

# Exposure to Family and Friend Homicide in a Nationally Representative Sample of Youth

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## Abstract

This study examines the lifetime prevalence and distribution of family/friend homicide exposure among children and adolescents age 2 to 17 in the United States, and assesses the impact of family/friend homicide on emotional and behavioral outcomes, while controlling for potential co-occurring factors. Data were collected by telephone about the experiences of youth in 2008, 2011, or 2014, as part of the National Surveys of Children's Exposure to Violence (NatSCEV). Analyses are based on a pooled sample ( $n = 11,771$ ) from these three surveys. Approximately 8% of all children and youth ages 2 to 17 were exposed to a family/friend homicide. Older adolescents, Black youth, those living in single parent and nonparent family households, those from lower socioeconomic status households, and youth living in large cities were overrepresented among youth experiencing family or friend homicide. Exposed youth were also substantially more likely to be poly-victims, experience other major adversities, and live in neighborhoods with more community disorder. Exposure to family/friend homicide was significantly related to trauma symptoms. However, when other co-occurring factors were taken into account, only family/friend homicide that occurred

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within the last 2 years remained significant. With respect to delinquency, only nonfamily homicide exposure remained significant with these other factors controlled. Findings suggest that family/friend homicide represents a powerful marker for a broad level of victimization risk and adversity, demonstrating that family/friend murder is often just one relatively small part of a more complicated life of adversity. Although recent exposure is certainly distressing to youth, it is the wider, co-occurring context of poly-victimization and other types of adversity that appears most impactful in the longer term.

### **Keywords**

childhood adversity, community disorder, delinquency, homicide survivors, homicide co-victim, poly-victimization, trauma

### **Introduction**

In 2015, an estimated 17,793 people were homicide victims in the United States (Murphy, Xu, Kochanek, Curtin, & Arias, 2017), and, in 2016, an estimated 17,250 persons were murdered (FBI Uniform Crime Reporting, 2016). For each murder victim, in any given year, it has been estimated that six to 10 relatives as well as numerous friends and neighbors are left behind (Gross, 2007; Rheingold, Zinzow, Hawkins, Saunders, & Kilpatrick, 2012). As a result, the number of individuals affected by the homicide is far greater than the number of direct victims. These close network members of the homicide victims have been called “co-victims of homicide” or “homicide survivors” (Connolly & Gordon, 2015; Zinzow, Rheingold, Hawkins, Saunders, & Kilpatrick, 2009). In this article, we refer to the experience as “exposure to family/friend homicide.”

Although children and youth would clearly be among those affected by the homicide of a friend or family member, we know little about how many children are exposed to this type of adversity, their characteristics, and the types of relationships they have to the victims. One study based on a nationally representative survey of adolescents (ages 12-17) conducted in 2005 (Rheingold et al., 2012) found that 9% of youth who were co-victims of criminal homicide responded yes to “During your lifetime, has there ever been an incident during which a member of your family or friends who was very close to you was killed or murdered by some other person?” Another 7% of the sample was a co-victim of vehicular homicide (responded yes to “Has someone in your family or a friend who was very close to you ever been killed by a drunk driver?”). A higher portion of respondents who lost someone to

criminal homicide were African American or Hispanic, female, and lower socioeconomic status (SES) in comparison to those exposed to vehicular homicide and nonvictims.

Studies based on nationally represented samples of children and youth are extremely limited, and even the research cited above does not address exposure among children under the age of 12. Studies that allow prevalence estimates of child exposure to family/friend homicide across the entire developmental spectrum of childhood and adolescents are clearly warranted.

