An understudied form of intra-family violence: Sibling-to-sibling aggression among foster children

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Abstract

Foster children are at high risk for perpetrating and for being victims of sibling aggression and violence. This article proposes an integrative, multidimensional model for studying risk and protective factors of sibling violence. In the model, exposure to sibling violence (perpetration and victimization), child mental disorder, and placement characteristics are risk factors for impaired psychological functioning (internalizing and externalizing symptoms) and for disruptions in school competence (scholastic and social competence with classmates). Sibling positivity, quality of the foster care giving, and foster rejecting care giving are proposed as moderating processes in the linkage between exposure to sibling violence and impaired psychological functioning. Preliminary data are presented in support of the proposed model.

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Keywords: Sibling aggression; Violence; Foster children

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1. Introduction

In 2003, there were 538,000 children in the foster care system in the United States (USDHHS, 2004). Although foster children represent a small percent of the child population, they have high rates of medical, mental health, and educational problems and represent a substantial public health burden. For example, while foster children comprised 1% of the children in California in 1988, they accounted for a 41% greater expenditure rate than all other children covered by Medi-Cal (Halfon, Berkowitz, & Klee, 1992). In the state of Washington, mental health services were used by 25% of foster children compared with 3% of AFDC children; and twice as many foster children as AFDC children used medical equipment or specialist services or were hospitalized (Takayama, Bergman, & Connell, 1994). Among 255 randomly selected foster children from three CPS service areas in California, 80% were given a psychiatric diagnosis, and about one-half received mental health (51%) and special education services (52%) (Zima et al., 2000).

Foster children served in the child welfare care sector comprised a population of substantial public health burden due to high mental health services, special education services, and overrepresentation in the juvenile justice sector. A key to decreasing the toll of familial victimization during childhood is to prevent transmission of other types of familial violence, (i.e., sibling violence among victimized children). Yet in order to exercise prevention efforts to deter future familial violence, it is necessary to identify the association of sibling violence with other risk factors, the iterative processes between exposure and consequences, and the influence of resilience factors unique of the foster care population.

To date, no attention has been given to understanding the ways by which sibling processes may affect the well-being of urban African-American and Latino maltreated children raised in foster homes. The overwhelming majority of studies of foster children have focused on single children. Such a focus has ignored the fact that the majority (62%) of children in NYC (and elsewhere) enter foster care as sibling groups (New York City Administration for Children’s Services, 2000), thus exerting a continued influence on each other after they are removed from their homes and placed in substitute care. This article reviews current foundational knowledge about the enduring influences of siblings on each other, with a focus on factors that may contribute to increased risk for sibling aggression and violence among highly vulnerable maltreated siblings entering foster homes. In this article we review what is known about sibling relationships and mutual aggression and violence and discuss the possible impact of sibling violence on child outcome for an understudied high risk population for the continuation of familial violence. Preliminary results of a pioneering study of exposure to sibling
aggression in the foster care system are presented. Finally, directions for future research in this area are discussed.

2. Heuristic model

A heuristic model of sibling violence is shown in Fig. 1. Sibling violence is operationalized as severity and chronicity indices of psychological, physical, and sexual aggression between siblings as victims, perpetrators, or both. Psychological symptomatology is operationalized as high levels of internalizing and externalizing problems. School competence is operationalized as scholastic and social engagement with classmates. In this model (see Fig. 1), exposure to sibling violence (perpetration and victimization) is a risk factor for impaired psychological functioning (internalizing and externalizing symptoms) and disruptions in school competence (scholastic and social competence with classmates).

Due to a host of adverse risk histories, foster children are at high risk for of sibling aggression and violence. There is a cluster of characteristics that is likely to serve as correlates of sibling aggression and violence unique to this foster care population that may contribute to initial and subsequent changes in reported levels of sibling violence. In our model, we hypothesize that children’s exposure to past familial victimization (neglect, abuse, and/or exposure to domestic violence), high incidence of disruptive behavior and other disorders, placement condition (placed apart from each other), and placement instability (change of foster homes), are risk factors for problematic and negative sibling relationships which may fluctuate with the passage of time. Exposure to family violence teaches children maladaptive ways to cope with the stresses of life. Existing psychiatric disorders affect ways children interact with their social environments. Placement condition (siblings placed together in the same foster home or apart) may affect sibling’s feelings of closeness and protection toward each other. Placement instability may have an enduring influence on sibling differential levels of positivity and negativity over time. All these factors may shape the quality of the sibling relationship in yet unknown ways.

