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The Role of Placement History and Current Family Environment in Children's Aggression in Foster Care

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Abstract

Predictors of the physical and relational aggressive behavior of children in foster care were examined ($N = 160$, 50.9% male, $M_{age} = 7.57$, $SD = 2.39$). First, predictors representative of children's placement histories were examined in relation to the children's aggression at T1. Next, predictors representing characteristics of the current family environment were examined in relation to the children's aggression at T2 (four months later). Results revealed that a greater number of prior group home placements and being in a non-kinship home were associated with higher physical aggression at T1. A greater number of prior group home placements, a fewer number of regular home placements, being in a non-kinship home, and prior removal from the home due to neglect were associated with higher relational aggression at T1. The results also revealed that higher foster sibling relational aggression at T1 predicted lower child physical aggression at T2. If foster siblings were biological children of the foster parent, higher levels of a foster sibling's physical aggression at T1 predicted reduced child physical aggression at T2. The opposite pattern was observed if foster siblings were not biological children of the foster parent. Lastly, longer time in the current placement, more children in the home, and the presence of a sibling that was a biological child of the parent predicted higher child relational aggression at T2. These findings provide initial insights into how placement history and current family environment are associated with the physical and relational aggressive behavior of children in foster care.

Keywords

Relational aggression; physical aggression; foster care; sibling aggression; kinship care; foster children; sibling relationships

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Informed consent: Informed consent was obtained from all individual participants included in the study.

Introduction

Children in foster care experience a unique family environment while in care. Some live with relative caregivers while others live with caregivers they have never known. Caring for children in foster care comes with unique challenges for caregivers and their families. Caregivers and families must adjust their routines to the new child in the home. Furthermore, the characteristics of the child may present additional challenges for the family. Children in foster care have higher levels of emotional and behavioral problems, such as aggression, than their community counterparts (Keller et al., 2001; Tarren-Sweeey, 2008). Displays of aggressive behavior may result in social challenges for caregivers and the children in their home.

Whereas physical aggression involves acts such as hitting, kicking, and pushing others (Crick & Zahn-Waxler, 2003; Dodge, Coie, & Lynam, 2006), relational aggression is a nonphysical form of aggression directed towards an individual's relationships, which can include both direct and indirect threats manifesting in behaviors such as gossip, social exclusion, and threats to terminate the relationship (Crick & Grotpeter, 1995; Ostrov, Crick, & Stauffacher, 2006). Thus far, the majority of the research on the aggressive behavior of children in foster care has focused on physical forms of aggressive behavior. In non-foster populations, research suggests that relational aggression is a unique indicator of future internalizing and externalizing problems, including binge drinking in adolescence, over and above physical aggression (Crick et al., 2006; Herrenkohl, Catalano, Hemphill, & Toumbourou, 2009). Additionally, relational aggression may be the modal form of aggression for girls (Crick & Zahn-Waxler, 2003), such that as many as 60% of aggressive girls and 7% of aggressive boys fail to be identified as aggressive when not including relational aggression (Henington, Hughes, Cavell, & Thompson, 1998). Therefore, research that is not inclusive of relational aggression may fail to accurately assess aggression in girls and to a lesser extent boys.

It is likely that foster children exhibit relational aggression and that this behavior may be displayed at a higher level than their community counterparts. First, there is a high degree of co-occurrence between physical and relational aggression, suggesting that children who exhibit one form of aggression likely exhibit the other form of aggression as well (Little, Jones, Henrich, & Hawley, 2003). Children in foster care display higher levels of physical aggression, so they likely display higher levels of relational aggression as well (Clausen, Landsverk, Ganger, Chadwick, & Litrownik, 1998; Tarren-Sweeny, 2008). Second, research on attachment theory and relational aggression suggests that children who have attachment styles other than secure attachment with their caregiver are more likely to display relational aggression within their peer relationships (Casas et al., 2006; Michiels, Grietens, Onghena, & Kuppens, 2008). Maltreated children are less likely to be securely attached to their caregiver than non-maltreated children (for a review see Morton & Browne, 1998). Since virtually all children in foster care have been maltreated by their caregivers, they are less likely to have secure attachment with their caregivers and thus, are at a higher risk exhibiting relationally aggressive behavior. Based on this research, relational aggression is an important form of aggressive behavior to study in foster care populations. Furthermore, neglecting the

study of relational aggression in research on aggressive behavior of children in foster care may result in interventions that do not adequately address all forms of aggression.

For children in foster care, their placement history may provide valuable insights into the levels of the aggressive behavior they exhibit in foster care. In prior research, maltreatment has been found to be associated with levels of aggressive behavior among children and adolescents. In particular, children who have experienced physical abuse have been found to be at a heightened risk for exhibiting physically aggressive behavior (Shackman & Pollak, 2014). In two studies, children who had been physically abused displayed more aggression than children who had been neglected or who had experienced no prior maltreatment (Cullerton-Sen et al., 2008; Teisl & Cicchetti, 2008). However, early neglect has also been found to be predictive of aggressive behavior in children (Kotch, et al., 2008). Additionally, sexual abuse has been found to be associated with relationally aggressive behavior in girls (Cullerton-Sen et al., 2008). Thus, the type of maltreatment that a child has experienced may be associated with the level of the child's aggression.

In addition to the reason for removal, there is some evidence indicating that the number and type of prior placements may be related to levels of aggressive behavior. Several studies have revealed a positive association between the number of prior placements and the child's level of behavior and school problems (Newton, Litrownik, & Landsverk, 2000; Zima et al., 2000). In addition, there is some research suggesting that the type of placement may impact the child's level of aggression. Children with more externalizing behavior problems may be more likely to be placed in a group home (Cheung, Goodman, Leckie, & Jenkins, 2011). Once in a group home, the child is at risk for increased behavior problems due to peer contagion and increased exposure to externalizing behaviors (Dishion, McCord, & Poulin, 1999; Lee & Thompson, 2009). Based on research on the linkage between foster children's placement histories and behavior problems, it is likely that a greater number of prior placements, particularly group home placements, would be predictive of higher levels of both relational and physical aggression.