### *Child Adversity and Impact of Homicide Exposure*

Stress Process theory considers how the health and well-being of individuals is influenced by the adversity they experience and the resources they are able to mobilize to deal with those experiences (Pearlin & Bierman, 2013; Pearlin, Schieman, Fazio, & Meersman, 2005). Elaborations of this framework that emphasize life-course developmental processes have highlighted the strong effect of earlier life experiences in determining later health outcomes (Nurius, Green, Logan-Greene, & Borja, 2015; Turner & Schieman, 2008). Indeed, it has been argued that many adult diseases should be viewed as developmental disorders that begin early in life and that persistent health disparities are a function of toxic stress in childhood, stressful conditions, and events that reflect major adversities such as exposure to violence (Shonkoff et al., 2012). These types of exposures are thought to create disruptions in emotional processing and executive functioning, thereby increasing vulnerability to trauma symptomatology and multiple forms of psychopathology (McLaughlin, 2016). Moreover, toxic stress has health-damaging behavioral manifestations, such as substance use and other risk-taking behaviors, often developed as a means of coping with overwhelming adversity (Felitti, 2009). These mechanisms linking adverse child experiences (ACE) with emotional and behavioral difficulties in youth are consistent with numerous studies finding both internalizing symptoms (e.g., trauma symptoms such as depression, anxiety, dissociation) as well as externalizing problems (e.g., delinquency, substance use, juvenile justice involvement) as core consequences of stressful events in childhood (Alisic et al., 2014; Baglivio et al., 2014; Carliner et al., 2016; Herts, McLaughlin, & Hatzenbuehler, 2012).

Although research specifically addressing the impact offriend/family homicide exposure is limited, a recent systematic review documented a variety of mental health problems among (generally adult) homicide survivors (van Denderen, de Keijser, Kleen, & Boelen, 2015). A wide range of post-traumatic stress disorder (PTSD) estimates were found across studies, with lifetime homicide-related PTSD ranging from 19% to 71% and current PTSD

ranging from 5.2% and 6% among those who were exposed. Some other studies found elevated depression, anxiety, and substance abuse among individuals exposed to family/friend homicide (van Denderen et al., 2015). Although studies generally suggest that this is a highly traumatized population, most have failed to control for other traumatic experiences that may co-occur with homicide exposure. For example, one study of young adult homicide survivors found that 15% met the criteria for the full symptom cluster of PTSD, more than four times the national average of adults with past-year PTSD, and nearly twice the percentage of those in their sample who had experienced some other type of violence but not homicide exposure (Zinzow, Rheingold, Byczkiewicz, Saunders, & Kilpatrick, 2011). However, their analyses did not account for the possibility that victims of family/friend homicide might have also had personal experiences of violence and/or other potentially traumatic events, so it was unclear whether the greater prevalence of PTSD was due to family/friend homicide exposure or other co-occurring adversities. Studies comparing homicide-related loss with other forms of violent loss (such as suicide or car accidents) often have found no significant differences in outcomes (Amick-McMullan, Kilpatrick, & Resnick, 1991; Murphy, Clark Johnson, Wu, Fan, & Lohan, 2003).

Numerous studies on the death of family members, more generally, among children and adolescents, indicate that, while most experience elevated distress and sometimes behavioral problems for several months to 2 years following the loss (Brent, Melhem, Donohoe, & Walker, 2009; Silverman & Worden, 1992; Stikkelbroek, Bodden, Reitz, Vollebergh, & van Baar, 2016), for most youth, symptoms dissipate over time and do not develop into longer term mental health problems (Dowdney, 2005; Luecken & Roubinov, 2012; Stikkelbroek, Prinzie, de Graaf, ten Have, & Cuijpers, 2012). When symptoms remain over time, some research suggests that at least part of this is accounted for by pre- and/or post-bereavement factors, such as financial strain, problematic parenting behaviors, and other negative life events (Dowdney, 2000; Luecken & Roubinov, 2012; Thompson, Kaslow, Price, Williams, & Kingree, 1998). This would suggest that studies of the impact of family/friend homicide should also account for the recency of the event, as well as factors that may often occur or exist in the lives of exposed youth and contribute to negative outcomes. In the case of homicide-related losses, it seems particularly likely that these youth would be exposed to social and environmental contexts that would place them at high risk for experiencing personal violence and other major adversities.