Over the course of the placement experience, the trajectory of sibling negativity and violence is likely to negatively influence the trajectory of sibling psychological symptoms and competence across the home and school domains. Siblings who engage in high levels of negativity and violence are likely to report depressive symptoms and loneliness due to alienation of the sibling bonds. Furthermore, sibling violence results in increased externalizing problems due to siblings continuing to behave in coercive ways with conventional peers and others. Internalizing and externalizing problems are likely to result in disruptions in school competence over time.

Resilient processes in the sibling relationship and in the foster home may protect children from the cascade of negative trajectories. Identifying the moderating influence on development of positive sibling and family processes is
crucial for the development of effective prevention. We hypothesize that sibling positivity, quality of the foster care giving, and less differential warmth and responsive management in foster care can moderate the relationship between violence and negative outcomes over time.

3. The nature of sibling relationships

Sibling relationships are best described as emotionally ambivalent–conflictual at times, warm at others, and often mixed, as most siblings try to strike a balance between positivity and negativity (Brody, 1998). The intensity of negativity and positivity has been found moderately stable over middle childhood (Dunn, 1996) and adolescence (Hetherington, Henderson, & Reiss, 1999). In normative samples, correlations for negativity and positivity dimensions range from −.08 to −.16, suggesting that these orthogonal dimensions may reflect independent relationship dimensions rather than a polarity of a single relationship dimension (Furman & Buhrmester, 1985a). Stormshak, Bellanti, and Bierman (1996) hypothesized that sibling relationships characterized by high levels of conflict in the absence of warmth may be especially deleterious for child adjustment. More conflict and less warmth between siblings have been linked to diagnosable problems including depression, anxiety, and antisocial behaviors (Stocker, Burwell, & Briggs, 2002).

4. Sibling conflict

Sibling conflict is typical in the general population, occurring daily in 50% of young children (Dunn & Kendrick, 1982). In 80% of siblings ages 3–17, there was one or more violent episode occurring in the preceding year (Straus, Gelles, & Steinmetz, 1981). Across non-clinical and clinical samples, 60–96% of children had been victims of physical aggression in the hands of a sibling; 30% of siblings reported frequently being bullied by their siblings, including name calling or being picked on; while 22% reported often being hit and pushed around (Duncan, 1999; Kolko, Kazdin, & Day, 1996).

5. From normative conflict to sibling violence

Researchers of familial violence have long recognized violence between siblings as a common form of intrafamilial violence (Gelles & Straus, 1988). Adult sibling violence (assault, intimidation, robbery, rape, and murder) involved 8.8% of all family violence reports, second only to spouse abuse, and similar to child maltreatment reports (Uniform Crime Reports, 1998). Sibling violence may include psychological/emotional (e.g., teasing, ridiculing, insulting, threatening, terrorizing), physical (e.g., slapping, hitting, biting, kicking, tickling, smothering, choking, using a weapon), or sexual (e.g., touching or fondling, indecent exposure, attempt of penetration, intercourse by coercion or force, oral or anal sex) acts.

Research of sibling violence, to date, has relied primarily on small sample sizes, retrospective reports, or clinical case studies. For example, between 50–94% of high school or undergraduate students report current sibling physical violence (De Jong, 1989); 3–15% of adult siblings reported having sexual contact with a sibling in childhood (Alpert, 1991; Finkelhor, 1980; Hardy, 2001). In small adult clinical samples, brother–sister sexual abuse has been found to share similar characteristics to father–daughter in regard to threatened force, pain or injury, bribes, and to be associated with psychological consequences of similar magnitude such as depression, drug or alcohol problems, PTSD symptoms, and sexual promiscuity (Rudd & Herzberger, 1999; Cyr, Wright, McDuff, & Perron, 2002).

