of peer relationships (presence/absence of friends at school) was explored using the information available for 54 children (22 adoptees, 14 institutionalized, 18 community). In the community group, 77.78% of children had at least one friend in both waves, while this percentage was 50% in the adoptive group and 42.85% in the institutionalized group (Table 6). Using Cohen's kappa coefficient, the stability from W1 to W2 was non-significant in any of the groups (Adoptive: $k = 0.016, P = 0.848$; Institutionalized: $k = 0.111, P = 0.237$; Community: $k = -0.059, P = 0.596$), suggesting changes in the 3 groups from W1 to W2. Due to methodological limitations related to the size of the sample, we were unable to carry out analyses to explore the interaction between care group and stability of sociometric status.

7.5. Summary of findings

According to caregivers' reports, children growing up in family contexts (adoptive and community groups) had higher social skills than institutionalized children. According to teachers' reports, adoptive and institutionalized children had similar social skills, in both cases lower than the community group. Between-informant

Table 5
Results from the mixed ANOVAs, including the direct effect group (adopted, residential care and community), time (W1 and W2) and the group*time effects.

Source	Parents/caregivers' reports					Teachers' reports				
	df	MS	F	P	EffectSize	df	MS	F	P	EffectSize
Group effect (A)	2	7669.76	24.85	<0.001	.358	2	3919.15	21.24	<0.001	.423
Time effect (B)	1	73.98	0.60	0.442	.007	1	40.24	0.42	0.522	.007
A×B	2	91.05	0.73	0.483	.016	2	556.97	5.74	0.005	.165
Error	89	124.02	–	–	–	58	96.97	–	–	–

Note: MS = Mean squares, effect size = η^2_p (0.01 small, 0.06 medium, 0.14 large).

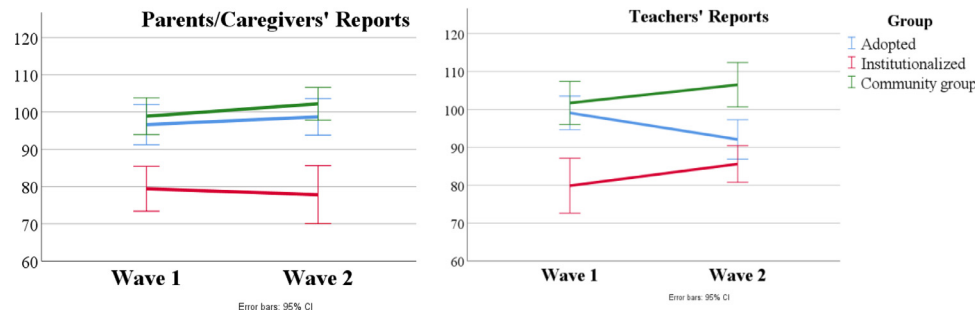


Fig. 1. Mean standard scores in the global social skills scale for the three groups of children in the two waves of the study, based on parents/caregivers' and teachers' reports. Note: Social skills are based on standard scores ($M = 100, SD = 15$) according to the normative data presented by the authors of the instrument (SSRS; Gresham & Elliott, 1990; and SSIS; Gresham & Elliott, 2008).

Table 6
Percentage of children from each group whose sociometric status and presence/absence of a good friend remained stable or changed from wave 1 to wave 2.

	Sociometric status				Presence/absence of a good friend			
	Remained stable W1 – W2		Changed W1 – W2		Remained stable T1 – T2		Changed T1 – T2	
	Positive status(P/A)	Negative status(R/N)	Improved (from R/N to P/A)	Worsened (from P/A to R/N)	Presence of friend	Absence of friend	Improved (from absence to presence)	Worsened (from presence to absence)
Adoptive group	36.36%	13.64%	4.54%	45.46%	50%	9.09%	27.27%	13.64%
Residential care group	30.77%	30.77%	38.46%	0%	42.85%	21.43%	28.57%	7.15%
Community group	78.95%	0%	10.53%	10.53%	77.78%	0%	11.11%	11.11%

Note: P/A = Preferred/Average, R/N = Rejected/Neglected, W1 = Wave 1, W2 = Wave 2.

correlations indicated that the agreement between caregivers and teachers was low in the adoptive and institutionalized groups. The interaction effect between group and informant was significant: in the adoptive group, mothers had a more favorable perception than teachers, while in the institutionalized group caregivers had a more negative view than teachers about children's social skills. Regarding their sociometric status as assessed by teachers, adoptees were more likely to be rejected than the other groups. Longitudinal analyses showed that, according to parents/caregivers' reports, social skills did not change significantly over time in any of the groups; while according to teachers' reports, social skills decreased significantly in the adoptive group. Finally, about half of the adoptees worsened their sociometric status from W1 to W2, while more than a third of the institutionalized children improved over time.