Related to this issue, one study using the same young adult sample cited earlier found a significant unique effect of homicide survivorship, independent of demographic factors and exposure to any violent victimization (any

sexual assault, physical assault, or witnessed violence) on PTSD, major depression, and drug abuse/dependency (Zinzow et al., 2009). Although the researchers controlled for *any* violence exposure (yes/no) in their analyses, they did not account for the extent of violence exposures or the number of other major adversities or stressful contexts that may co-occur with homicide survivorship. A very similar study using a population-based sample of adolescents also examined the impact of homicide survivorship on emotional and behavioral outcomes, controlling for demographic factors and *any* violence exposure (Rheingold et al., 2012). Results showed significant independent effects of homicide survivorship on depression, drug use, and alcohol use. But, again, the study did not consider potential differences in the *extent* of personal violence exposure, other lifetime adversities, or contextual factors that could potentially explain elevated mental health problems among adolescents exposed to family/friend homicide.

### *Poly-Victimization, Cumulative Adversity, and Community Context*

There has been a growing acknowledgement of the importance of understanding the accumulation and intersections of violence, victimization, and adversity across different contexts and domains of exposure (Evans, Li, & Whipple, 2013; Finkelhor, Ormrod, & Turner, 2007a, 2007b, 2009; Finkelhor, Ormrod, Turner, & Hamby, 2005; Turner, Finkelhor, & Ormrod, 2010). An important concept in this cumulative adversity literature, “poly-victimization” refers to the experience of multiple victimizations of *different kinds*, such as sexual victimization, physical abuse, bullying, witnessing family violence, and exposure to community violence, not simply multiple episodes of the same kind of victimization. Research on poly-victimization has highlighted the significance of cumulative exposure to *different* forms of victimization, demonstrating that more than 15% of youth are exposed to six or more different types within a year (Finkelhor, Turner, Shattuck, & Hamby, 2013) or 11 or more victimization types in their lifetimes (Turner et al., 2010), and that this type of poly-victimization is more highly related to adverse child outcomes than experiencing a single, even serious, type of victimization (Mitchell & Ybarra, 2009; Turner et al., 2010). Numerous additional studies have documented very strong links between poly-victimization and negative outcomes in children and adolescents (Cyr et al., 2013; Elliott, Alexander, Pierce, Aspelmeier, & Richmond, 2009; Ford, Elhai, Connor, & Frueh, 2010; Soler, Kirchner, Paretilla, & Forns, 2013). It seems plausible that youth who have been exposed to homicide within their close social network may also be more likely to be personally exposed to substantial victimization, including poly-victimization.

Like victimization experiences, other forms of major adversity can also co-occur and accumulate to influence youth outcomes. Indeed, major stressful events such as family/friend homicide exposure may often occur against a backdrop of other adverse experiences and conditions, such as serious accidents and illnesses, parental unemployment, family alcohol or drug problems, marital discord, and parental imprisonment. These types of adverse nonvictimization events and situations can themselves accumulate over the child's lifetime to increase risk of emotional and behavioral problems (Mersky, Topitzes, & Reynolds, 2013; Thompson et al., 2015; Turner, Finkelhor, & Ormrod, 2006).

"Community disorder" is a neighborhood environment that presents residents with observable signs that social control is weak and that there is little concern or ability to maintain a safe and orderly physical environment. Such neighborhoods are often characterized by rundown buildings, graffiti, litter, public drinking and drug use, vandalism, and cues that crime is common (Geis & Ross, 1998; Kim & Conley, 2011). Research has demonstrated associations between community disorder and the mental health of both adults and youth (Gary, Stark, & LaVeist, 2007; Hill, Ross, & Angel, 2005; Latkin & Curry, 2003; Ross & Mirowsky, 2009). Not only are youth in these neighborhoods more likely to be exposed to elevated personal victimization and witnessing violence, they are also less likely to experience social support from family members (Turner, Shattuck, Hamby, & Finkelhor, 2013), and may be more likely to develop low perceived control, powerlessness, and a sense of mistrust of others, psychosocial factors that contribute to distress (Kim & Conley, 2011; Ross & Mirowsky, 2009; Ross, Mirowsky, & Pribesh, 2001). Because crime is typically more common in higher disorder neighborhoods, it is possible that residence in such neighborhoods, and the variety of experiences and conditions that characterize them, could also help to account for the association between family/friend homicide exposure and negative youth outcomes.