6. Exposure to past familial violence and sibling violence

Exposure to familial violence is an important theoretical correlate of subsequent sibling violence and it is likely to be associated with fluctuations of initial levels of sibling violence. Considering the influence of histories of familial victimization provides an opportunity to examine the dynamic interplay over time between exposure histories and sibling responses to violence. There is ample evidence from the social learning literature that aggression is learned in the family. Siblings play a role in the development and maintenance of aggressive behavior by providing training models for each other. Patterson (1984) and Snyder and Patterson (1995) demonstrated that some siblings use
coercive behaviors such as yelling, fighting, and name-calling to terminate conflict; these coercive patterns get negatively reinforced when the sibling submits (i.e., gives in). Exposure to coercive, power-based norms as ways of regulating conflict among maltreating families places siblings at higher risk to use these same strategies with each other when they enter foster care, with peers, and eventually with romantic partners. Exposure to neglectful parenting may also place children at risk for sibling violence by diminishing pro-social models. In a cycle of violence, early coercive cycles of interaction with parents spread to problematic relationships with siblings in early childhood, which lead to conduct problems in middle childhood, which in turn, add to antisocial behavior in adulthood (Bank, Patterson, & Reid, 1996).

In addition, from the perspective of social contamination, there is support for the notion that high stress in the family contributes to the spread and exacerbation of different types of familial violence. Under a ‘contamination’ explanation siblings raised in violent environments experience high stress which ‘spills over’ onto other family subsystems, including sibling relationships (Hetherington et al., 1999). Consistent with a social learning model and a social contamination perspective, it is likely that, over time, siblings who were victims of past physical abuse and those who witnessed intimate partner violence report higher sibling physical violence than do victims of sexual abuse or neglect. On- going research in our laboratory was designed to test this hypothesis.

7. Mental disorders and sibling violence

In a study of 255 foster children in California, assessed by clinicians at ages 6–12, 21% received psychiatric diagnoses including: ADHD (15%), major depression (5%), or other (1%) (Zima, Bussing, Crecelius, Kaufman, & Belin, 1999). Our studies indicate that 62% foster siblings entering care received at least one psychiatric disorder using the C-DISC 4 (2000) parent version (Linares, Padial, Rosbruch, & Cloitre, 2003), with ADHD showing the highest single incidence (22–29%). Given the high rate of mental disorders in this population, it is important to consider how one or both siblings’ behavioral disability may impact on the sibling relationship, and levels of sibling violence. In a study of 11 families, healthy siblings reported feeling victimized by their ADHD sibling (Kendall, 1999); having low conflict and a warm sibling relationship is a protective factor against externalizing behavior problems for healthy siblings having a handicapped sibling (Fishman et al., 1996). On the other hand, sibling interactions of aggressive children are marked by higher levels of observed conflict and lower levels of self-reported positive features, as compared to non-aggressive children (Aguilar, O’Brien, August, Aoun, & Hektner, 2001). It is likely that child disruptive behavior disorders are associated with higher sibling violence.

8. Placement characteristics and sibling violence

Case studies suggest that intact placement (siblings residing in the same foster home) is associated with sibling attachment, closer relationship between siblings, and supportive roles between siblings (Bellwood, 1985; Linares & Torres, 2005), while split placement is associated with behavior problems (Aldridge & Cautley, 1976; Hegar, 1988; Smith, 1998; Thorpe & Swart, 1992) and less stable placements (Boer & Spiering, 1991; Staff & Fein, 1992).

A second characteristic which is important to consider is placement instability. Change in foster homes is a common event in the lives of foster children. For example, in our own sample, 39% changed homes over the course of one year. In a randomly selected sample of 302 foster children (age 6–12), the mean number of placement changes was 3.4 (SD=2.2); 28% had lived in ≥5 placements (Zima et al., 2000). Among foster children, increased number of foster home placement correlates with antisocial behavior and convictions for criminal activity (r = .58), although the direction of effect is unclear (Runyan & Gould, 1985).

