Association of Sibling Aggression With Child and Adolescent Mental Health

WHAT’S KNOWN ON THIS SUBJECT: Popular press and research show that sibling aggression is common. Too often, however, it is dismissed as benign, and other forms of child aggression, such as peer aggression, are considered more serious. Peer aggression is linked to poorer mental health.

WHAT THIS STUDY ADDS: Using a national probability sample, we show that the nature and severity of sibling aggression have negative links to children’s and adolescents’ mental health. We demonstrate that sibling and peer aggression are comparable their links to symptoms of distress.

abstract

OBJECTIVE: Sibling aggression is common but often dismissed as benign. We examine whether being a victim of various forms of sibling aggression is associated with children’s and adolescents’ mental health distress. We also contrast the consequences of sibling versus peer aggression for children’s and adolescents’ mental health.

METHODS: We analyzed a national probability sample (n = 3599) that included telephone interviews about past year victimizations conducted with youth aged 10 to 17 or an adult caregiver concerning children aged 0 to 9.

RESULTS: Children ages 0 to 9 and youth ages 10 to 17 who experienced sibling aggression in the past year (ie, psychological, property, mild or severe physical assault), reported greater mental health distress. Children ages 0 to 9 showed greater mental health distress than did youth aged 10 to 17 in the case of mild physical assault, but they did not differ for the other types of sibling aggression. Comparison of sibling versus peer aggression generally showed that sibling and peer aggression independently and uniquely predicted worsened mental health.

CONCLUSIONS: The possible importance of sibling aggression for children’s and adolescents’ mental health should not be dismissed. The mobilization to prevent and stop peer victimization and bullying should expand to encompass sibling aggression as well. Pediatrics 2013;132:79–84
Parents and others often minimize the frequency and severity of aggressive behavior among siblings. Such a response reflects the historical acceptance by researchers and the general public of sibling aggression as benign and normal and even beneficial for their children's social development and their ability to handle aggression in other relationships. As such, sibling aggression remains an unrecognized form of violence, even though similar aggressive behavior among peers is perceived as problematic. Victims of peer aggression report poorer mental health, including greater depression and anxiety. Findings from the few small studies of sibling aggression, which are typically conducted with convenience samples and limited to the assessment of physical assault, also show its occurrence is linked with poorer mental health.

In the current study, using a national probability sample, we examined whether being a victim of sibling aggression is associated with children's and adolescents' mental health. In doing so, we provide a comprehensive picture of the links between sibling aggression and mental health through our examination of 3 subtypes of sibling aggression: physical assault, property victimization, and psychological aggression by a sibling. Our analyses also addressed the importance of severity and frequency of sibling aggression for mental health. We compared levels of distress symptoms for those who did or did not experience more mild forms of physical assault (without a weapon or resulting injury), as well as for those who did and did not report being the victim of more severe forms of physical assault: those involving a weapon or causing injury. We also compared the mental health of children and adolescents who experienced either none, 1, or 2 or more types of sibling aggression. We hypothesized that child and adolescent victims of each type of sibling aggression would report greater mental distress than those who did not experience sibling victimization. Also, we expected that experiencing more types of sibling victimization would be linked to greater mental health distress.

The rate of sibling aggression is at its height before adolescence, but the severity of sibling aggression peaks in adolescence when the highest rates of injury and weapon use are reported. It is unknown, however, if the links between sibling aggression and mental health differ for children versus adolescents despite variation in the frequency and severity of sibling aggression. Finally, to address the assumption that sibling aggression is less serious than peer aggression, we compared sibling versus peer aggression links to children's and adolescents' mental health, expecting that sibling aggression would have unique and similar associations with mental health, because in both cases, the experience involves child-to-child aggression.

METHODS

The data are from The National Survey of Children's Exposure to Violence, which was designed to obtain incidence and prevalence estimates of a wide range of childhood victimizations. A nationwide sampling frame of residential telephone numbers from which a sample of telephone households was drawn by random digit dialing was created. To ensure that the study included a sizeable proportion of minorities and low-income respondents for more accurate subgroup analyses, there was an oversampling of US telephone exchanges that had a population of 70% or more of African American, Hispanic, or low-income households. The current research focuses on 3599 children aged 1 month to 17 years who had at least 1 sibling younger than 18 living in the household at the time of the interview. The interviews with parents and youth were conducted over the phone by the employees of a survey research firm. Telephone interviews are commonly used to gather information about violence and victimizations (eg, US Department of Justice's National Crime Victimization Survey) and have been shown to be comparably reliable and valid to in-person interviews.