In sum, although the research in this area is not extensive, studies of adults and adolescents suggest that family/friend homicide can be accompanied by substantial emotional and behavioral consequences. Yet, there is every reason to believe that youth who have been exposed to this highly salient event might often also be exposed to considerable personal victimization and other adverse conditions that characterize their families, friendship networks, and neighborhood environments. As past studies on this issue have not adequately accounted for these potentially co-occurring factors, it is not clear how family/friend homicide fits within a larger context of risk and the unique impact it may have on child and adolescent well-being.

The purpose of this research is to examine the prevalence and distribution of family/friend homicide exposure among children and youth in the United

States and to assess its impact on emotional and behavioral outcomes, while controlling for potentially co-occurring factors, including poly-victimization, nonvictimization adversity, and community disorder. The specific aims are to

1. Estimate the prevalence of lifetime exposure to the murder of a close family member or friend in a nationally representative sample of 2 to 17 year olds;
2. Describe the distribution of the victims' relationships to children and youth who have been exposed to family/friend homicide and the recency of its occurrence;
3. Evaluate demographic differences between youth exposed to family/friend homicide and those without this experience, distinguishing between family and nonfamily homicides; and
4. Determine the effect of exposure to homicide on trauma symptoms and delinquency, considering both the recency of the event and relationship to the victim, and controlling for poly-victimization, cumulative nonvictimization adversity, and level of community disorder.

## **Method**

### *Participants*

Data were collected by telephone about the experiences of 13,052 children aged 1 month to 17 years in either 2008, 2011, or 2014, as part of the National Surveys of Children's Exposure to Violence (NatSCEV). Information about family background; demographic, health, and childcare/school characteristics were part of a brief interview with an adult caregiver "who is likely to be most familiar with the everyday activities of the child." During this interview portion, one child in the household was randomly selected from all eligible children by using the last birthday method (Salmon & Nichols, 1983). If the sampled child was 10 to 17 years old, the telephone was handed off to that child, and the main interview was conducted with him or her. For children under age 10, the adult caregiver answered as a proxy for the child. Interviews were available in English or Spanish. The current analyses focuses on a target sample of 11,858 children and youth age 2 to 17 who had nonmissing data for our main independent variable.

### *Sample*

The 2008 sample was obtained from a nationwide sampling frame of residential telephone numbers from which a sample of households was drawn by random digit dialing (RDD), including an oversampling of U.S. telephone

exchanges that had a population of 70% or more of African American, Hispanic, or low-income households. For the 2011 and the 2014 years of data collection, a sampling frame was constructed using four sources: (a) an address-based sample (ABS) of households from which cell-phone and residential numbers could be dialed, (b) a prescreened sample of households with children from recent national random-digit-dialed surveys, (c) a listed land-line sample (with a known child in the household based on commercial lists), and (d) cell-phone numbers drawn from a targeted random-digit-dialed sample frame. This multistep frame construction helped to assure representativeness of the samples and also worked to recruit households with children and cell phone-only households.

Response rates (RR) were 50.7% in 2008, 44.6% in 2011, and 29.4% in 2014 (RR4 per The American Association for Public Opinion Research, 2016), the variation due in part to a nationwide decline in telephone RRs but also to the increasing complexity of the NatSCEV sample design in an effort to construct a frame inclusive of children from economically disadvantaged backgrounds (AAPOR Cell Phone Task Force, 2010; Blumberg, Luke, Ganesh, Davern, & Boudreaux, 2012; Fahimi, Malarek, & Kulp, 2013). Sample weights were applied to adjust for differential probability of selection due to (a) study design, (b) demographic variations in nonresponse, and (c) variations in within-household eligibility.

The analysis presented here uses pooled data from these three nationally representative samples to have adequate statistical power to study the relatively small number of children who have experienced friend/family homicide.

### **Recruitment**

Respondents received a US\$20 check as a token of appreciation after completion of the full interview. Interviews were available in both English and Spanish and averaged 50 min in length. A clinician trained in telephone crisis counseling on the research team reviewed all cases where ongoing victimization was reported or where an interviewer flagged a child as being otherwise at-risk. This clinician remained in contact with these interview participants until the situation could be addressed locally, such as a referral to a counselor or other professional. This survey process and question items have been reviewed and approved by the University of New Hampshire Institutional Review Board.

