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## Child Abuse &amp; Neglect

journal homepage: [www.elsevier.com/locate/chiabuneg](https://www.elsevier.com/locate/chiabuneg)Exposure to parent assault on a sibling as a childhood adversity<sup>☆</sup>Corinna Jenkins Tucker<sup>a,\*</sup>, David Finkelhor<sup>b</sup>, Heather Turner<sup>b</sup><sup>a</sup> Human Development and Family Studies Department, University of New Hampshire, United States of America<sup>b</sup> Crimes Against Children Research Center, University of New Hampshire, United States of America

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## ABSTRACT

**Background:** Children's exposure to parental violence against another parent has been widely studied as an adverse childhood experience and source of childhood trauma. Exposure to parental violence against a sibling could be equally as traumatizing, but the literature on this exposure is sparse, by comparison. We examined the frequency of exposure to parental assault on a sibling (EPAS) and its demographic distributions. We also investigated the links between EPAS and symptoms of distress.

**Method:** From three combined surveys of the National Survey on Children's Exposure to Violence, based on telephone interviews with parents, and in the case of those 10–17 years old, adolescents, we examined children living with a juvenile sibling ( $N = 7,029$ ; 49% female).

**Results:** Lifetime EPAS was 3.7%, and sibling assault was more common by fathers (70%) than by mothers (30%). Exposure was greatest for boys and adolescents, highest for those whose parents had some college education, and for those living with other non-parental adults, single parents, and stepfamilies. Rates did not differ by ethnicity. Most exposed youth felt afraid (83%), and fear was greater when witnessing fathers than mothers assaulting a sibling. Controlling for child maltreatment and exposure to interparental violence, those exposed to EPAS showed higher current levels of mental distress (anger, depression, and anxiety;  $F(10, 6146) = 140.44, p = .001$ ;  $R^2 = 0.19$ ).

**Conclusions:** Clinical work and parent education programs should address the occurrence of EPAS and the adverse association between EPAS and mental health to reduce its potential negative impact.

In a national survey, 5.8% of children witnessed a parent assault another parent in the past year and 15.8% witnessed such incidents over their lifetime (Finkelhor et al., 2015). Children's exposure to interparental violence has been widely studied as an adverse childhood experience and source of childhood trauma that is linked with a number of psychological difficulties, including depression (Briggs-Gowan et al., 2019). Recently, the concept of child maltreatment has expanded to include exposure to interparental violence. However, exposure to parental violence against siblings could be equally as traumatizing, but the literature on this exposure is sparse, by comparison. In families in which child abuse takes place, it is not necessarily true that all siblings are abused at the same time or that

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all siblings are abused (Hamilton-Giachritsis & Browne, 2005; Spano, 2018). In families in which children observe a sibling being physically mistreated by a parent, such an occurrence is likely to be distressing and make them feel afraid. In this study, we use a nationally representative sample of U.S. children and adolescents to document the prevalence and demographic distribution of the lifetime occurrence of exposure to a parent physically assaulting a sibling and its connection to mental health. We define exposure to parent-on-sibling assault (EPAS) as any incident in which the target child saw parent physical aggression (hitting, beating, kicking, or physically hurting and not including spanking) toward a co-residing juvenile sibling over the course of the target child's lifetime.

### 1.1. Frequency and distribution of exposure to EPAS

U.S. national-level data is available on exposure to sibling victimization, but it includes any incident regardless of perpetrator and incidents of murder and stealing (Finkelhor et al., 2009; Hamby et al., 2010). In the current work, we focus exclusively on violence by a parent given the centrality and importance of parents and their parenting style for children's and adolescents' mental health. Only a few studies have examined the frequency of parent on sibling violence. In a convenience sample of emerging adults aged 18–25 years of age, lifetime retrospective reports of the frequency of exposure to parental violence toward a sibling, including seeing and hearing it, was 22% (Teicher & Vitaliano, 2011). Using a nationally representative sample, Renner and colleagues (Renner et al., 2020) reported that 1.3% of their sample had witnessed parent assault of a sibling in the past year. In a study of Finnish ninth graders, 8% of the sample reported exposure to father-to-sibling and mother-to-sibling violence in the past year (Lepistö et al., 2010). Although this Finnish study found similar rates of exposure to mothers' and fathers' violence toward a sibling, other work suggests there may be parent differences, but the evidence is mixed. Child physical abuse is more common by fathers than by mothers (Guterman et al., 2009), and thus, it is likely that there is more exposure to fathers than mothers to physically assaulting a sibling. However, one retrospective study of college students suggests that children observe mothers more often than fathers assaulting a sibling (Howells & Rosenbaum, 2008).