9. Sibling violence and internalizing problems

Internalizing problems, such as depression, poor self-esteem, or fear of further separations, are often reported among foster children (Halfon, Mendonca & Berkowitz, 1995; Hulsey & White, 1989; Klee & Halfon, 1987; Pilowsky, 1995). In the midst of familial loss and rupture of family bonds, sibling conflict may contribute to internalizing problems (Bowlby, 1969; Garmezy & Masten, 1994). Not getting along with a sibling is associated with
high levels of fear and anxiety among younger siblings (Dunn, Slomkowski, Beardsall, & Rende, 1994). Among adolescents, sibling conflict is predictive of anxiety, and depressed mood two years later (Stocker et al., 2002). For example, in a study of 414 non-foster sibling pairs, after accounting for family environment, moderate correlations ($r = .26$ to $.39$) were found between sibling’s aggression and internalizing behavior for sisters, brothers, or mixed-sex siblings (Fagan & Najman, 2003).

Furman and Buhrmester (1985b) argued that friendships serve unique needs in children’s lives, providing affection, intimacy, alliance, and enhancement of worth; the absence of friends in childhood may lead to feelings of loneliness. In the absence of a close relationship with a sibling, it is likely that siblings report increased loneliness and depressive symptoms over time.

10. Sibling violence and externalizing problems

Cross sectional studies report that between 24–92% of foster children showed elevated rates for externalizing problems such as acting-out, anger, destructive behavior, lying and stealing, with rates depending on how problems are assessed (Horwitz, Simms, & Farrington, 1994; McIntyre & Kessler, 1986). From non-foster care samples, there is extensive evidence of the influence of sibling negativity on externalizing problems. For example, sibling negativism and hostility forecast increases in child externalizing two years later (Kim, Hetherington, & Reiss, 1999). Incidence of conflict tends to be higher for problematic siblings, i.e., those who are bullies; in this group, 77% admitted that they bully their siblings. Furthermore, siblings with a high level of conflict, particularly if they experienced rejecting parenting, are at highest risk for disruptive and aggressive behavior (Garcia, Shaw, Winslow, & Yaggi, 2000). Bank et al. (1996) demonstrated that high levels of sibling conflict in non-foster children during middle childhood are predictive of conduct and antisocial behavior during adolescence.

11. Sibling violence and peer competence

In a longitudinal study of 80 sibling pairs in African-American families first seen at mean age 7, McCoy, Brody, and Stoneman (1994) found that sibling relationships predicted peer friendships. Based on Brody’s model of antecedents of the sibling relationship, we anticipate foster siblings to be at risk for not forming friendships with conventional peers. There is emerging evidence that this is the case (Price & Brew, 1998). This work demonstrates that sibling relationships are important for development of peer competence because they provide youths with a context in which to explore, in preparation for peer interactions, the appropriate expression of the interaction patterns learned from their parents. Thus, it is likely that physical sibling violence is inversely related to social competence in the classroom over time.

12. Sibling positivity as a moderator

Support for the positive role of siblings on child behavioral adjustment comes from normative studies of siblings. Siblings can be each others’ friends and companions, with older siblings often assuming parental-type roles that may include mother, teacher, and rule enforcer (Zukow, 1988). Starting in early childhood, siblings are often each others first playmates, and often spend more time with each other than with parents (Bank & Kahn, 1982). Studies point to the beneficial role of having a sibling for children of divorce parents (Kaplan, Hennon, & Aderidder, 1993; Kempton, Armistead, Wierson, & Forehand, 1991).

Siblings may be the only stable and enduring relationship for a substantial number of foster children who routinely experience changes in foster home, school, and neighborhood while in care. Even in the presence of high conflict, during a period of family transition and high instability in the foster care environment, the presence of positive sibling relationships may help children buffer a sense of loss and isolation from family, peers, school, and neighborhood. The same siblings who are a source of stress leading to deleterious consequences are also capable of being supportive of one another in times of stress (Lussier, Dunn, & Deater-Deckard, 2001). In low-income, disorganized, urban families, ‘ambiguous parental cues’ or ‘insufficient parental influence’ promote the development of strong sibling bonds (Bank & Kahn, 1982; Minuchin & Fishman, 1981). Our own data indicate that, despite high sibling negativity (conflict, rivalry, competition), sibling relationships seem embedded in robust
positivity (warmth and nurturance). An examination of the moderating role of sibling positivity is clinically important given the degree to which siblings can serve as sources of mutual support during placement. Thus, it is likely that sibling positivity attenuates the linkage between sibling violence and child problems (internalizing and externalizing) over time, so that in the presence of sibling violence, those with higher positivity report fewer problems than those with lower positivity.