### **Measurement**

*Exposure to family/friend homicide.* The primary independent variable in this study was whether a child had been exposed to homicide in their close social

network. This was assessed by asking, “*At any time in (your child’s/your) life, was anyone close to (your child/you) murdered, like a friend, neighbor or someone in (your child/your) family?*” Those who responded “yes” were asked a series of follow-up questions, including identifying the child’s relationship to the victim. If the child was exposed to friend/family homicide more than once in their lifetime, they were asked victim information about the most recent incident. Victims were classified as being either family (sibling, parent, or other relative) or nonfamily. “Time since exposure” was calculated by subtracting the child’s age when the event occurred from his or her age at the time of the interview. Time since exposure group cut-points were made to provide approximately equal categories.

**Poly-victimization.** Exposure to victimization was assessed using the screening questions from the Juvenile Victimization Questionnaire (JVQ; Hamby, Finkelhor, Ormrod, & Turner, 2004), an instrument that covers five general areas of youth victimization: conventional crime, maltreatment, victimization by peers and siblings, sexual victimization, and witnessing/indirect victimization. There are 37 victimization screeners, including the main independent variable described above. Poly-victimization, or being a victim of multiple forms of victimization, is assessed as exposure to 11 or more types of these 36 screeners (excluding the main family/friend homicide screener we examine separately) in their lifetime. This method of operationalizing poly-victimization has been evaluated in previous studies (Finkelhor, Ormrod, et al., 2005).

**Adversities.** To measure lifetime adversities, we use a count of the number of hardships experienced by the child and people close to the child. These include 17 items, such as whether he or she had ever experienced a bad fire or natural disaster, whether he or she (or someone close to the child) had been in a bad accident requiring hospitalization, whether the child’s parents had been unemployed, incarcerated, deployed, or experienced homelessness (Turner & Butler, 2003; Turner et al., 2006).

**Community disorder.** In addition to individual and family traits, we considered the importance of community disorder, taken as a count of the number of community problems, covering both physical and social aspects of disorder (8 items; Hamby, Finkelhor, Turner, & Holt, 2007). These include things such as witnessing drug sales, witnessing arrests and police raids, gang presence and graffiti, and neighborhood deterioration.

**Demographic characteristics.** Age was taken as the value at the time of the interview, computed from the child’s birthdate. Race/ethnicity categories are

the result of collapsing responses to two questions: one about Hispanic ethnicity and one about race. Children were coded as White if they were not of Hispanic ethnicity and reported White as the child's first racial identity; Black if they were non-Hispanic and Black was their first racial identity; Other, non-Hispanic if they reported being Asian, Native American, or any other race but not of Hispanic ethnicity; and Hispanic if they reported being of Hispanic ethnicity, regardless of race.

Community type is a measure of urbanicity taken as the category reported when caretakers were asked whether they would "*describe the place in which you live as being a large city, the suburb of a large city, a smaller city, a town, a small town or a rural area?*" Interviewers provided population size guidelines for each of these response options. We examine the role of community size/urbanicity by comparing whether a child was living in a large city, suburb (or smaller city), or rural community (including towns and small towns). We compare across four categories of family structure: two-parent families, one parent and one stepparent, single parent, and all other family arrangements. Finally, SES is a composite measure of household income and parent's highest education. These two categorical measures were converted to a standardized scale, summed, and recentered to a continuous standardized scale. For the demographic profile, we display the distribution of the sample in each third of the distribution. For the regression models, we use the continuous scale as a control measure.

**Outcomes.** We examined the effect of family/friend homicide on two outcome measures:

**Delinquency and trauma symptoms.** Using a modified version of the Frequency of Delinquency Behavior (FDB) scale (Loeber & Stouthamer-Loeber, 1987), a total delinquency score was tabulated by summing the number of specific types of delinquent acts self-reported by juveniles aged 10 and older in the past year. The trauma measure incorporates responses from the Trauma Symptom Checklist for Children (TSCC; Briere, 1996; Briere et al., 2001). In this pooled file, the alpha coefficient for these 19 items is .93. The item count was summed and standardized, and this score represents the average-level symptomatology experienced in the past month.