Our national-level data provide an important opportunity to examine the distribution of lifetime EPAS for a variety of demographic characteristics. Given that child maltreatment varies by child sex, ethnicity, parents' education level and family structure (e.g., U.S. Department of Health and Human Services, 2021), we expect variability in children's EPAS. One study found that females were more commonly exposed to parent-on-sibling violence than were males (Lepistö et al., 2010). Based on the child maltreatment literature, we expect higher levels of exposure for children in Black and lower-educated and non-two-parent households.

### 1.2. EPAS and mental health

The almost exclusive focus on exposure to family violence between adults on children's mental health has limited understanding of the links between exposure to other forms of family violence and mental health. Most children exposed to one adversity have likely experienced another in their families. For example, there is significant overlap between domestic violence and child maltreatment (Hamby et al., 2010). A comprehensive approach to the examination of domestic violence exposure should include exposure to parent-on-sibling violence. In households in which children are exposed indirectly to violence, opportunities to observe, learn and practice healthy responses to stress are limited, and prolonged exposure to such incidents enhance the role of toxic stress in mental health (Bucci et al., 2016; Hornor, 2015; McLaughlin & Sheridan, 2016; Shonkoff et al., 2012). It is likely that EPAS is another form of exposure that could culminate and create trauma and health effects in children.

Emotional security theory (Cummings & Davies, 2011; Davies & Cummings, 1994), which includes a focus on the importance of the inter-parental relationship to a child's emotional security, provides a guiding framework to examine EPAS. According to this theory, children's perceptions and emotional reactions to destructive inter-parental conflict (e.g., physical aggression, threats) puts children at risk for negative affect such as fear and sadness. Children are also at risk for the development of negative internal representations of family relationships. These representations can lead to concerns about one's own welfare as well as for other family members (Cummings & Merrilees, 2010). Extrapolating from this work, EPAS may provide a foundation for dysfunction and distress creating instability in a child's emotional security. On a daily basis, children are keen observers of their parents' treatment of siblings. Given that siblings are important figures in children's and adolescents' lives, often being frequent sources of support, playmates and companions, they are integral to children's and adolescents' well-being. Observations of parental mistreatment of a brother or sister are likely related to children's and adolescents' negative affect, like fear and mental health distress (depression, anxiety, and anger). Exposed children may fear for their sibling, but they also may worry about themselves receiving the same treatment by a parent. If they do not experience such treatment, they may feel survivor's guilt. Such beliefs in homes with intimate partner violence have been shown to put children at risk for mental health problems (Hungerford et al., 2012).

Like children exposed to intimate partner violence, studies show that children's exposure to parental sibling victimization is related to worse mental health (Renner, 2012; Renner et al., 2020; Renner & Boel-Studt, 2017). Using Child Protective Services data of multi-child families in which at least one child was reported being physically abused, children and adolescents who were assumed to have been exposed to sibling victimization, had higher rates of externalizing behaviors than maltreated children (Renner, 2012). In addition, two large retrospective studies of emerging adults found that observations of parental sibling victimization were associated with current depression, anxiety, and anger (Howells & Rosenbaum, 2008; Teicher & Vitaliano, 2011). Reliance on crude measures derived from CPS data and adults' retrospective reports underscore the need for data from children and adolescents. Further, there is the need in research to distinguish the effect of exposure to sibling violence from the likely correlated exposure to interparental violence or direct abuse by a parent on the target child. An exception to these studies was conducted by Renner and colleagues (Renner et al., 2020) on nationally representative data from 2003 which documented adolescents' past year EPAS and showed it is linked to anxiety, depression, and anger distinguished from other forms of family violence. The current study will explore the relationship

between EPAS and reports of being afraid at the time of the incident and mental health distress (i.e., depression, anxiety, and anger) with data from three combined representative of the US population of children and adolescents, controlling for interparental violence and child maltreatment. We also examine if these feelings vary by whether the physical assault was perpetrated by mothers or fathers. College students' retrospective reports of exposure to sibling assault were connected to greater depression if fathers rather than mothers were the perpetrator (Howells & Rosenbaum, 2008).