Another factor related to children's placement histories is their current placement status, i.e. whether they are living with relative or nonrelative caregivers. A number of studies have found that children living in non-kinship homes, or homes where the child is not related to the caregiver, demonstrate higher levels of behavior problems compared to children placed in kinship homes, where the child is related to the caregiver (Cheung et al., 2011; Keller et al., 2001). Relative caregivers may be less likely to take a child in when they are aware that the child has a heightened level of behavioral problems. Results from a recent study found that differences in placement stability between kinship and non-kinship care can be explained by the characteristics of children entering the kinship care, and not by fundamental differences between kinship and non-kinship care (Font, 2015). Additionally, children who do have access to kinship caregivers or have more ties with kin may have more social support, and high levels of social support from extended family has been linked to lower externalizing behavior problems, which may be another reason that children in kinship homes exhibit lower levels of aggression when compared to children in non-kinship care (Akcinar & Baydar, 2016). Since the type of home placement may be indicative of a child's behavior prior to entry, the type of foster care placement could be conceptualized as a

placement history variable. Based on the prior research, it is likely that children in non-kinship care would demonstrate higher levels of relational and physical aggression than children placed with relatives.

In addition to a child's prior placement history, previous research indicates that the foster family can have an impact on the foster child's behavior problems (Salas, Garcia-Martin, Fuentes, & Bernedo, 2015). Several studies of non-foster families have suggested that family social environment can play a role in the development of physical and relational aggression in children. In addition to the sizable amount of literature on the relationship between parents' behavior towards children and aggressive behavior in the family (see Dishion, 2014), other types of family interactions also appear to contribute to the development of children's aggression (Patterson, Dishion, & Bank, 1984), especially interactions between siblings. Interactions between siblings provide unique opportunities for socialization that are unavailable through interactions with parents and peers. Social learning theory postulates that siblings may contribute to the development of aggression in a child through exposure to aggressive acts, which may lead to imitation and reinforcement, in which the child learns that aggression leads to control and dominance over others (Bandura, 1973; Hoffman, Kiecolt, & Edwards, 2005). Additionally, even if the child is not the target of the sibling's aggression, he or she may still be exposed to the sibling acting aggressively towards others. Studies show that a sibling's physical aggression is predictive of a child's physical aggression towards peers during early childhood (Ostrov et al., 2006), middle childhood, and adolescence (Button & Gealt, 2009; Patterson et al., 1984) and longitudinally the physical aggression of a sibling is associated with a child's future use of physical aggression (Dunn & Munn, 1986).

There is also some research on how siblings may contribute to the development of relational aggression. Results from interviews with 50 sibling dyads suggest that between siblings, relational aggression is used significantly more than overt aggression (Crick et al., 2001). Furthermore, similar to physical aggression, for children in early childhood, the older sibling's use of relational aggression predicted the younger sibling's relational aggression towards peers (Ostrov et al., 2006). Updegraff et al., (2005) suggest that relational aggression between siblings may disrupt feelings of closeness in the sibling relationship and may be a way for children to observe and learn relational aggression. Taken together, the research on physical and relational aggression suggests that siblings have the potential to influence each other's levels of relational and physical aggression. Therefore, it is likely that the level of a sibling's physical and relational aggression would be predictive of levels of physical and relational aggression among children in foster care.

While the use of aggression by a sibling may be related to a child's own level of aggression, a sibling's level of social competence may serve as a protective factor against the development of aggression in the child. Children's social-emotional skills, such as interpersonal and stress management skills, have been associated with less physical bullying and relational aggression (Polan, Sieving, & McMorris, 2013). In the same way that social learning may result in increased aggression, exposure to a sibling's positive social skills and relationship strategies may lead to improved social skills and lower levels of aggression in a child. Sibling empathy has been found to contribute to decreased sibling hostility (Tafoya &

Hamilton, 2012). Additionally, children with affect-intense sibling relationships report less behavior problems than those with relationships marked by conflict (Buist & Vermande, 2014). In contrast, displays of relational aggression are most likely to occur in the context of less emotional support and more negativity between siblings (Updegraff et al., 2005). Thus, a sibling with a high level of social skills may have a better relationship with the child, possibly resulting in less physical and relational aggression between the siblings and contributing to an overall decrease in the child's use of aggression.

The research on sibling relationships suggests that siblings play a crucial role in the development of relational and physical aggression in children. Foster siblings are unique because they may or may not be related. Furthermore, the foster sibling's relationship to the parent (i.e. biological child, other foster child) can influence how the foster child interacts with the sibling and how the parent disciplines or handles disputes between the child and the sibling. One of the main concerns of foster parents when considering fostering is how it will impact their biological children (Twigg & Swan, 2007). This concern may lead to the foster parent monitoring the relationship between their biological child and foster child more closely. In Twigg and Swan's (2007) review, they found that nearly all biological children reported being the recipients of either overt or covert aggression from the foster child. This presents a challenge to foster parents in how they respond to these disputes. Some foster parents may overcompensate when disciplining the foster child versus their biological child, such that their biological child may receive more consequences than the foster child for the same infraction, in an attempt to convey to the foster child that the parents are not biased towards the biological child.

The unique dynamic between the biological child and the foster child may lead to different types of interactions between these two children compared to interactions among other foster children in the home. One qualitative study found that the biological daughters of foster parents become apprehensive about establishing relationships with foster children over time and relied on their parents for emotional support (Serbinski, 2015). The aforementioned factors may result in differences in the parenting practices displayed toward the biological child-foster child dyad versus a foster child-foster child dyad. Therefore, the foster sibling's relationship to the parent (i.e. whether a biological child or not) may moderate the relationship between the foster sibling's behavioral characteristics and the levels of aggressive displayed by the child in foster care.

Two other potential moderators that have been studied when examining the effects of a sibling's behavior on the child's behavior are the birth order and the gender constellation of the sibling dyad (Ostrov et al., 2006). In general, the level of the older sibling's aggression is related to changes in the younger sibling's aggression (Ostrov et al., 2006). However, the gender constellation of this dyad may matter. Older sisters have been found to be more relationally aggressive to peers than their younger sisters but older brothers were more physically aggressive to peers than their younger brothers (Ostrov et al., 2006). Therefore, the gender and birth order of the sibling dyad may influence whether sibling aggression is associated with the child's levels of aggression.

Another social contextual factor that may play a role in the development of foster child aggression is household size. In a Canadian study of urban minorities, household size was positively associated with physical aggression (Gosselin et al., 2014). Another study looking at children in foster care found that the presence of more children in the home was associated with increased externalizing behavior problems (Harden & Whittaker, 2011). Although the relationship between household size and relational aggression has yet to be determined, studies focusing on peer contexts suggest that children with more peer relationships may exhibit heightened relational aggression because there are more opportunities for the child to use relational aggression (Faris & Felmlee, 2011; Neal, 2009). Resource dilution theory posits that available resources in the home, such as parents' time and energy, decreases as the number of children in the home increases (Downey, 2001). Therefore, a greater number of children in a caregiver's home might decrease caregiver attention to and monitoring of all sibling interactions, which may allow more opportunities for various forms of aggression to occur. Thus, the number of children in the home is likely positively associated with the child's levels of physical and relational aggression.