## **Analysis**

All statistics were performed using the statistical software package Stata (v.14.2).

Chi-square analyses and *t* tests are reported in Table 1 to examine demographic differences between the unexposed group and three exposure groups (any exposure to homicide, those who had a family member who was a homicide victim, and those who had a close nonfamily member who was a homicide victim). Table 2 presents, among children and youth exposed to family/friend homicide, the distribution of their relationships to the homicide victim, separately for 2 to 9 year olds and 10 to 17 year olds, as well as the recency distribution of the homicide exposure (less than 2 years, 2-3 years, and 4 or more years). Table 3 shows the results of ordinary least squares (OLS) regression models predicting the trauma scores for those aged 10 to 17 years. Three sets of models examine the effect of (a) any exposure to friend/family homicide, (b) time since exposure, and (c) relationship to victim (family victim and nonfamily victim) compared with those not exposed. Table 4 repeats this procedure, but, instead, utilizes a negative binomial model to predict the count of delinquent acts reported. A negative binomial distribution was selected because this dependent variable was overdistributed, with a weighted mean of 0.99 and a standard deviation of 2.95. Negative binomial is best suited for count measures with these characteristics (Long & Freese, 2006).

## Results

### *Prevalence and Demographic Differences*

Of the entire sample of 2 to 17 year olds, 8.1% had someone close to them murdered in their lifetimes (12.4% of 10-17 year olds; 3.8% of 2-9 year olds). Table 1 presents differences in demographics, poly-victimization, nonvictimization adversity, and community disorder among youth aged 2 to 17 who were exposed to a homicide in their social network relative to those without homicide exposure. Older youth were much more likely to have experienced a family/friend homicide in their lifetimes than were younger children. Teens, age 14 to 17, were particularly overrepresented; although only 26.8% of the entire sample, they comprised almost 55% of all youth exposed to homicide. The age differences were even more pronounced among nonfamily homicides, with the oldest youth (14-17 years) comprising 69% of all those exposed, while 2 to 5 year olds comprised just 4.2%.

Black youth were substantially overrepresented among those who had experienced a friend/family homicide. Although only 14.8% of the sample, Black children comprised 35% of those having this experience. In contrast, White children and youth represented 57.5% of the entire sample, but only 31% of those exposed to family/friend homicide. These race differences were particularly evident for family homicides with Black youth representing

**Table 1.** Demographic Characteristics by Whether Child Was Exposed to Homicide and Relationship to Victim, Children Aged 2 to 17.

	Exposed to Friend/Family Homicide		Relationship to Victim <sup>a</sup>		
	Full Sample	Not Exposed	Exposed	Family Relative	Nonfamily
Age					
2-5 years	25.9%	27.4%	9.6%	14.0%	4.2%
6-9 years	23.0%	23.9%	13.1%	13.7%	11.1%
10-13 years	24.2%	24.4%	22.4%	27.8%	15.7%
14-17 years	26.8%	24.4%	54.9%	44.5%	69.0%
Race					
White, non-Hispanic	57.5%	59.8%	31.0%	27.0%	39.9%
Black, non-Hispanic	14.8%	13.0%	35.0%	38.1%	27.8%
Other, non-Hispanic	7.8%	8.0%	6.1%	7.6%	4.3%
Hispanic (any race)	19.9%	19.2%	27.9%	27.3%	28.0%
Gender					
Male	51.3%	51.9%	44.6%	43.4%	44.7%
Female	48.7%	48.1%	55.4%	56.6%	55.3%
SES					
Low SES	35.2%	33.8%	53.8%	57.1%	49.2%
Mid SES	33.6%	33.7%	31.7%	31.0%	32.3%
High SES	31.2%	32.5%	14.5%	12.0%	18.5%

(continued)