8. Discussion

This study explores the social competence of two groups of children whose life trajectories were marked by experiences of early adversity, but who had different experiences of care thereafter (adoption vs residential care). The social skills and peer relationships of both groups were compared with a sample of children from the community using parents/caregivers and teachers as informants. Using a longitudinal approach, we explored the stability

of social competence from early to late childhood in all 3 groups of children.

8.1. Social skills of international adoptees and children in residential care

When the children in the study were aged between 4 and 8 years, both their caregivers and teachers coincided in assessing the social skills of those in residential care as being lower than those of the children in the community and adoptive groups, between which there were practically no differences (Palacios et al., 2013). As the children approached adolescence in this W2, however, a significant change seems to have occurred, since now (4.5 years later), only children from the community group received a similar positive assessment from both their parents and teachers. In contrast, teachers' assessments of adoptees in W2 were worse than those of their parents, while their rating of institutionalized children was better than the one given by their caregivers in their institutions. Both groups, adopted and institutionalized children, were still rated by their teachers lower than the community group.

In the adoptive group, parents assessed their children as having normative social skills, while their teachers assessed them as being less communicative, cooperative, assertive, responsible, engaged and with less self-control than their community peers. In terms of parents' assessments, the results of the present study are consistent with those reported previously indicating no dif-

ferences in social skills between school-age adoptees and children living with their biological parents (Barcons-Castel, Fornieles-Deu & Costas-Moragas, 2011; Rosnati, Montiroso & Barni, 2008). The few studies that have jointly analyzed the perspectives of adoptees' parents and their teachers during middle childhood report results that partially coincide with those reported here, particularly when the samples were comparable (Glennen & Bright, 2005; Pitula, DePasquale, Mliner & Gunnar, 2019). For example, Pitula et al. (2019) found that children adopted internationally after early experiences of institutionalization (placement age between 17 and 36 months) had more social difficulties according to their teachers, although their parents perceived no differences between them and a community sample. In contrast, Glennen and Bright (2005) found that both parents and teachers assessed children adopted from Eastern Europe (placement age under 30 months) as having lower social skills than their counterparts from the community.

The institutionalized children in our study scored lower on their social skills than children in the community group. These results are similar to those reported for institutionalized children in countries such as Chile (Garcia-Quiroga et al., 2017), Japan (Zhang et al., 2019) and Turkey (Simsek et al., 2007). In these studies, institutionalized children were found to have more social and relational difficulties than the community groups, both when they were assessed by their institutional caregivers (Garcia-Quiroga et al., 2017; Zhang et al., 2019) and by their teachers (Simsek et al., 2007). To the best of our knowledge, ours is the first study to compare institutional caregivers' and teachers' assessments of institutionalized children's social skills.

In sum, in the community comparison group, informants from both the home and school environments coincided in positively assessing children's social skills. In contrast, inter-informant differences were present for adoptees and institutionalized children. This difference could mean that these children's social behavior differs across contexts, or perhaps that informants' assessment is influenced by their knowledge and beliefs about the children's background. In the case of adoptees, their parents assessed their social skills more positively, perhaps because they rated the progress made since their arrival in the family. In the case of institutionalized children, caregivers perceived their social skills in a more negative light, perhaps because the history of previous adversity of the children and their current circumstances would be well-known to them. In this case, the knowledge of the early adversity experienced by these children might be associated with biases that presuppose lower adjustment. These biases may be based on the knowledge of the socio-emotional difficulties in children with experiences of institutionalization (e.g. van Ijzendoorn et al., 2020).