### 1.3. Current study

Combining the data from three nationally representative U.S. data sets, we document the frequency and prevalence of children's and adolescents' lifetime EPAS across a variety of demographic indicators (e.g., ethnicity, household structure). Drawing on the existing literatures on children's exposure to child and intimate partner violence, we expect that fathers are more commonly observed being involved in such incidents than are mothers. We also believe that adolescents will report more exposure than children, and there are higher levels of exposure in Black and lower-educated and non-two-parent households. Extrapolating from Emotional Security theory, the toxic stress literature and empirical evidence, we hypothesize that observations of parents' assault of a sibling are linked with children and adolescents feeling afraid and having mental health distress. A significant strength of our study is that we investigate whether the effects for EPAS exist after controlling for lifetime exposure to interparental violence and child maltreatment. Based on previous evidence on abuse and exposure, we expect children and adolescents to report more likely to be afraid and experience mental health distress when seeing fathers rather than mothers assaulting a sibling.

## 2. Method

### 2.1. Participants and procedure

The data are from the combination of three cross-sectional National Surveys of Children's Exposure to Violence (NatSCEV) conducted in 2008, 2011, and 2014. To achieve a nationally representative sample of U.S. children and adolescents for each survey aged 1 month to 17 years, two phases of random digit dialing (RDD; Babbie, 2011) were employed based on a nationwide sampling frame of residential numbers and targeted over-sampling of cell-phone-only homes, households with children, and/or underrepresented groups and low-income households. Study interviews were conducted with a parent or primary caregiver who provided demographic information and then one child was randomly selected from all eligible children living in the household by sampling the child with the most recent birthday. If the selected child was under the age of 10, interviews were conducted with a caregiver most familiar with the daily experiences of the child. Children aged 10 and older were interviewed on their experiences.

Verbal informed consent was obtained from participating parents and youth, and the telephone interview, conducted in English or Spanish, averaged 50 min and was conducted by employees of an experienced survey research firm. Procedures were included so that the interview protocol ensured confidentiality of responses and privacy. The quality of data for telephone interviews is comparable to that of in-person interviews and may encourage disclosure due to a degree of perceived anonymity (Acierno et al., 2003). A clinical member of the research team trained in crisis counseling would contact any participants who disclosed a serious threat or ongoing victimization to provide contact information for support in their local community. Respondents were paid \$20 for their participation. All materials and procedures were authorized by the university's Institutional Review Board.

Sample weights were calculated to adjust for differential probability of selection due to study design, demographic variations in non-response, and variations in within-household variability (for more information see Finkelhor et al., 2009; Finkelhor et al., 2011; Finkelhor et al., 2013; Finkelhor et al., 2015). The current study focuses on complete pooled data from all three surveys for children and adolescents aged 1 month to 17 years residing with a juvenile sibling ( $N = 7029$ ;  $n = 4,050$  aged 1 month–9 years;  $n = 2979$  aged 10–17). Eight percent of the sample had an older adult sibling in addition to the co-residing juvenile sibling. A majority of target children had an older versus a younger sibling residing with them (56%), and the mean number of juvenile siblings was 1.56 ( $SD = 0.86$ ; range 1–6). The sample was divided approximately evenly by gender (49% female) and was 56% White, non-Hispanic, 23% Hispanic, any race, 14% Black, non-Hispanic, and 7% other race, non-Hispanic. Two-parent households (66%) was the most common family structure, followed by single-parent families (23%), then stepfamilies (8%) and other nonparental adults (3%). Less than half of children and adolescents had a parent with at least a bachelor's degree (45%) followed by those who had a parent with some college (31%) and a high school degree or less (24%).