Lastly, the length of time that the child has been in the home may influence the child's aggression. Research suggests that the externalizing behavior problems of foster children may be higher at the beginning of a placement and then decrease over time (McWey, Cui, & Pazdera; 2010). Additionally, other studies have found that children in foster care do experience a decrease in physical aggression while in care, even when no intervention services are present (Linares, Li, & Shrout, 2012). Therefore, it was expected that children who had been at their current placement for longer periods would have lower physical and relational aggression scores.

The primary aims of this investigation were (a) to examine the relationships between the placement histories of children in foster care and their levels of physical and relational aggression in the foster home at Time 1, (b) to examine the relationships between characteristics of the current foster family environment and the children's levels of physical and relational aggression at Time 2, and (c) to examine whether the relations between siblings' behaviors and children's behaviors were moderated by sibling dyad characteristics. Based on the review of the literature, we hypothesize that placement variables, such as the type of maltreatment the child has experienced and the number and type of the child's prior placements will be predictive of the level of the child's physical and relational aggression. Additionally, it is hypothesized that current family characteristics, such as the number of children in the home, and the level of the sibling's aggression and social skills, will be related to the child's aggressive behavior.

Method

Participants

Participants included 160 foster families who were in the "control" condition of a foster parent intervention implementation trial in San Diego County. Families were recruited from a pool of foster and kinship caregivers of children from San Diego Child Welfare Services. Eligibility requirements for the intervention study were as follows: (a) the focal child (the main child in the study) was between the ages of 4 and 13, (b) the *focal child* had been in his

or her current placement for at least 30 days (to minimize the selection of children in temporary shelters or emergency placements), (c) the focal child was not considered “medically fragile” (that is, not severely physically or mentally handicapped), (d) there was at least one other child in the home who would be considered the *focal sibling*, and (e) the family had not previously received the foster parent intervention that was tested. The *focal sibling* was considered the child closest in age to the focal child, who could be one of the following: the biological child of the foster or kinship parent, another child in foster care (including an actual sibling of the focal child), or another relative of the caregiver. Thus, the term “sibling” in this study refers to a broad range of relationship types. This study was conducted in compliance with a San Diego University IRB, parents gave informed consent, and families were compensated for their participation. Demographic data obtained during the baseline interview for the focal child, focal sibling, foster parent, and sibling dyad, is provided in Table 1.

Procedure

The data used in this investigation were derived from two sets of interviews with the foster parent most familiar with the child, collected at two different time points. The same parent was interviewed at each time point. As is the case with prior studies of children in foster care (e.g., Chamberlain et al., 2006), the majority of the parents who completed the interviews were female. Interviews conducted at the first time point (T1) were considered the baseline of the study and interviews at the second time point (T2) were conducted four months after the baseline interviews by trained research assistants. At each time point, a set of three phone interviews were conducted over the phone. Spanish speaking interviewers were used for participants who preferred to use Spanish.

At T1, 160 participants completed interviews, while at T2, 114 participants completed interviews. Of the 46 families with no data at T2, 27 had children who had exited the home prior to T2, and 19 did not have complete interviews at T2. Of the 27 children who exited the home, 11 were reunified with their parent, five moved to a relative’s house (non-foster care), five moved to another foster home, two moved to a group home, three moved to an adoptive or pre-adoptive home, and one parent did not give a reason for the child’s exit. Overall, 19 parents said their child’s move was for a positive reason and seven parents said the child’s move was for a negative reason. Results from a logistic regression suggested that for the 26 children whom experienced an exit, relational aggression or physical aggression at T1 did not distinguish between a positive or negative move as indicated by the foster parent ($\chi^2(2) = .46, p = .80$). Additionally, for the relational aggression measure, there were two additional missing cases. The 160 participants were used in the analyses to examine the relation between children’s placement histories and their initial (baseline) levels of aggressive behavior (158 participants for the relational aggression analysis). In separate analyses used to examine the relations between aggression and the family environment, only those families that had T1 and T2 data (114 participants for the physical aggression analysis, 112 for the relational aggression analysis) were used. Analyses were conducted to evaluate whether there were differences between the group that had missing data at T2 ($n = 46$) and those who had complete data at T2 ($n = 114$). There was no difference between the two groups for gender ($\chi^2(1) = 1.27, p = .29$), age ($F(1,158) = 0.57, p = .45$), annual income (F

(1,146)= 0.06, $p = .81$), the child's relation to the parent ($\chi^2(1) = 3.14$, $p = .11$), the child's physical aggression at T1 ($F(1,158) = 0.29$, $p = .59$), or the child's relational aggression at T1 ($F(1,157) = 0.28$, $p = .60$), which suggests there may be a lack of bias in our missing data. Therefore, time 2 missing data was handled using listwise deletion because our data appears to be missing at random (MAR), which makes listwise deletion a feasible option (Gelman & Hill, 2007).

Measures

Physical aggression—Caregivers were asked to complete the parent version of the Child Behavioral Checklist (CBCL; Achenbach, 1991). The CBCL aggression subscale was used to measure physical aggression in both the focal child and the sibling. Achenbach and Rescorla (2001) advocate for using raw scores in lieu of standardized scores in data analysis and thus the raw scores are used in this study. The CBCL is a 113-item parent report measure of youth symptoms designed to assess clinical behavior in youth. Respondents are asked how often a behavior has occurred over the past four months and answer the questions on a three point scale: not true (0), somewhat or sometimes true (1), or very true or often true (2). For this sample, the aggression subscale had a high internal consistency for the focal children (Cronbach's $\alpha = 0.92$) and the focal siblings (Cronbach's $\alpha = 0.91$). The CBCL aggression subscale has been used to study physical aggression in other studies of children in foster care (Linares et al., 2012). In this sample, 15.5% of focal children and 5.5% of focal siblings scored in the clinical range on the aggression subscale.