13. Quality of foster care giving as a moderator

Relationships with parental figures, whether children are in foster care or not, provide children with models of ways of behaving in a social world and teach children how to negotiate interactions (Cicchetti, Lynch, Shonk, & Manly, 1992). Foster care giving that is affectively positive and child management that is non-punitive and responsive is likely to make an independent contribution, separate to that of sibling relationships, to a child’s adjustment to care. Two dimensions of the parenting role in the foster home are important to consider as moderator factors: warmth and involved interactions; and consistent, non-punitive discipline management (Stormshak, Bierman, McMahon, & Lengua, 2000). It is likely that warmth and responsive foster care giving attenuate the linkage between sibling violence and sibling problems, so that foster mothers with higher quality of care giving in the presence of high sibling violence report fewer behavior problems than those with lower quality of care giving.

14. Rejecting foster care giving as a moderator

Differential treatment of siblings may involve differences in the delivery of privileges, chores, affection, discipline, and temporal involvement. Differential treatment tends to be normative in the general population; and it is found to covary by configuration characteristics such as age, birth order, and gender (McHale, Updegraff, Tucker, & Crouter, 2000; Tucker, McHale, & Crouter, 2003). Younger siblings benefit from parental intervention, while older siblings may become less involved and less close with parental intervention (Kramer, Perozynski, & Chung, 1999). McCoy et al. (1994) demonstrated that in caregivers (mothers) who show high levels of rejecting care giving (unequal attention, discipline, warmth) toward their children, siblings show high rivalry and behavior problems. Rejecting care giving is related to higher internalizing and externalizing symptoms, and is most felt by younger siblings (Daniels, Dunn, Furstenberg, & Plomin, 1985; Plomin, 1994). The examination of the moderating role of caregiver’s favoritism in sibling conflicts is an important step in prevention work with this population. It is likely that less differential warmth and responsive management attenuate the linkage between sibling violence and child problems, so that foster mothers with less rejecting care giving in the presence of high sibling violence are likely to report fewer behavior problems than those with more rejecting care giving.

15. The sibling bonds project at the NYU Child Study Center

Given their exposure to one or multiple forms of past familial violence (child neglect, abuse, or exposure to intimate partner violence), foster children are a high-risk group for the cross-generational transmission of familial violence. With funds from the Centers for Disease Control (1 R49 CE 000205-01), we are currently studying the impact of sibling relationships and exposure to sibling violence on the psychological adjustment and school competence among urban African-American and Latino siblings placed in foster care. This research was originally funded as a Competitive Discretionary Grant Award by the US Children Bureau (RFA 2001B.2 Investigator-Initiated Research Advancing the State of the Art in the Child Abuse and Neglect Field). That federal funding enabled us to collect two waves of data to examine the impact of a child welfare policy that mandates that siblings be placed together on sibling relationships, psychological adjustment, and school competence during the first year in foster placement.

As reviewed above, although the sibling subsystem is thought to play an important stabilizing and reorganizing role during the period of family crisis and disruption associated with foster care placement, scant scientific knowledge is available about the nature of sibling relationships, positive and negative, and the specific factors that might place foster siblings at risk for sibling-related violence. Through four waves of longitudinal data
collection, the goal of the current study is to examine the contributions of initial to later sibling symptoms and competence, and identify family processes that accelerate or slow down trajectories of changes of violence, problems, and competence over time.

16. The sample

In these preliminary analyses we use the first 120 recruited siblings (Sib1 = oldest child; Sib2 = next to oldest child) of 174 siblings enrolled in the study to date (final sample size = 254). The sample included 2-sibs (55%), 3-sibs (28%), and 4-sibs (17%) family groups. The preliminary data reported here represent 60% of the projected sample size.