## 3. Measures

The relevant questionnaire items were identical across all three survey administrations. For all three surveys, the parent/guardian always provided demographic information.

### 3.1. Exposure to parent-on-sibling assault

The Juvenile Victimization Questionnaire (JVQ; Finkelhor et al., 2005; Finkelhor et al., 2009) is an established measure which assesses a range of child victimization experiences and has demonstrated test-retest reliability and construct validity (e.g., Finkelhor et al., 2005). Comparison between parent- and self-reports with this instrument found no evidence of reporter bias (Finkelhor et al., 2005; Finkelhor et al., 2009). One item determined whether the target child observed parents' physical assault of a sibling.

Respondents were asked to indicate yes or no (1/0) to the question “At any time in your child's/your life, did your child/you SEE a parent hit, beat, kick or physically hurt his/her/your brothers or sisters, not including a spanking on the bottom?”. If a respondent indicated that parent assault of a sibling occurred (Yes/No), standardized follow-up questions asked about who the perpetrator was (i.e., mother, father) and whether the incident happened in the past year and the number of events over the child's lifetime.

### 3.2. Afraid

One additional standardized follow-up question to the initial query about exposure to parent assault of a sibling was “How afraid was your child/were you?”. Response choices were (1 = *not at all afraid*, 2 = *a little afraid* and 3 = *very afraid*).

### 3.3. Mental health distress

Mental health distress symptoms in the last month for children aged 2–9 years were measured by parents' responses to the 26-item Trauma Symptoms Checklist for Children (TSCC; Briere, 1996). Adolescents responded to 24 items from the Trauma Symptom Checklist (TSC; Briere, 1996). Both measures assess children's and adolescents' depression, anxiety, and anger based on how often symptoms were experienced in the past month on a four-point scale (0 = *not at all* to 4 = *very often*). Items were summed and standardized so that higher scores indicate greater mental health distress. Cronbach's alpha was 0.85.

### 3.4. Control variables

Additional dichotomous (yes = 1) items from the JVQ were used to indicate lifetime occurrence of child maltreatment (i.e., positive endorsement of any items on neglect and physical and emotional abuse) and exposure to interparental violence/chronic conflict (two items: witnessed parent assault and parents arguing or angry all the time) and were incorporated as control variables in the analyses.

### 3.5. Demographic measures

Parents provided information on the target child's gender, age (in years); and coded into child (aged 1 month–9 years or adolescent age group), race/ethnicity (White non-Hispanic, Black, non-Hispanic, Hispanic, any race, Other race, non-Hispanic), parent education level (high school, some college, college degree), family structure (two biological or adoptive parents, stepfamily, single parent, other adult), if there was an adult sibling not living at home, and number of juvenile siblings.

## 4. Results

### 4.1. Frequency and distribution of EPAS

Lifetime EPAS was reported by 3.7% ( $N = 263$ ) of the sample (aged 1 month to 17 years). Assault on a sibling by a father (70%) was more than twice as likely to be done than by mothers (30%). There was no overlap in parents' assault. Fig. 1 shows the distribution of past year EPAS by age. Chi-squared analyses (see Table 1) revealed differences in the frequency of EPAS by child age group ( $\chi^2 = 89.69$ ,