Relational aggression—Caregivers were asked to complete a modified measure of relational aggression from the five-item relational aggression subscale of Crick and Grotpeter's (1995) peer nomination and teacher report of children's social behavior (CSBS-T) that was later adapted for parents (Casas et al., 2006) and reliably used by parents with children in middle childhood (Tackett & Ostrov, 2010). This measure was used to measure both the focal child and focal sibling's relational aggression. Three items from the CSBS were amended and asked how often the child engaged in a behavior (*i.e.*, “Tells mean lies or rumors about people to make other kids not like them,” “Gets even with other kids by keeping them out of their group of friends,” & “Spreads rumors or gossip about other kids in school”). Two other items intended to measure non-verbal aggression in the social context were added (*i.e.* “Makes mean faces to hurt others' feelings,” and “Rolls eyes or snubs nose to make others feel left out,” Underwood, Beron, Gentsch, Galperin, & Risser, 2008). In prior research, these two items have been added to the CSBS relational aggression subscale to get an aggregate score of relational aggression (Wright, Li, & Shi, 2012). The five items were rated on a five point Likert scale (1-Never to 5-Frequently). Traditionally, this measure was summed, but because there were some missing responses on items of the scale for some participants, the scale was averaged across the available items for each participant to lessen the impact of the missing responses on scale scores. Therefore, scores ranged from 1 to 5. In this sample, at baseline, the scale had a high internal consistency for both the focal child (Cronbach's $\alpha = 0.86$) and focal sibling (Cronbach's $\alpha = 0.88$), and a principal component analysis revealed one factor that explained 64% of the variance in the focal children's scores.

Characteristics of children's placement history—Data on the children's placement histories were collected from San Diego County's administrative data. Children who were somehow related to their caregiver (e.g., grandchild, niece, or nephew) were considered to be in kinship placement, whereas those unrelated to their caregiver were considered to be in a non-kinship placement. Placement history included the number of prior institutional (e.g., group home) and regular home placements a child had experienced prior to the current placement. The reason the child was removed from the biological home was coded into the following categories: neglect, physical abuse, sexual abuse, or emotional abuse. Reason for removal was used as a proxy measure of maltreatment. It should be noted that this may not be the most accurate indicator of types(s) of maltreatment a child has experienced, as children often experience multiple types of maltreatment. For data analyses, a set of codes was created to compare the effect of reason for removal. The first code compared children who had been removed due to neglect to those who had been removed due to any type of abuse. The second code compared children who had been removed due to physical abuse to children who had been removed due to sexual or emotional abuse. The third code compared children who had been removed due to sexual abuse to children who had been removed due to emotional abuse. Table 1 contains a breakdown of how many kids were classified into each removal group.

Characteristics of the family environment—To measure the social skills of the focal sibling, the Walker-McConnell Scale of Social Competence and School Adjustment-Elementary Version (1995), a 43-question peer and social skills questionnaire, was utilized. The scale is comprised of three subscales measuring self-control (e.g., "Shows empathy"), peer relations (e.g., "Compromises when the situation calls for it"), and school adjustment (e.g., "Listens carefully to directions"). This scale is usually given to teachers, but because it was given to parents instead of teachers in our study, one question from the school adjustment scale, "Answers or attempts to answers when called on by a teacher," was not included in the interview. The self control subscale was included because it addresses the child's cooperation and self-control with peers. The peer relations subscale was included because it addresses how well the child interacts with peers. The school adjustment subscale was included because it is indicative of how well the child follows directions and listens to the parent. Thus, 42 items were averaged to create an overall index of the sibling's social skills. In this sample, for the focal siblings, the internal consistency at baseline was excellent ($\alpha = 0.96$).

The number of children in the home was assessed by the number of children under 18 living in the home at baseline. Length of time in the home was assessed by how long the child had been living in the home up to and including the date of the baseline interview. Lastly, the parents were asked how they were related to the focal sibling. If the focal sibling was a biological child, adopted, or a stepchild, the sibling was considered a child of the parent. If the focal sibling was a foster child or other relative (e.g., nephew or niece), the sibling was not considered a child of the parent. A dichotomous variable was created using these criteria – child of parent, not child of parent.

Two variables were also created to assess whether sibling dyad characteristics moderated the effect of sibling behaviors on the child's aggression. The first was a categorical variable that

characterized the gender constellation of the sibling dyad (e.g. female/female, male/male, female/male, male/female) and the second was a dichotomous variable that characterized the birth order of the sibling dyad (i.e. focal child older/focal sibling younger, focal child younger/focal child older). The gender and birth order breakdowns for sibling pairs are included in Table 1.

Data Analyses

Preliminary analyses included assessing the descriptive statistics for the outcome variables and variables of interest, looking at the correlations among the predictor and outcome variables, and determining the collinearity among predictors using the variance inflation factor (VIF). Additionally, initial tests of the three moderators were examined using linear regressions, where only the pertinent interaction variables were included in the regression, without control variables. If there was no evidence for a particular moderator in these preliminary analyses, then it was not included in the primary analyses. Potential control variables were also assessed. The primary aims of the study were evaluated using four linear regressions. To assess the effects of the child's placement history variables, two linear regressions were used, one for the child's physical aggression score at T1 and another for the child's relational aggression score at T1. Two hierarchical linear regressions were used to assess the effects of the family environment variables, one for the child's physical aggression scores at T2 and another for the child's relational aggression scores at T2. In step one, the control variables, including any significant variables from the child placement history regression and the T1 relational and physical aggression scores were entered. In step two, the variables reflecting the family environment were entered. Finally, in step three, the interaction coefficients representing the relationship between the focal sibling and the foster or kinship provider were entered. Significant moderation was determined by examining the significance of the interaction coefficient (i.e. $p < .05$).

Results

Descriptive statistics are provided in table 2. Correlations among the predictor variables and outcome variables are provided in table 3. For the focal child, relational aggression and physical aggression were significantly and positively associated at both T1 ($r = 0.66$, $p < .001$) and T2 ($r = 0.57$, $p < .001$). The VIF ranged from 1.05 to 4.91, suggesting the absence of a collinearity problem. The average aggressive behavior score on the CBCL in a nonreferred normative sample was 4.7 for boys and 4.5 for girls, or 4.6 across gender (Achenbach, 1991). At T1, a one-sample t-test showed that physical aggression scores were higher in the current sample than in the nonreferred normative sample for focal children ($t(159) = 6.08$, $p < .001$, $M = 8.3$) and focal siblings ($t(157) = 2.46$, $p = .02$, $M = 5.9$).