Sample weights were applied to adjust for differential probability of selection because of study design, demographic variations in nonresponse, and variations in within-household eligibility. The sample was approximately evenly divided across gender (51% male) and age. In terms of ethnicity, 63% of the children and youth were white and non-Hispanic followed by 18% Hispanic, any race; 13% black, non-Hispanic; and 6% other race, non-Hispanic. Most of the sample was from 2-parent households (69%) or single-parent families (20%). Forty-six percent of parents had a bachelor’s degree (versus 27% with some college and 27% with a high school degree or less).

The adult caregiver (usually a parent) in each household provided family demographic information. One child was randomly selected from all eligible children living in a household by selecting the child with the most recent birthday. Selected children aged 10 to 17 years completed the telephone interview via self-report. For selected children younger than 10, the caregiver who “is most familiar with the child’s daily routine and experiences” completed the interview. A safety protocol was implemented to ensure confidentiality of responses and privacy during the interview. Respondents were paid $20 for their participation. The interviews were conducted in both English and Spanish and averaged 45 minutes in length. Almost all of the adolescents aged 10 to 17...
were interviewed in English. Respondents who disclosed a situation of serious threat or ongoing victimization were recontacted by a research team clinical member trained in telephone crisis counseling whose responsibility was to stay in contact with the respondent until the situation was resolved. Respondents who refused to participate (or could not be reached), but for whom parent screener information was obtained, were not systematically different from respondents on victimization risk.

**Sibling and Peer Aggression**

Sibling and peer aggression were assessed via items from an enhanced version of the Juvenile Victimization Questionnaire (JVQ). The enhanced JVQ obtained reports on 48 types of youth victimization covering 5 general areas of interest: conventional crime, maltreatment, victimization by peers and siblings, sexual victimization, and witnessing and indirect victimization. Follow-up questions gathered additional information about each victimization, including characteristics of the perpetrator, whether the event occurred in the past year, and whether a weapon was used or injury resulted. Reports by caregivers versus children younger than 10 for this measure have shown to be comparable.

We constructed measures to capture the range and extent of sibling-perpetrated aggression. The constructed measures count only those experiences that occurred in the past year and that were perpetrated by a juvenile sibling residing in the same household as the interviewed child. Two of the dichotomous measures pertain to physical aggression by a sibling: physical assault with no object/weapon or injury and physical assault involving an object/weapon or causing injury. One dichotomous measure assesses sibling property aggression (force used to take something away from child that the child was carrying or wearing; something stolen from child and never given back; and child’s things broken or ruined on purpose). Another dichotomous measure captured whether the child had experienced psychological aggression by a sibling (child felt bad or scared because a sibling was “calling him/her names, saying mean things, or saying they didn’t want him/her around”). The questions for property and psychological victimization were asked only of children aged 2 years and older. Additional variables were created based on the combination of the above variables to assess the extent of experiencing different types of sibling aggression. To do so, we created variables based on a count of the number of sibling victimization types experienced by children and adolescents over the past year. Although we were unable to assess the frequency with which each type of sibling victimization occurred over the past year with the available data, we believe our data are likely to provide unique and perhaps more reliable information than the typical retrospective measures of frequency of episodes. These variables included (1) sibling physical aggression (if the child or adolescent experienced either of the 2 subtypes of sibling physical aggression [a dichotomous variable]; (2) total types of sibling aggression, which is summed across the 4 types of sibling aggression [a continuous variable]; (3) None versus 1 experience of sibling aggression summed across the 4 types [a dichotomous variable]; and (4) 1 versus 2 or more experiences of sibling aggression summed across the 4 types [a dichotomous variable]. Measures were also constructed for past-year victimizations perpetrated by nonsibling peers using the same process and criteria: (1) peer physical aggression (includes whether the child was hit, beaten, or attacked with or without an object and whether injury resulted); (2) peer property aggression; (3) peer psychological aggression; and (4) total types of peer aggression.

**Mental Health**

Children’s and adolescents’ mental health was assessed by 2 closely related measures: the Trauma Symptom Checklist for Young Children, which was used in the caregiver interviews for children 9 years and younger, and the Trauma Symptoms Checklist for Children, which was used with the 10- to 17-year-old adolescents’ self-report interviews. Reporters indicated how often they (or their children) experienced items in the anger, depression, and anxiety scales from each measure in the past month on a 4-point scale (0 = not at all to 4 = very often). Cronbach’s α for the Trauma Symptom Checklist for Young Children was 0.86 (28 items) and for the Trauma Symptoms Checklist for Children was 0.93 (25 items). Because these measures are often and generally used in their entirety and we were interested only in global mental health, we created a total mental health distress score. The item wording, however, differed for the 2 measures so the total score for the sample was created by summing the anger, depression, and anxiety scales of each measure and then standardizing and merging the standardized mental health scores for each age group. Higher scores indicate greater mental health distress.