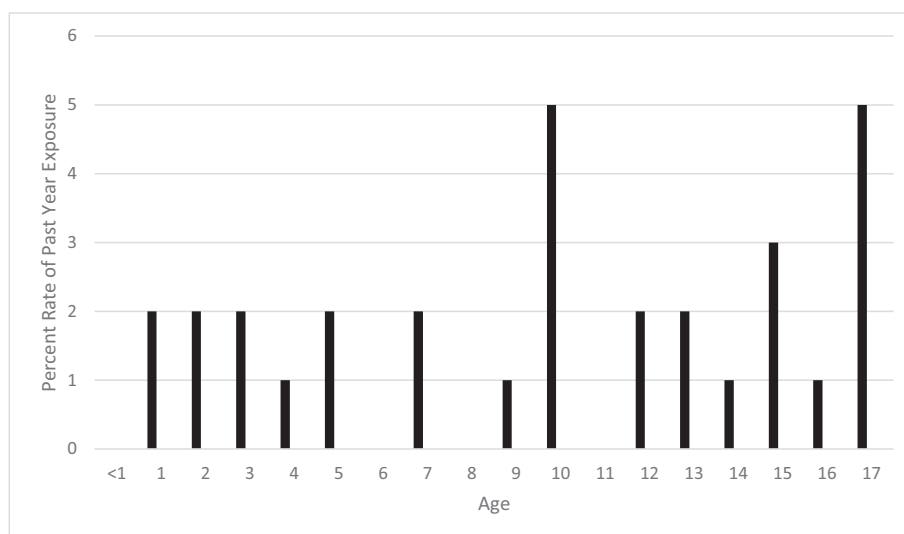


Fig. 1. Distribution of past year exposure to parent assault on a sibling by age.

$p = .001$ ). In contrast to children (age 1 month–9 years), more adolescents (age 10–17 years) reported observing lifetime parent sibling assault (6% of adolescents vs. 2% of children). Slightly more boys (4%) than girls (3%) were exposed over their lifetimes ( $\chi^2 = 3.92, p = .05$ ). Lifetime exposure also differed by parent education level ( $\chi^2 = 9.30, p = .01$ ), with the greatest exposure for children with parents having some college education (5%) compared to high school or less and college educated (both 3%). An additional significant chi-squared analysis of family structure ( $\chi^2 = 72.06, p = .001$ ) showed that children living with other nonparental adults had most frequently observed parents' physically assaulting a sibling (10%), followed by single parents and stepfamilies (6% each) and two parent households (3%). There were no ethnic differences in the number of children and adolescents exposed lifetime EPAS.

#### 4.2. EPAS and mental health

When exposed to sibling assault by a parent, the majority of children and adolescents felt a little or very afraid (83%) while 16% were not at all afraid. Children under 10 years of age were more likely to be afraid than were adolescents ( $\chi^2 = 13.29, p = .001$ ; 86% vs. 82%, respectively). There were no gender differences in how afraid children and adolescents felt at the time of the exposure. Children and adolescents were more likely to be afraid when fathers (91%) rather than mothers (66%) physically assaulted a sibling ( $\chi^2 = 37.46, p = .001$ ).

To examine mental health differences (ages 2–17 years) in those with lifetime exposure versus not exposed, we employed an ANCOVA that controlled for child age group, gender, and ethnicity, and parents' education, family structure, number of siblings, and if there was an adult sibling not residing in the household. Preliminary chi-squared analyses showed significant overlap of EPAS with exposure to interparental violence ( $\chi^2 = 455.91, p = .001$ ; 13% overlap) and child maltreatment ( $\chi^2 = 637.43, p = .001$ ; 15% overlap). To limit confounds due to the impact of these types of victimizations (Finkelhor et al., 2007), participants' lifetime experiences of child maltreatment and exposure to interparental violence were included in the models. Analysis revealed a significant model ( $F(10, 6146) = 140.44, p = .001$ ;  $R^2 = 0.19$ ) and main effect for EPAS ( $F(1, 6146) = 20.56, p = .001$ ;  $\eta^2 = 0.03$ ). Children and adolescents' lifetime EPAS reported greater current mental distress ( $M = 0.91, SD = 1.32$ ) than those who were not exposed ( $M = -0.01, SD = 1.00$ ). An additional ANCOVA showed no differences in mental health distress when exposed to mothers versus fathers' assault of a sibling.

### 5. Discussion

There are several important findings to emerge from this study of three combined national surveys: (1) exposure to parental assault of a sibling is associated with distress symptoms in children and adolescents; (2) Exposure was greatest to fathers, and children and adolescents, by comparison, were more afraid when fathers assaulted a sibling than when did mothers; and (3) the effects of EPAS are independent of the effects of exposure to interparental violence and child maltreatment. More generally, the findings suggest the importance of expanding the concept of exposure to family violence to include EPAS.