The focal child's gender, age, and ethnicity, the focal sibling's age and gender, and the gender constellation and birth order of the sibling dyad were considered as potential covariates for the placement history regressions. In addition to these variables, the presence of a spouse, interview language, and parent ethnicity and education were considered as potential covariates for the home environment regressions. ANOVAs were run for categorical variables and Pearson correlations were run for continuous variables, which are

included in table 3. For the categorical child variables, the child's gender was not related to the child's physical ($F(1, 158) = 0.84, p = .36$) or relational aggression ($F(1, 158) = 1.65, p = .20$) at T1 and the child's ethnicity was not related to the child's physical ($F(5, 154) = 1.53, p = .18$) or relational aggression ($F(5, 152) = 2.15, p = .06$) at T1. The sibling's gender was also not related to the child's physical ($F(1, 158) = .000, p = .99$) or relational aggression ($F(3, 156) = 0.01, p = .91$) at T1. Of the sibling dyad variables, gender constellation was not related to the child's relational ($F(3, 156) = 1.07, p = .36$) or physical aggression ($F(1, 156) = 0.58, p = .63$) at T1 and birth order was not related to the child's relational ($F(1, 158) = 0.1, p = .92$) and physical aggression ($F(1, 158) = 1.36, p = .25$) at T1. Lastly, for the categorical placement history demographic variables, interview language was not related to the child's relational ($F(1, 158) = 0.03, p = .86$) or physical aggression ($F(1, 158) = 2.90, p = .09$) at T1 and foster parent ethnicity was not related to the child's relational ($F(5, 152) = 1.20, p = .31$) or physical aggression ($F(5, 152) = 2.19, p = .06$) at T1. Spousal presence emerged as a predictor of focal child physical aggression, such that in homes where the parent had a spouse, the child showed higher physical aggression scores than in homes where there was no spouse ($F(1, 157) = 4.28, p = .04$) but was not related to relational aggression ($F(1, 157) = 2.44, p = .12$). Therefore, spousal presence was included as a covariate in the second physical aggression analysis. For the focal child, there was a significant decrease in the physical aggression score from T1 to T2 ($t(114) = 2.05, p = 0.04$). There was no significant change in the relational aggression score from T1 to T2 ($t(112) = .012, p = 0.99$).

Regression analyses were run to examine the preliminary relations of the moderator variables to the sibling variables. When controlling for relational aggression at T1, there was no evidence that the relation of sibling physical aggression, relational aggression, or social skills at T1 to child relational aggression at T2 was moderated by birth order, gender constellation, or sibling relation to the parent (all $ps > .05$). When controlling for child physical aggression at T1, there was no evidence that the relation of sibling physical aggression, relational aggression, or social skills at T1 to child physical aggression at T2 was moderated by birth order or gender constellation (all $ps > .05$). However, there was evidence that the sibling's relation to the parent moderated the relation of sibling physical aggression at T1 to the child's physical aggression at T2 ($p = .018$). Therefore, sibling relation to the parent was examined as a moderator in the physical aggression primary analysis. Even though there was no evidence for the inclusion of birth order and gender constellation as moderators, these variables were controlled for in the primary analyses.

A series of regression analyses were used to examine the relationships between the children's placement history variables and physical aggression and relational aggression at T1. The child placement history variables significantly predicted focal child physical aggression scores at T1 (Table 4, $F(6, 153) = 4.04, p = .001, R^2 = .14$). Specifically, kinship home placement status ($p = .005$) and a child's prior group home placements ($p = .007$) emerged as significant predictors. Children who were placed in non-kinship homes rather than kinship homes and children who had more prior group home placements were more likely to have higher T1 physical aggression scores.

Additionally, the child placement history variables significantly predicted focal child relational aggression scores at T1 (Table 4, $F(6, 151) = 3.33, p = .004, R^2 = .12$). Specifically, kinship home status ($p = .027$), the child's prior group home placements ($p = .015$), the child's prior home placements ($p = .024$), and reason for removal ($p = .019$), emerged as significant predictors. Children who were in non-kinship homes, had more institutional placements, had fewer home placements, and were removed from the home due to neglect ($B = 0.27$) rather than any kind of abuse ($B = -.09$) were more likely to have higher relational aggression scores at T1.

Next, a series of regression analyses were used to examine the relationships between current family environment variables and measures of aggressive behavior. In each of these analyses, control variables were entered in the first step of the equation. Next, the variables describing the current family environment were entered in the second step of the equation, as well as variables representing gender and birth order configurations. Finally, in the third step, the interaction terms were entered.

First, family environment predictors of changes in the child's physical aggression were examined. At step 1, the control variables significantly predicted the focal child physical aggression score at T2 (Table 5, $F(5, 107) = 34.79, p < .001, R^2 = .62$). The focal child's physical aggression score at T1 ($p < .001$) and the focal child's relational aggression score at T1 ($p = .002$) emerged as significant predictors. At step 2, the control variables and family environment variables significantly predicted the focal child physical aggression scores at T2 ($F(13, 99) = 13.83, p < .001, R^2 = .65$). Here, the sibling's relational aggression score at T1 emerged as a significant predictor of physical aggression at T2 ($p = .03$). Higher focal sibling relational aggression scores at T1 predicted lower focal child physical aggression scores at T2. At step 3, the control variables, family environment variables, and the interaction coefficients significantly predicted the focal child's physical aggression score at T2 ($F(16, 96) = 12.11, p < .001, R^2 = .67$). The effect of the focal sibling's physical aggression score on the focal child's physical aggression score was significantly moderated by the focal sibling's relationship to the parent ($p = .03$). If the sibling was a child of the parent, higher sibling physical aggression scores at T1 predicted lower focal child physical aggression scores at T2 ($B = -0.36$). This effect was reversed if the sibling was not a child of the parent, such that higher sibling physical aggression scores at T1 predicted higher focal child physical aggression scores at T2 ($B = 0.15$). A graph of the interaction is included in figure 1.

Lastly, family environment predictors of changes in the child's relational aggression were examined. At step 1, the control variables significantly predicted focal child relational aggression scores at T2 (Table 5, $F(8, 102) = 13.74, p < .001, R^2 = .52$). Here, the child's relational aggression scores at T1 ($B = .63, p < .001$) and reason for removal ($B = -.22, p = .035$) emerged as significant predictors. At step 2, the control variables and the family environment variables significantly predicted focal child relational aggression scores at T2 ($F(16, 94) = 9.39, p < .001, R^2 = .62$). The amount of time the focal child had been in the home ($B = .006, p = .025$), the sibling's relationship to the parent ($B = .18, p = .025$) and the number of children in the home ($B = .14, p = .003$) emerged as significant predictors. Focal children who were living in homes with more children, who had been in the home for a

longer amount of time, and who had siblings that were biological children of the parent compared to non-biological children of the parent were more likely to have higher relational aggression scores at T2.