Data were gathered on dyads, on average, within 3-months of initial placement into foster care. Siblings were recruited from thirteen foster care agencies in NYC. Eighty-seven percent (87%) were placed by agency personnel together in the same home (intact placement). According to official records which conformed to the NYS legal definitions of child maltreatment (child neglect, physical abuse, and sexual abuse), children were classified as: 83%, neglected, and 17%, physically abused, 0% sexually abused. Siblings came from family households of low socioeconomic status, and primarily ethnic minority backgrounds (86% are African-American or Latino) living in NYC. As compared with the national foster population (USDHHS, 2004), our sample contained more neglect cases (83% vs. 63%), and more children from ethnic minority backgrounds (86% vs. 66%). Sib1 and Sib2 were in middle childhood; were two years apart; 63% were of the same gender; and the majority resided together in the same home (Table 1). Regarding caregivers, about a third are foreign born; had an average of less than 12 years of education; ~1/3 were on public assistance; and ~1/3 resided in a housing project. As compared with foster mothers, biological mothers were younger, reported more psychological distress, had fewer years of education, were in school and were not employed more often, resided in a housing project, and in a smaller home.

17. Measures

The key dyadic level independent variable is the quality of the sibling relationship (Sibling Relationship Questionnaire, SRQ, Buhrmester & Furman, 1990), which includes: negativity (conflict and competition) and
positivity (warmth; nurturance of Sib1 to Sib2, and nurturance of Sib2 to Sib1). Correlates include: exposure to past familial victimization (The Maltreatment Classification System, MCS, Barnett & Manly, 1993); structured psychiatric diagnoses using 8 selected modules (C-DISC 4, 2000); placement condition (i.e., intact vs. split) and instability (i.e., low and high). Parenting measures include: quality of foster care giving and differential warmth and responsive management (Spoth, Redmond, & Shin, 1998). Psychological symptoms focused on: depressive symptoms (Child Depression Inventory, CDI, Kovacs, 1992), peer loneliness (The Loneliness Scale Instrument, Parker & Asher, 1993), behavior problems in the home (Eyberg Child Behavior Inventory, ECBI, Eyberg & Pincus, 1999) and in the classroom (Sutter–Eyberg Student Behavior Inventory-R, SESBI-R, Eyberg & Pincus, 1999), and school competence (Harter Teacher Rating Scale, Harter, 1985). Data consists of self-reports by multiple informants: the sibling (if > 7-years of age), biological mother, foster mother, and classroom teacher.

18. Summary of findings

Results are presented in four sections: (1) initial levels of quality of the sibling relationship and conflict; (2) correlates of sibling conflict; (3) outcomes by levels of conflict; and (4) preliminary evidence for moderation.

19. Sibling relationships

Caregivers (biological and foster mothers) and siblings are asked to report on each dyad in the study (i.e., sib1 and sib2; sib1 and sib3, sib1 and sib4; sib2 and sib3, etc). Siblings report on themselves and each of their siblings. The SRQ (21 items) included two dimensions: negativity include conflict (α = .89) and competition (α = .77); and positivity include: warmth (α = .93); nurturance of Sib1 to Sib2 (α = .91) and nurturance of Sib2 to Sib1 (α = .94). Means and SD are reported in Table 2.

20. Co-occurrence of negativity and positivity

There is a low negative correlation between positivity and negativity $r = -0.223$ ($p = .006$). Biological mothers report higher positivity as compared to foster mothers and to sibling ($p = .000$). In the SRQ, biological mothers also report lower negativity as compared with foster mothers, but not as compared to siblings. Biological mothers and child reports of lower negativity may reflect an effort to protect an idealized family experience.

21. Sibling conflict

21.1. Incidence of sibling conflict

Most siblings (71–86%) were reported to engage in sibling conflict. The criterion was at least one of five SRQ conflict items: insult and call each other names, bug and pick on each other, disagree and quarrel, get mad and get into arguments, or argue with each other endorsed as ‘very much’ or ‘extremely much’, by either biological mothers, foster mothers, or siblings. Based on responses given to at least 3/5 SRQ conflict items by any informants, three sibling conflict groups were constructed: high conflict = ‘extremely much’ (28%); moderate conflict = ‘very much’ (40%); and low conflict = ‘somewhat-hardly at all’ (32%).