Though not a common occurrence, lifetime EPAS was reported for over 250 (3.7%) children and adolescents in our sample. However, our number may be a conservative estimate because we exclusively assessed seeing a parent assaulting a sibling and information was not collected on hearing its occurrence or learning about it through another means and other kinds of victimization (e. g., threats). A retrospective study of young adults found that 22% of them reported seeing or hearing threats or assaults toward a sibling (Teicher & Vitaliano, 2011). Children and adolescents were most exposed to fathers assaulting a sibling. This finding is congruent with the child maltreatment literature showing mother vs. father differences in rates of abuse (Guterman et al., 2009) but in

**Table 1**  
Distribution of demographic characteristics by exposure to parent assault on a sibling ( $N = 7029$ ).

	Exposure to parent-on-sibling assault	
	No (%)	Yes (%)
Gender		
Males	3452 (96%)	150 (4%)
Females	3314 (97%)	112 (3%)
Age group		
Children (aged 1 month to 9 years)	3973 (98%)	77 (2%)
Adolescents (aged 10–17 years)	2793 (94%)	186 (6%)
Education level		
High school or less	1602 (97%)	55 (3%)
Some college	2075 (95%)	104 (5%)
Bachelor's or higher	3086 (97%)	104 (3%)
Family structure		
Two-parent	4529 (97%)	114 (3%)
Stepfamily	510 (94%)	34 (6%)
Single parent	1514 (94%)	92 (6%)
Other non-parent adult	213 (90%)	23 (10%)
Ethnicity		
White	3806 (96%)	161 (4%)
Black	938 (97%)	32 (3%)
Hispanic	1530 (97%)	52 (3%)
Other	492 (96%)	18 (4%)

contrast to a retrospective study of college students who observed mothers more often than fathers assaulting a sibling (Howells & Rosenbaum, 2008). Across a variety of demographic characteristics, there was variability in lifetime EPAS. As expected, greater exposure was found for adolescents and boys and those living with parents who have less than a college education and in family structures other than two parent-households. Despite evidence of ethnic variation in child maltreatment (U.S. Department of Health and Human Services, 2021), unexpectedly, there were no differences in EPAS by ethnicity.

As noted, exposure to interparental violence has been extensively studied as an adverse childhood experience and a source of mental and physical health problems. There is a limited information about children's exposures to other forms of family violence and what they mean for children's functioning. This study's findings are consistent with the small existing literature on EPAS suggesting that EPAS is traumatizing (Renner, 2012; Renner et al., 2020). Most importantly, our findings showed that over 80% of exposed children and adolescents reported feeling a little or very afraid and younger children were more afraid than adolescents. Further, exposed children and adolescents reported greater current mental health distress (anger, depression, and anxiety) than those who were not exposed. Grounded in the Emotional Security theory (Cumplings & Davies, 2011; Davies & Cumplings, 1994), and the importance of siblings to one another, our findings suggest that EPAS may provide a foundation for dysfunction and distress which creates instability in a child's emotional security. As noted, children exposed to parental assault of a sibling, likely become fearful for themselves and/or their sibling's welfare.

Though not explored in the current study, such experiences may influence sibling dynamics concurrently, and in the future, even in adulthood. A child who experiences EPAS may become preoccupied worrying about themselves thus limiting opportunities for sibling interaction or their behavior with their sibling may change due feelings of survivor's guilt. It is also possible that EPAS could lead to intense support from a child or adolescent to the victimized sibling, perhaps, to compensate for parental maltreatment of the sibling. In this case, the sibling relationship could be an important emotional resource for the maltreated sibling. Given the frequency of EPAS and its effects, in families in which child abuse has been discovered, child protective workers should be encouraged to assess siblings' exposure to the abusive events. Our findings suggest that EPAS represents an additional adverse childhood event and the concept of exposure to family violence broader than exposure to interparental violence.

In some families, EPAS may be part of a larger family climate of violence (Briggs-Gowan et al., 2019; Hamby et al., 2010; Tucker et al., 2014; Van Berkel et al., 2018; Renner and Boel-Studt, 2017). Studies have shown overlap among siblings in which child abuse and neglect are present in a household (Spano, 2018). There is also overlap in the kinds of family violence. Evidence shows overlap in homes with inter-adult violence, parent child maltreatment and witnessing victimization of a sibling by parents and other adults (Finkelhor et al., 2009; Hamby et al., 2010; Teicher & Vitaliano, 2011). As more family members are exposed to violence in the household, the more likely there is less emotional security among family members. The lack of an available, nurturing adult is a risk for children's emotion dysregulation and dysfunction (Bucci et al., 2016; Shonkoff et al., 2012).