Discussion

The primary aims of this study were as follows: to determine which characteristics of foster children's placement histories predicted their levels of relational and physical aggression; to determine which characteristics of the current foster family environment best predicted changes in the children's relational and physical aggression while in the current placement; and to assess whether the relationship between a focal sibling's level of aggressive behavior and the children's physical and relational aggression was moderated by the gender constellation and birth order of the sibling dyad or the type of relationship between the sibling and foster parent. The findings of the investigation revealed that certain characteristics of the children's placement histories were predictive of their levels of physical and relational aggression, as assessed by foster and kinship parents after the children had been in their current placements for an average of one year. In addition, specific characteristics of the children's current foster family environments were found to be predictive of levels of physical and relational aggression assessed four months later, after controlling for initial levels of aggressive behavior and significant placement history predictors of T1 levels of aggression.

Placement History Predictors of Aggression

The results of the study revealed that higher levels of physical aggression and relational aggression at T1 were predicted by a higher number of previous group home placements and placement with a non-kin foster parent. In addition, relational aggression was predicted by fewer home placements and neglect as a reason for removal from the family of origin. Since these analyses were correlational in nature, it was not possible to determine the direction of the relationship between the measures of aggression and the children's placement history variables. Regarding the association between prior placements and aggressive behavior, it is possible that repeated placements in institutional settings (e.g., group homes) increased the children's levels of aggressive behavior. Prior research has demonstrated a link between frequent changes in foster placements and increased behavior problems (Newton et al., 2000). Furthermore, if placements are in some type of institutional care, such as a group home, there is evidence that children are at risk for increased behavior problems through a peer contagion network in which they have greater exposure to externalizing behaviors (Dishion et al., 1999; Lee & Thompson, 2009). However, it is also possible that children with more externalizing behavior problems may be more likely to be placed in a group home (Cheung et al., 2011). Thus, the children with elevated aggression scores at T1 may have had longer-term aggressive tendencies that were then maintained by unstable placement histories. Regardless of the causal direction of these findings, the results of this study are consistent with previous research in demonstrating a connection between children's prior placement histories and their relational and physical aggression.

The results also revealed that relational aggression was predicted by neglect as a reason for removal from the home of origin. Although the reason for removal code is an administrative code that may or may not represent a child's actual experience of maltreatment, it does serve as proxy-measure for the type of maltreatment faced. It is possible that the children who had been neglected by their parents failed to learn socially appropriate ways of interacting with others and thus were more likely to use relational aggression as a means of managing their social interactions. There is evidence indicating that children who have experienced some form of neglect demonstrate lower levels of social skills and competencies than non-maltreated children (Keil & Price, 2003). In addition, early neglect has been found to predict childhood aggression (Kotch et al., 2008). One implication of this finding is that in addition to children who have experienced multiple placements, those children who have also experienced neglect, which includes a high proportion of children in foster care, should be monitored for displays of relational forms of aggressive behavior while in foster care.

Higher levels of physical and relational aggression at T1 were also associated with placement with a non-kin caregiver. This particular finding is consistent with prior research, which has found that children in non-kinship homes demonstrate higher levels of behavior problems compared to children in kinship homes (Cheung et al., 2011; Keller et al., 2001). It is possible that relative caregivers are less likely to take a child into their home if the child displays higher levels of aggressive behavior. Consequently, more aggressive children may be more likely to end up with nonrelative caregivers. Given this, nonrelative caregivers may especially benefit from services that provide training in the management of aggressive behavior.

Family Environment Predictors of Aggressive Behavior

In the current study, several characteristics of the foster family environment, such as the sibling social environment, the number children in the home, and the length of time the child had been in the foster home, were examined as possible predictors of aggressive behavior. After controlling for levels of aggression at T1, the significant predictors of aggression at T1, and gender and age configurations of sibling pairs, several characteristics of the foster family environment were found to predict the children's levels of aggressive behavior at T2, four months after T1. The findings revealed different sets of family environment predictors for each type of aggressive behavior. In regards to physical aggression, higher levels of relational aggression at T1 on the part of the focal sibling were related to lower levels of physical aggression on the part of the focal child at T2. Thus, a more covert form of aggression on the part of the focal sibling (whether or not they were another foster child) was related to decreased levels of physical aggression on the part of the focal child. Similarly, if the focal sibling was a child of the foster or kinship parent, higher sibling physical aggression scores at T1 predicted lower focal child physical aggression scores at T2. However, this relationship was reversed if the focal sibling was not a child of the parent. In that case, higher sibling physical aggression scores at T1 predicted higher focal child physical aggression scores at T2.

This pattern of findings may be explained by the unique family dynamics of foster and kinship families. It is possible that foster and kinship parents monitor the relationships

between their biological children and foster children more closely than they would the relationships among foster children. Foster parents have a vested interest in ensuring that the foster child feels as if they are a part of the foster family (Megahead & Soliday, 2013) and may be more vigilant when conflicts between foster children and their own children arise. They may also be more vigilant in monitoring aggressive exchanges between their own children and foster children in order to protect their own children. Regardless of motive, foster and kinship parents might be quick to intervene in order to prevent conflicts from escalating into reciprocally aggressive exchanges. In contrast, foster and kinship parents may be less attentive to aggressive exchanges between foster children, which could explain the positive relationship between focal sibling (unrelated to the foster or kinship parent) aggression at T1 and focal child aggression at T2. As previous research has found, having more children in a foster home can lead to increases in externalizing behavior problems (Harden & Whittaker, 2011). Having multiple children in the home creates a greater challenge for foster parents for monitoring and managing interactions between all possible pairs of children. Relative and nonrelative caregivers who have multiple children in their care may benefit from intervention efforts designed to assist parents in monitoring and managing aggressive exchanges between children.

In comparison to physical aggression, the analyses revealed a different set of predictors for relational aggression at T2. Specifically, higher levels of relational aggression were related to a greater number of children in the home, a longer period of time in the home, and the focal sibling being a biological child of the parent. As was anticipated, a greater number of children in the home predicted an increase in the child's relational aggression. In several studies, a positive association has been found between the number of peers in a child's social network and their level of relational aggression (Faris & Felmlee, 2011; Neal, 2009). The results of this study are consistent with those findings, in that more children in the home led to higher levels of relational aggression. Social learning theory would suggest that an increased number of children in the home would allow for increased exposure to and opportunity to use relational aggression.