8.2. Sociometric status and friendship relationships according to teachers' reports

The second aim of this study was to explore the sociometric status and friendship relationships of adopted and institutionalized children in the school context. In both cases, our results are somewhat contradictory with respect to previous research. Regarding friendship relationships, although the percentage of children who did not have any friends in the classroom was higher among adoptees and institutionalized children than among their community peers, the differences were non-significant. These results, based on teachers' perceptions, contrasts with the more negative significant differences reported by Howard et al. (2004) for adoptees (using parents as informants), and by Martín, Muñoz de Bustillo and Pérez (2011) for institutionalized children (based on sociometric techniques). The varying methodologies and informants considered in each study might explain the different results.

Previous research with these groups using sociometric techniques is limited. In our study, teacher assessments indicate that, in their late childhood, adopted children are more likely to be rejected than their community or institutionalized counterparts. When this same subsample of adopted children was assessed by their peers, 46% of them were classified as rejected (Cáceres et al., 2021). Thus, both classmates and teachers coincide in assigning a negative sociometric status to a high percentage of adopted children in the years prior to the onset of adolescence, a finding which is clearly more concerning than the favorable data reported by Stams et al. (2000) with a sample of children adopted at a much younger age, just a few weeks old, but consistent with Julian and McCall (2016) hypothesis that the interpersonal problems of post-institutional children are more evident when assessed in adolescence than in childhood. As regards children in residential care, no significant differences were observed between their sociometric status and that of the community group. This finding is consistent with the data reported by Martín et al. (2011) for institutionalized Spanish children of similar age.

It is worth highlighting the fact that, whereas the sociometric status of adoptees was more negative than that of their institutionalized counterparts, the social skills of both groups were rated similarly by teachers. It may be that the institutionalized children's tendency towards hyper-cooperation observed by Keil et al. (2019) was not detected by the scale used in our study to assess social skills, yet nevertheless helped foster a better sociometric status among this group in comparison with adoptees. On the other hand, in the years leading up to adolescence, children who are perceived by the group as "different" may face more difficulties to be considered and fully integrated among their peers in school. In the case of adoptees, these differences could be related to their adoptive status (when it is known by teachers and peers), and highlighted by their physical appearance, markedly different from that of those born to Spanish parents. This is consistent with the fact that in the adolescence years adoption identity and visibility are associated with microaggressions from peers (Miller et al., 2020).

8.3. Longitudinal development of social competence throughout childhood

The third aim of our study was to explore the evolution of social skills and peer relationships throughout childhood. Among children with no experiences of early adversity, social skills tend to remain stable, both over time and across contexts, as observed in our community sample and in previous research (i.e., Renk & Phares, 2004; Sørli, Hagen & Nordahl, 2020). The trend observed among the adopted and institutionalized children in our study, however, was different.

When assessed by their parents, the social skills of the adoptees in our study remained stable throughout childhood. This stability has been found also by other authors for information provided by adoptive parents (Rijk et al., 2010; Smith et al., 2018; Tan, 2009). However, in the school context (teachers' assessments), the social skills of adopted children were found to diminish with age, consistently with other similar studies (Julian & McCall, 2016; Sonuga-Barke et al., 2010). Some authors (Julian & McCall, 2016) have referred to this process as "a sleeper effect" of social difficulties, arguing that the effects of early adversity on social competence may not become visible or evident until late childhood. As Zeanah, Gunnar, McCall, Kreppner, & Fox (2011) suggested, the social skills that serve adopted children well in the family and served them well with their peers during their younger years, may not be sufficient to cope with the more complex social interactions that take place later on during early adolescence.

In relation to the social skills of children in residential care, the results of our study indicate a tendency to stability, without significant signs of recovery or decline as childhood progresses. Our data coincide with those reported by other authors (Barroso, Barbosa-Ducharme, Cruz & Silva, 2018; Zhang et al., 2019), although some cross-sectional studies based on reports by teachers (Simsek et al., 2007) and social workers (Attar-Schwartz, 2008) found that children's age correlated negatively with their social difficulties in both their residential care facility and at school.