A strength of this work was that we were able to distinguish the unique contribution of EPAS from child maltreatment and exposure to interparental violence to mental health. As was shown in this study, EPAS did have some overlap with lifetime experiences of child maltreatment and exposure to interparental violence. However, EPAS made a unique contribution to feeling afraid at the time of the incident and current mental health distress. This finding supports others' (Briggs-Gowan et al., 2019; Hamby et al., 2010; Renner et al., 2020) and our call to broaden the approach to thinking about domestic violence which includes recognition of EPAS as a form of indirect exposure. Our work is important for clinical and programmatic efforts to lessen the detrimental effects of exposure to family violence. One step would be revision of family violence exposure inventories to include EPAS. Additionally, our work demonstrates that in families in which child abuse takes place, it is not necessarily true that all siblings are abused at the same time or that all siblings are abused (Hamilton-Giachritsis & Browne, 2005; Jean-Gilles & Crittenden, 1990). Thus, even though direct abuse may not be happening to the target child, our work shows that exposure to violence toward a sibling can have traumatic effects. In homes where child abuse is evident, it would be important to ask siblings about their exposure to the abuse. Behavioral interventions could be developed to minimize the impact of exposure on other children in the family. In addition, education could be provided to exposed children about how to help in the wake of EPAS such as providing support to the sibling and telling another adult.

As part of our exploration of EPAS, we examined whether children and adolescents' fear and mental health distress differed by whether the perpetrator was a mother versus father. Greater fear was reported when fathers rather than mothers assaulted a sibling. However, gender of the parent perpetrator did not matter for mental health distress. One reason for the difference in findings for the two analyses could be that the fear item assessed fear at the time of the incident whereas mental health distress focused on current functioning. At the time of the incident, due to fathers being typically more physically intimidating than are mothers, children and adolescents may be more fearful for their sibling and themselves. With time, not the gender of the parent but rather the exposure itself may be what matters for mental health. However, one study found that college students retrospectively reported greater depression if fathers rather than mothers were the perpetrator of sibling violence (Howells & Rosenbaum, 2008).

### 5.1. Limitations

The information gathered on EPAS and mental health were collected exclusively from a single reporter which has the potential to create method bias. Acquiring information from other family members could provide different reports of exposure. However, we are confident in our data because the JVQ assesses whether an assault incident occurred and not its frequency, which is less subject to memory issues (Finkelhor et al., 2005). An additional limitation is that the data are from three combined cross-sectional surveys. Because the data were collected at one point in time, we could not adjust for previous EPAS in our analyses of the links between EPAS and mental health. Further, with a longitudinal investigation, we could determine whether mental health distress may lend itself to being exposed to a parent assault of a sibling. Lastly, such data could create an opportunity to examine the trajectory of mental health

in relation to EPAS.

## 5.2. Conclusions

It is not surprising that many children are exposed to parent assault on a sibling given that nearly 80% of children in the U.S. live with a sibling (Knop, 2020) and levels of family violence remain high (Finkelhor et al., 2015). Using the combined data of three nationally representative sample of U.S. children and adolescents, we contribute to the small but expanding literature on exposure to parent violence toward a sibling and join the call for such exposure to be considered part of child maltreatment and a form of indirect family violence. The present study underscores the importance of the possible unique detrimental effects of lifetime EPAS on children's and adolescents' mental health at the time of the incident and currently. While some studies have demonstrated a link between EPAS and mental health, ours is the first study to show that these links exist for children and adolescents, and that there are fathers-mother differences in exposure and possible impact on mental health. Our work also contributes to the expansion of the Emotional Security theory to the study of EPAS. Results of this study can be used to inform practical and clinical applications including encouraging and helping parents, especially fathers, to participate in parent education and child protective workers to investigate violence exposure for all children in the family.

## Declaration of competing interest

The authors did not have any conflicts of interest.

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