The analyses also revealed that children who had been in the foster home for a longer period of time had higher levels of relational aggression, which was not the case for physical aggression. There is research to suggest that relational aggression is more likely to be present in close and intimate relationships (Grotzinger & Crick, 1996). The longer a child remains in the foster home, the greater the opportunity to form closer relationships with the foster family and foster siblings. This may, in turn, lead to an increase in the child's use of relational aggression in social disputes. Furthermore, because parents are more likely to be attentive to and discipline overt (such as physical) aggression rather than relational aggression (Goldstein & Boxer, 2013) children may begin to replace physical aggression with relational aggression. Supporting this possibility is this study's finding that physical aggression decreased for focal children between T1 and T2.

Finally, the analyses revealed that if the focal sibling was a biological child of the parent, the foster child had higher relational aggression scores at T2, compared to if the focal sibling was not a biological child of the parent. If, as was suggested earlier, caregivers are monitoring the relationship between their biological child and the foster child more closely,

the focal child may be replacing physical aggression with the more covert form of aggression - relational aggression. Also, as was suggested earlier, if there is less parental monitoring of the focal child's interactions with siblings who are not biological children of the foster parent, physical aggression may continue to be the preferred form of aggressive behavior which may, in part, explain why there was a reduction in relational aggression from T1 to T2, if the focal sibling is not a biological child of the parent.

Regardless of the interpretation of these particular findings, continued use of relational aggression increases the likelihood of negative interactions among foster siblings. In addition, children who display relational aggression are at increased risk for both externalizing and internalizing forms of behavior problems (Crick et al., 2006; Herrenkohl et al., 2009). Therefore, children and their caregivers would likely benefit from intervention or education programs that provide foster parents with training in recognizing and monitoring all forms of aggressive behavior and training in parenting strategies found to be effective in managing children's aggressive behavior.

Limitations

Although this is one of the first studies to examine predictors of different types of aggressive behavior among children in foster care, several limitations of the study must be noted. First, the sample included only elementary-age children living in foster care, and thus did not examine predictors of aggression in younger or older youth in foster care. Second, there was some variability in the developmental periods and corresponding age ranges represented by our sample, with focal children's age ranging from 4–13 years of age and focal siblings' age ranging from 2 to 17. However, the majority of the sample was in the elementary school age range (85.6%), with a small proportion of the focal children at four years of age (12 children, 7.5%) or 12–13 years of age (11 children, 6.9%). Some of the items on the relational aggression subscale (which was completed by the foster or kinship caregiver), such as "spreads rumors" may have low base rates among the younger participants of our sample, but were developmentally appropriate for the majority of the sample. Third, the measures of aggressive behavior and social skills relied on a single type of informant – foster and kinship parents. There may be a response bias for foster caregivers, such that they may underestimate the prevalence of their biological child's aggression and overestimate the prevalence of their foster child's aggression. One recent study found that higher reports of positive relationships between the caregiver and youth predicted lower behavior problems from the youths' and parents' perspective, suggesting that the quality of the caregiver-foster child relationship may have an impact on the caregivers' judgments of the child's behavior problems (Cooley, Wojciak, Farineau, & Mullis, 2015). Additionally in one study, even if the foster child's behavior problems were generally within the normal range, caregivers still perceived deficits in the levels of the child's competence (McAuley, 2000). Future studies would benefit from including measures from multiple informants, including children and observers. Lastly, the focus of this study was on aggressive behavior within the home context. It would be informative to examine the physical and relational aggression of children in foster care in multiple contexts, including neighborhood and school.

The results of this investigation are consistent with previous research demonstrating an association between the number of placements and behavior problems (e.g., Newton et al., 2000). However, this study expands the body of research by revealing an association between the frequency of institutional placements (such as group home placements) and aggressive behavior. Thus, these findings underscore the breadth of impact of placement changes on children's social behaviors and maladaptive behaviors and highlight the need to minimize the number of placements, especially institutional placements, while children are in out-of-home care. The results of this study also reveal that the environment of the foster or kinship home, especially the sibling environment, is related to children's levels of aggressive behavior. The dynamics of foster and kinship homes appear to influence whether or not physical and relational aggression on the part of a focal sibling is related to a foster child's level of aggressive behavior. Focal sibling relational aggression appears to be related to decreased levels of physical aggression in the focal child. Likewise, physical aggression from a sibling who is a child of the caregiver is also related to reduced physical aggression in the focal child. Additional research is needed to replicate these findings in order to begin to understand the family dynamics that may contribute to these observed relationships. The results of this investigation have also revealed that the more time in the foster home, a greater number of children in the home, and a focal sibling that is not a biological child of the foster parent resulted in reduced levels of relational aggression. Together, these findings suggest that foster and kinship families may benefit from intervention efforts designed to increase parent competencies in monitoring and managing all forms of aggressive behavior and in teaching children prosocial skills and appropriate ways of managing social conflict.

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Figure 1.

The interaction between sibling status and sibling physical aggression at T1 on child physical aggression at T2, at the average of all other variables in the model Bio indicates that the child is a biological child of the parent. Non-bio indicates that the child is not a biological child of the parent.

Table 1**Demographic Data**

	M or Frequencies (%)	n
Focal Child		
Age	7.33 (2.31)	
Male	50.9%	84
Ethnicity		
Hispanic	49.4%	79
Caucasian	17.4%	28
Mixed ethnicity	16.9%	27
African American	11.9%	19
American Indian/Alaska Native/Asian	1.9%	3
No ethnicity provided	2.5%	4
Reason for removal		
Neglect	68.1%	109
Emotional abuse	13.8%	22
Physical abuse	10.1%	16
Sexual abuse	6.9%	11
No reason for removal provided	1.3%	2
Foster Parent		
Age	45.75 (10.82)	
Male	9.4%	15
Interviews conducted in Spanish	36.9%	59
Live with a Spouse	58.6%	94
Ethnicity		
Hispanic	41.9%	67
Caucasian	38.1%	61
African American	8.9%	14
American Indian/Alaska Native/Asian	5.6%	9
Mixed Ethnicity	1.9%	3
No ethnicity provided	3.6%	6
Focal Sibling		
Age	7.98 (4.04)	
Male	46.3%	74
Sibling's relation to child and parent		
Biological child of foster parent and	33.1%	
full sibling to child	0.0%	0
not related to child	17.5%	28
related to child but not a sibling	15.6%	25
Not a biological child of foster parent and	66.9%	
full sibling to child	41.9%	67

	M or Frequencies (%)	<i>n</i>
not related to child	8.13%	13
related to child but not a sibling	16.9%	27

Note. Age is in years. With a spouse = Parent indicated that they lived with a spouse.