Table 2
Means (SD) for the SRQ

<table>
<thead>
<tr>
<th>SRQ Measures</th>
<th>M(SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negativity</td>
<td>2.9 (1.1)</td>
</tr>
<tr>
<td>Conflict</td>
<td>3.0 (1.1)</td>
</tr>
<tr>
<td>Competition</td>
<td>2.8 (1.3)</td>
</tr>
<tr>
<td>Positivity</td>
<td>3.5 (0.9)</td>
</tr>
<tr>
<td>Warmth</td>
<td>4.1 (0.8)</td>
</tr>
<tr>
<td>Nurturance of Sib1 to Sib2</td>
<td>3.4 (1.2)</td>
</tr>
<tr>
<td>Nurturance of Sib2 to Sib1</td>
<td>3.1 (1.3)</td>
</tr>
</tbody>
</table>
21.2. Incidence of verbal vs. physical sibling fights

Using the ECBI, we examined responses to two items endorsed as ‘often/always’ to provide a relative incidence of sibling verbal vs. physical fights. Foster mothers reported verbal and physical fights equally as frequent (41%), while biological mothers also did so but at a lower level (28% for verbal fights; 21% for physical fights).

21.3. Sibling vs. peer fights

Across informants, between 28–41% engage in sibling fights, while 11–29% of siblings engage in peer (friends close in age or classmates) fights.

21.4. Correlates of sibling conflict

Past exposure to familial violence. Based on independent codes of type of maltreatment using CPS official records (MCS), we found that most siblings experienced multiple (65%) as compared to single (35%) type familial victimization. In descending order of frequency, the following types were found: neglect–failure to provide; neglect–exposure to intimate partner violence, neglect–lack of supervision, neglect–emotional maltreatment, physical abuse, neglect–moral maltreatment, and sexual abuse.

Mental disorders. In wave, 1.62% of siblings met one or more psychiatric disorders by either biological mothers or foster mothers using eight category modules in the C-DISC 4 parent version (see Table 3). The most common category endorsed was Disruptive Behavior Disorder followed by anxiety and elimination category disorders. Biological mothers and foster mothers reported similar rates for Sib1 and Sib2. Kappa coefficients are low to moderate (–.11 to .45) suggesting the need for multi-informant mental health assessment to guide selective interventions and services for foster children. Our incidence of sibling psychopathology, ranging from 41–62%, as indicated by dimensional (ECBI/SESBI-R) and categorical (C-DISC 4), is substantially higher than rates found for youth served in the mental health, substance abuse, or juvenile justice sectors (Garland et al., 2001); and demonstrates the substantial public burden and the pressing clinical needs of this population. It also points to the need to attend to this time-variant variable as a potential covariate in examining the sibling violence–outcome linkage. Elevated rates in mental disorders exhibited by the sample may reflect transitory placement-related distress. A longitudinal study design will answer this possibility. Siblings reported to have a psychiatric diagnosis tend to report higher sibling negativity than those without a psychiatric disorder (p=.07).

| Table 3 |
|------------------|------------------|------------------|
| Category/diagnoses | Informant | Biological mothers | Foster mothers |
| Anxiety (%) | | | |
| Separation anxiety | 13 | 8 |
| Generalized anxiety | 2 | 3 |
| Post traumatic stress | 1 | – |
| Mood (%) | | | |
| Major depressive | 4 | 7 |
| Disruptive behavior | | | |
| Attention deficit hyperactivity | 22 | 29 |
| Oppositional defiant | 13 | 14 |
| Conduct | 2 | 6 |
| Elimination disorders | | | |
| Enuresis diurnal/nocturnal | 8 | 13 |
| Encopresis | 1 | |
| At least one diagnosis (%) | 40 | 49 |
Placement condition. Siblings placed together (intact placements) report higher sibling warmth \( (p = .03) \), and nurturance of Sib1 to Sib2 \( (p = .02) \), than those placed apart (split placements). There was not a significant initial associations found between placement condition and sibling conflict group.

### 22. Sibling conflict and outcomes

Sibling conflict is significantly correlated with lower positivity, lower foster care giving warmth, depressive symptoms, behavior problems in the foster home, and less competence in school, while sibling positivity is significantly correlated with higher care giving warmth (biological mothers), fewer behavior problems, and responsive parenting (in the biological mothers). Similar associations are found for Sib1 and Sib2.

### 23. Initial level of behavior problems

Across informants, 41% of siblings showed behavior problems in the clinical range \((>1SD)\). Behavior problems for Sib1 and Sib2 were highly correlated \((r = .59, p < .001)\).