**Demographic Characteristics**

Demographic measures included in these analyses were the following: child’s gender; child’s age (categorized into 2 groups: 0–9 vs 10–17 years of age); child’s race/ethnicity (categorized into 4 groups: white non-Hispanic; Hispanic any race; black non-Hispanic; and other race, non-Hispanic); and parent education for parent with the most education (high school or less, some...
RESULTS
Analyses of covariance (ANCOVAs) were conducted to assess whether there are distress symptom score differences for children and adolescents who did versus did not experience each type of sibling aggression in the past year. The ANCOVAs controlled for parent education level, ethnicity, language of the interview, and child gender. Also, to limit any confounds because of the impact of other types of victimizations,24 we controlled for participants’ past year experiences of nonsibling assault, nonsibling property victimization, nonsibling psychological victimization, child maltreatment, sexual victimization, school and Internet victimization, and witnessing family and community violence collected as part of the JVQ measure. Because of developmental differences in the frequency of sibling aggression11 and to test if there were age differences in the links between sibling aggression and mental health, an interaction term between sibling aggression type and age (childhood versus adolescence) was included in each of the models.

The ANCOVA models for the 2 sibling physical assault variables were significant ($F_{1,2583} = 62.80, P < .001$, for sibling physical assault with a weapon or resulting injury; $F_{1,2583} = 63.53, P < .001$ for sibling physical assault with no weapon or resulting injury). Main effects in each model showed that children and adolescents who experienced a sibling assault of either type (with or without a weapon and/or resulting injury) reported higher distress symptom scores (see Fig 1) than those who did not experience any sibling assault. In the model that included physical assault with no weapon or resulting injury, the age interaction was significant ($F_{1,2583} = 8.44, P = .001$), indicating that mental health differences between those who reported experiencing this type of sibling aggression and those who did not was greater in children than in adolescents ($M = 0.43$ versus $M = 0.12$ for children; $M = -0.02$ versus $M = -0.10$ for adolescents). The interaction between age and physical assault with a weapon/injury was nonsignificant.

The overall models for sibling property and sibling psychological aggression also were significant ($F_{1,2583} = 61.78, P < .001$; $F_{1,2583} = 48.84, P < .001$, respectively), showing significant main effects for property aggression ($F_{1,2583} = 9.82, P < .001$) and psychological aggression ($F_{1,2583} = 16.80, P < .001$). The results revealed that children and adolescent sibling victims reported greater distress than those children and adolescents who were not victims of property or psychological aggression (see Table 1). The interaction terms with age were nonsignificant. In sum, all types of sibling aggression, both mild and severe, were associated with significantly higher distress symptom scores for both children and adolescents.

Next, we explored whether experiencing multiple types of sibling aggression was associated with increased distress scores. Thirty-two percent ($n = 1033$) of children and adolescents reported experiencing 1 type of sibling victimization in the past year; 8% ($n = 286$) reported being the victim of 2 or more types. ANCOVAs were conducted that

college, or college graduate). Finally, a variable was constructed to indicate whether the parent interview was conducted in Spanish ($0 = \text{no}; 1 = \text{yes}$).
included the same control variables and an interaction term with age as in the previous analyses. The overall model comparing 1 versus no types of sibling aggression was significant ($F_{16,2581} = 54.28, P < .001$) and a main effect for this variable ($F_{2,2381} = 35.92, P < .001$) showed that experiencing just 1 type of sibling aggression over the past year was associated with greater mental health distress ($M = −0.05$ versus $M = 0.19$) than experiencing none. The model comparing 1 versus 2 or more types was also significant ($F_{16,1026} = 25.79, P < .001$), revealing that children and adolescents who experienced a greater number of sibling aggression types reported greater mental health distress ($M = 0.30$ versus $M = 0.54$).