As regards stability or change in children's sociometric status, the most striking finding is the clear drop in status experienced by adopted children and the improvement of their institutionalized counterparts as they approach adolescence. Whereas the latter group seems to benefit from the fact that, both inside and out of the classroom, their life transpires in a group setting, the reason for the sociometric deterioration of adoptees is less clear. This drop in status is quite concerning, since adopted children appear to have a more negative sociometric status in both the assessment carried out by teachers (this article) and that carried out by their peers (Cáceres et al., 2021).

8.4. Strengths, limitations and future lines of research

This study analyzes social competence across two waves, considering the perceptions of multiple informants from the family and school contexts and including children with different experiences of early adversity and care trajectories. The analysis carried out charts the evolution of adopted and institutionalized children's social skills and peer relationships throughout childhood. Regarding the limitations of the study, social skills were measured with slightly different versions of the instrument at W1 and W2, although the scores were standardized following the norms provided by the authors (SSRS and SSIS, Gresham & Elliott, 1990, 2008). It is also important to consider some questions related to the generalization of the results. Although we achieved good longitudinal sample retention, with sample sizes like in other studies, the adoptive and institutionalized groups in this study were small (specially for the longitudinal analyses) and in the case of adoptees gender was not balanced, which has certain methodological consequences, including the fact that gender could not be controlled for in further comparisons. Future studies may wish to address these issues by recruiting larger and more balanced samples.

Additionally, the adoptive sample from this study represents a specific subgroup of internationally adopted children. The profile of the children in this group and their subsequent development may differ from that of children adopted from other countries or with different pre-adoption experiences, meaning that much caution should be exercised when generalizing the results. The institutionalized children in this study had been exposed to prolonged group care and most of them experienced different degrees of residential instability, rarely having only one placement. The findings reported here may not be generalizable to the population of children who remain in residential care for shorter periods of time or in more stable institutional circumstances.

As mentioned earlier, institutionalized children had significant difficulties in social skills, although their sociometric status at school was not so unfavorable. Future research should explore the links between social skills and sociometric status in the peer group in more detail, particularly among children who have experienced early adversity and different care trajectories. It would be particularly interesting to analyze whether, as we suspect, negative peer perceptions of internationally adopted children are exacerbated as they approach adolescence, regardless of their social skills.

Finally, our data show that whereas the assessments made by different observers of the social competence of community samples are similar, in the case of children exposed to early adver-

sity, notable discrepancies are observed depending on the source of the information (parents/caregivers, teachers, peers). Future research with this population should therefore incorporate the perspectives of different observers in order to gain as complex a view as that offered by our results.

9. Conclusions and implications for practice

The findings of this study indicate that, in general, social skills develop best when children exposed to early adversity are raised in a family rather than an institution, especially when the perspective of their main caregiver is considered. Nevertheless, the recovery observed among adopted children is not complete, and 7 years after their adoptive placement they still have some difficulties, particularly when teachers' perspectives are considered. Moreover, in the years leading up to adolescence, the sociometric status of adoptees is clearly more negative than that of their peers. If this finding is confirmed in future research with larger samples, the sociometric status of adoptees in late childhood would require interventions in both the home and school environments to anticipate and prevent possible added complications during adolescence, a period in which these children face important challenges linked to their adoptive identity. The findings about the social skills of institutionalized children are also worrying, given that the differences with respect to the comparison group remained stable over time. Being aware of these difficulties and promoting direct and frequent communication and integrated work between protection centers and schools are key aspects to promote the social development of these children.

This study proves the importance of studying social competence from a multi-contextual and longitudinal perspective, since the social behaviors displayed by children tend to differ across contexts and may also change over time. This is especially important for children exposed to experiences of early adversity and subsequent care trajectories, as their personal development may be more subject to variability and change. The results from this study also highlight the need of effective interventions to promote the social competence of these groups of children. The investment in education and support for adoptive families and caregivers about how to promote the socioemotional development of their children is a key aspect. Another fundamental issue is the education of teachers and the school community about adoption and residential care, including contents related to positive peer interactions, acceptance of diversity and prevention of any type of discrimination or microaggressions. Some materials for teachers have been developed in recent years, with the aim of promoting the academic and social adjustment of children in care in the school context (e.g., Palacios, Jiménez, Espert, & Fuchs, 2014).

Declaration of Competing Interest

The authors declare no conflict of interest.

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Disability Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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