### 24. Behavior problems across dyads

Intraclass correlation (ICC) coefficients provide estimates of the proportion of the total variance that occur between dyads. The ICC showed high variability by domain and by informant. For example, for ECBI behavior problems, the ICC for biological mothers was .55, for foster mothers was .70, and for teacher (SESBI-R) was .59, suggesting that the variance component for dyads (between-subjects), or ‘clustering’ is substantial and should be considered in individual analyses; it also provides an effective ceiling on the amount of variation left to explain by individual siblings (within-subjects). On the other hand, the ICC for CDI depressive symptoms is low .14, indicating that siblings may have unique, not dyadic, perspective in their inner subjectivity about depressive symptomatology.

### 25. Behavior problems by level of sibling conflict

Behavior problem means on the ECBI (parents) were examined by sibling conflict group. Siblings in the high conflict group were reported (by both informants) to have significantly higher ECBI scores \( (m = 140; SD = 49) \) than those in the moderate conflict group \( (m = 120 SD = 45) \), who, in turn, had higher scores than those in the low conflict group \( (m = 103; SD = 50) \) \((p = .000)\).

### 26. Preliminary evidence for moderation

Table 4 presents results of PROCMIXED random regressions (SAS, Singer, 1998) examining the role of sibling negativity, positivity, quality of the foster care giving (warmth and responsive management), and rejecting care giving (differential warmth and responsive management) in predicting ECBI problems, after the random term (‘clustering’) is
taken into consideration. We also tested for the interaction of sibling negativity and care giving measures because of our interest in identifying modifiable dimensions of the conflict-problems linkage. Due to differences by informant, we entered first the informant term (biological mothers/foster mothers). When predictors were run separately, all solutions of the fixed effects (predictors) were significant after considering the random term (ICC = .27). When predictors were entered together (see Table 4), sibling conflict, warmth, and differential warmth contributed uniquely to the variance of ECBI problems, after accounting for informant. Siblings with high conflict, those receiving less care giving warmth, and those with more rejecting care giving were likely to report more behavior problems. In addition, the interaction between conflict and differential responsive management was significant, suggesting the negative effect of less responsive management toward the less favored sibling on behavior problems in the presence of sibling conflict.

27. Summary of findings

Foster children are at high risk for perpetrating and being victims of sibling aggression and violence. In this article, we proposed an integrative, multidimensional model for studying risk and protective factors of sibling violence. In the model, exposure to sibling violence (perpetration and victimization), child mental disorder, and placement characteristics are identified as risk factors for impaired psychological functioning (i.e., internalizing and externalizing symptoms) and disruptions in school competence (scholastic and social competence with classmates). Sibling positivity, quality of the foster care giving, and foster rejecting care giving were proposed as moderating processes in the linkage between exposure to sibling violence and impaired psychological functioning. Preliminary data was presented in support of the proposed model. Preliminary data presented here suggest the following:

1. We found ‘intense’ sibling bonds, positive and negative, with siblings showing relatively higher positivity than negativity;
2. Psychological conflict (moderate to high) was present in 68% of siblings; physical fights was reported by 40% of siblings ‘often’ or ‘always’;
3. We found significant zero order associations between conflict, positivity, foster care giving quality, depressive symptoms, child problems, and school competence;
4. Conflict, warmth, and differential warmth made an independent contribution to increased sibling problems; and
5. Controlling for the random term (siblings nested in dyads) and differences between informants via multi-level procedures, for the biological mother, differential warmth in the presence of high conflict was predictive of increased behavior problems.

28. Conclusion

Exposure to sibling violence is an understudied area of developmental psychopathology. The study of sibling violence can serve as a window through which we can look to understand how intergenerational violence is transmitted in families. Due to histories of family adversity, foster children are at high risk for perpetrating and for being victims of sibling aggression and violence; which has important adverse consequences including impaired psychological functioning (internalizing and externalizing symptoms), and disruptions in school competence (scholastic and social competence with classmates). The knowledge base concerning these family processes implicated in experiences with sibling violence has just begun and much research is needed to broaden our understanding of the interplay between risk and protective factors for this vulnerable population of children and adolescents.

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