To assess whether sibling and peer aggression made unique contributions to children’s and adolescents’ mental health, ANCOVAs were conducted separately for 3 types of aggression: physical, property, and psychological. The 2 subcategories of sibling physical aggression were combined for efficiency of presentation and due to similarity of findings. Multiple regression was used to analyze total types of sibling aggression types and total types of peer aggression types as predictor variables. ANCOVAs and multiple regression analyses controlled for parent education level; ethnicity; language of the interview; child age; child gender; participants’ past year experiences of child maltreatment; sexual, school, and Internet victimization; and witnessing family and community violence, and included Sibling $\times$ Peer interaction terms for each type of aggression to test whether children’s and adolescents’ mental health varied depending on whether they experienced total types of sibling and peer aggression singly or in combination.

**TABLE 2** Multiple Regression Predicting Children’s and Adolescents’ Mental Health

<table>
<thead>
<tr>
<th>Variable</th>
<th>$\beta$</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.15*</td>
<td>0.05</td>
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<tr>
<td>Parent education (ref: high school degree)</td>
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<tr>
<td>Some college</td>
<td>−0.02</td>
<td>0.05</td>
</tr>
<tr>
<td>College degree plus</td>
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<tr>
<td>Ethnicity (ref: white)</td>
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<td>Black</td>
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</tr>
<tr>
<td>Hispanic, any race</td>
<td>−0.01</td>
<td>0.06</td>
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<tr>
<td>Other or mixed</td>
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<td>0.08</td>
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<tr>
<td>Language of interview (ref: English)</td>
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<td></td>
</tr>
<tr>
<td>Spanish</td>
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<td>0.09</td>
</tr>
<tr>
<td>Child age (ref: 0–9 y)</td>
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<td></td>
</tr>
<tr>
<td>Age 10 plus</td>
<td>−0.13**</td>
<td>0.09</td>
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<tr>
<td>Child gender (ref: female)</td>
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<td></td>
</tr>
<tr>
<td>Male</td>
<td>0.00</td>
<td>0.04</td>
</tr>
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<td>Child maltreatment</td>
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<td>Sexual victimization</td>
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<td>School victimization</td>
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</tr>
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<td>Internet victimization</td>
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<tr>
<td>Witness family violence</td>
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<td>0.06</td>
</tr>
<tr>
<td>Witness community violence</td>
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</tr>
<tr>
<td>Total types of sibling aggression</td>
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<td>0.03</td>
</tr>
<tr>
<td>Total types of peer aggression</td>
<td>0.25a</td>
<td>0.03</td>
</tr>
<tr>
<td>Total sibling $\times$ peer types of victimization</td>
<td>−0.02</td>
<td>0.04</td>
</tr>
</tbody>
</table>

$^{*}P < .001.$

**DISCUSSION**

Using a national probability sample, we showed that past-year sibling aggression was associated with significantly worse children’s and adolescents’ mental health. This connection was evident for both mild and severe forms of sibling aggression and for those who had experienced just 1 as well as multiple types of sibling aggression in the past year. Although mental health distress was greater for children than for adolescents who experienced mild sibling physical assault, children and adolescents were similarly affected by other forms of sibling aggression. Although peer aggression is generally perceived as being more serious than sibling aggression, our analyses showed that sibling and peer physical and psychological aggression had independent effects on mental health and that the mental health of those experiencing sibling versus peer physical and psychological aggression did not differ. Our work adds to the limited literature on sibling aggression generally characterized by small, non-representative samples. Our nationally representative study also removed the confounding influence of other kinds of victimization exposure and to assess the effects of multiple types of sibling aggression. Thus, we were able...
to show the damaging effects of several forms of sibling aggression, independent of other co-occurring victimizations. Another important strength of our study is that it included information about sibling aggression from early childhood through late adolescence. Although many national studies do not include young children because they may not be able to effectively answer questions, our proxy interviews with caregivers of children younger than 10 years provide data otherwise unattainable. A possible limitation of such data, however, is that younger children’s information may be incomplete because caregivers may not be able to provide a full inventory of sibling aggression exposures. However, caregiver and children’s reports on our measure of victimization have been shown to be comparable. Another limitation of our work is that we were unable to determine the direction of effects between aggression and mental health.

CONCLUSIONS

Taken together, our study shows that sibling aggression is not benign for children and adolescents, regardless of how severe or frequent. An implication of our work is that parents, pediatricians, and the public should treat sibling aggression as potentially harmful and something not to be dismissed as normal, minor, or even beneficial. Besides communicating this message directly to parents during pediatric visits, another avenue to disseminate this message would be to have popular parent education programs (eg, Triple P Positive Parenting Program) to include a greater focus on sibling aggression and successful mediation of sibling conflicts. An important next step is to gather longitudinal data to further examine the implications of various patterns of sibling aggression experiences for mental health and whether these patterns vary by birth order and gender.

REFERENCES