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Table 2
Descriptive Statistics for outcome variables, child history variables, and contextual variables (N = 160)

	%	n	Mean	SD	Range
Child's physical aggression score T1			8.30 (59.49)	7.50 (10.20)	0 – 33
Child's physical aggression score T2			7.56 (58.07)	6.55 (9.17)	0 – 28
Child's relational aggression score T1			1.80	0.90	1 – 4.8
Child's relational aggression score T2			1.79	0.97	1 – 5
Child History Characteristics					
Prior group home placements			0.96	1.20	0 – 8
Prior regular home placements			2.70	1.94	0 – 12
Kinship home status					
Kinship home	49.4%	79			
Non-kinship home	50.3%	81			
Contextual Characteristics					
Number of months child has been in the home			13.10	10.58	1 – 127
Number of children in the home			3.42	1.41	2 – 9
Sibling's physical aggression score T1			5.90 (56.49)	6.43 (8.82)	0 – 33
Sibling's relational aggression score T1			1.50	0.72	1 – 5
Sibling's social skills score T1			3.77	0.71	1.8 – 5
Sibling status					
Sibling is not a bio-child	66.9%	107			
Sibling is a bio-child	33.1%	53			

Note. Values in parentheses represent the standardized T-score means and std. deviations for the CBCL aggression subscale for the focal sibling and focal child.

Table 3

Control, Predictor, and Outcome Variable Correlations

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Outcome Variables														
1. Child RAgg (T1)	—													
2. Child RAgg (T2)	.66**	—												
3. Child PAgg (T1)	.61**	.49**	—											
4. Child PAgg (T2)	.61**	.57**	.77**	—										
Pre-Placement Variables														
5. Home Placements	-.04	.12	.11	.09	—									
6. Group Home Placements	.19*	.16	.27**	.27**	.40**	—								
Contextual Variables														
7. Sib social skills (T1)	-.14	-.20*	-.10	-.14	-.07	-.11	—							
8. Sib RAgg (T1)	.36**	.25**	.13	.11	.01	.00	-.32**	—						
9. Sib PAgg (T1)	.25**	.18	.28**	.26**	.02	.05	-.50**	.59**	—					
10. Children in the home	.05	.27**	.07	.11	.03	-.10	.005	-.07	-.04	—				
11. Time in the home	-.12	.03	-.19*	-.16	-.14	.06	.10	-.00	.01	-.17*	—			
Potential control variables														
12. Child's age	-.12	-.01	.08	-.003	.19*	.14	-.004	.04	.04	-.19*	.09	—		
13. Sib age	.06	.13	.02	-.07	.27**	.11	.15	-.08	.02	-.16	.05	.34**	—	
14. Parent education	.03	-.001	-.01	.07	.20*	.10	-.06	.12	.08	-.17*	.07	-.06	-.08	—

Note.

* $p < .05$.** $p < .01$.

Sib = sibling, RAgg = Relational aggression, PAgg = Physical aggression.

Table 4

Regression Models for Child History Variables Predicting T1 Aggression

Model	Predictor Variables	Physical Aggression T1			
		<i>B</i>	<i>SE</i>	<i>F</i>	<i>R</i> ²
1				4.04**	.14**
	Kinship status	3.41**	1.19		
	Group home placements	1.40**	.51		
	Reg home placements	-.17	.32		
	Reason for removal				
	Neglect (+3) vs Abuse (-1)	.32	.31		
	Physical (+2) vs. Emot/sexual abuse (-1)	1.06	.75		
	Sexual (+1) vs. emot abuse (-1)	-2.29	1.32		
2				3.33**	.12**
	Kinship status	.32*	.14		
	Group home placements	.16*	.06		
	Reg home placements	-.10*	.04		
	Reason for removal				
	Neglect (+3) vs Abuse (-1)	.10*	.04		
	Physical (+2) vs. Emot/sexual abuse (-1)	.06	.09		
	Sexual (+1) vs. emot abuse (-1)	-.14	.16		

Note.

* $p < .05$,** $p < .01$ *B*s are unstandardized regression coefficients. Reg = Regular, Emot = emotional. Kinship status (1 = kinship home status, -1 = non-kinship home).

Table 5
Regression Models for Family Environment Variables Predicting T2 Aggression

Model	Predictor Variables		T2 Physical Aggression			
			B	SE	F	R ²
1	Step 1	Child PAgg T1	.53**	.07	35.06**	.62**
		Child RAgg T1	1.73**	.55		
		Spousal presence	-.36	.40		
		Kinship status	-.07	.40		
	Group home placements		.62	.35		
		Step 2	Sib PAgg	.08	.08	16.56**
		Sib RAgg	-1.56*	.71		
		Sib social skills	-.75	.70		
	Time in home		-.01	.02		
		Children in home	-.13	.28		
2	Step 1	Sib status	.37	.97		
		Gender constellation	.28	.37		
		Birth order	-.13	.42		
		Step 3	Sib PAgg (x) sib status	-.25*	.12	13.89**
	T2 Relational Aggression					
	Step 1	Child PAgg T1	.02	.01	13.74**	.52**
		Child RAgg T1	.63**	.10		
	Reg home placements		.06	.04		
		Kinship status	-.10	.07		
	Group home placements		.03	.07		
Reason for removal						
Neg v. abuse		-.002	.04			
	Phys v. S/E	-.22*	.10			
Emot v. sexual		.24	.16			

Model	Predictor Variables	T2 Physical Aggression			
		<i>B</i>	<i>SE</i>	<i>F</i>	<i>R</i> ²
Step 2	Sib PAgg	-.01	.01	9.39**	.09**
	Sib RAgg	.02	.11		
	Sib social skills	-.21	.11		
	Time in home	.01*	.003		
	Children in home	.12**	.05		
	Sib status	.18*	.08		
	Gender constellation	.09	.06		
	Birth order	.10	.07		

*
 $p < .05$,

**
 $p < .01$

*B*s are unstandardized regression coefficients. Only significant interaction coefficients are shown for ease of interpretation. PAgg= Physical aggression, RAgg= Relational aggression, SS= social skills, S/E= sexual or emotional abuse, Sib status= Sibling relation to the parent (1 = bio child, -1 = non-bio child), Kinship status (1 = kinship home status, -1 = non-kinship home).