**Table 1. (continued)**

	Full Sample	Exposed to Friend/Family Homicide		Relationship to Victim <sup>a</sup>	
		Not Exposed	Exposed	Family Relative	Nonfamily
Family structure					
Other adult	4.5%	4.0%	9.6%	12.2%	6.4%
Single parent	27.6%	26.2%	42.7%	43.3%	38.7%
Parent + Stepparent	8.9%	8.4%	13.8%	11.7%	13.6%
2 bio parents	59.1%	61.3%	33.9%	32.8%	41.4%
Place size:					
Large city	19.9%	18.9%	32.2%	31.9%	33.9%
Suburb/Smaller city	35.9%	36.4%	30.2%	28.2%	32.7%
Town/Small Town/Rural area	44.1%	44.7%	37.6%	39.9%	33.4%
Child is a poly-victim (1+ victimizations)	10.9%	8.8%	33.8%	30.2%	39.4%
Number of adversities (M) <sup>b</sup>	2.18	2.06	3.57	3.36	4.02
Community Disorder count (M) <sup>c</sup>	0.91	0.80	2.26	2.16	2.59
Full sample	100.0%	91.0%	8.2%	4.1%	3.1%
	(n = 11,858)	(n = 10,993)	(n = 865)	(n = 419)	(n = 359)

Note. Percentages indicate the distribution of each characteristic within the column. SES = socioeconomic status.

<sup>a</sup>These columns exclude n = 89 cases for which relationship to the victim was not reported.

<sup>b</sup>Adversities range from 0-14 and are a lifetime count.

<sup>c</sup>Community disorder ranges from 0-7.

\*p < .05. \*\*p < .01. \*\*\*p < .001. Results are of chi-square or t tests comparing columns with those not exposed.

**Table 2.** Characteristics of Family/Friend Homicide, by Age Group.

	Ages 2 to 9		Ages 10 to 17		Full Sample	
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
<b>Relationship to Victim:</b>						
Family <sup>a</sup>	73.4	(121)	55.3	(321)	59.4	(442)
Sibling	6.0	(12)	3.8	(29)	4.3	(41)
Parent	2.9	(10)	3.3	(21)	3.2	(31)
Other live-in relative	6.2	(10)	5.2	(32)	5.4	(42)
Other live-out relative	55.6	(83)	41.0	(222)	44.2	(305)
Other Rel (not spec live-in/out)	2.7	(6)	2.1	(17)	2.2	(23)
Nonfamily <sup>a</sup>	26.6	(55)	44.7	(281)	40.6	(336)
Teacher/Coach/Mentor	6.7	(15)	4.5	(35)	5.0	(50)
Friend/Schoolmate/Neighbor	19.9	(40)	40.2	(246)	35.7	(286)
Total	100.0	(176)	100.0	(602)	100.0	(778)
<b>Recency of homicide:</b>						
Less than 2 years	43.2	(83)	44.6	(275)	44.3	(358)
2-3 years	39.3	(62)	25.2	(156)	28.5	(218)
4 or more years	17.5	(39)	30.2	(210)	27.2	(249)
Total	100	(184)	100	(641)	100	(825)

<sup>a</sup>These rows exclude *n* = 89 cases for which relationship to the victim was not reported.

more than 38% of this type of homicide exposure. Hispanic youth were also overrepresented among youth experiencing family/friend homicide.

Girls were slightly but significantly overrepresented among youth exposed to family/friend homicide (representing 48.7% of the sample but 55.4% of those exposed). There appeared to be a relatively linear negative association between family SES and youth exposure to family/friend homicide. Low SES families represented 35.2% of the sample but 53.8% of youth exposures, while high SES families represented 31.2% of the sample but experienced just 14.5% of total family/friend homicides. Socioeconomic differences were most pronounced for family homicides. There were also substantial differences in exposure across family structure type. Youth living with two biological parents were substantially underrepresented among youth exposed to family/friend homicide, compared with all other family types. Youth living in nonparent households were particularly overrepresented (4.5% of the sample, 9.6% of exposures), especially among family homicides (12.2% of exposures). Youth living with single parents were also overrepresented (27.6% of the sample, 42.7% of exposures). Youth exposed to family/friend homicide were more likely to be residing in big cities than youth in other

**Table 3.** OLS Coefficients and Standardized Coefficients Predicting Trauma Score Examining Exposure to Family/Friend Homicide, Children Aged 10 to 17.

	Exposure to Family/Friend Homicide			Time Since Exposure			Relationship to Victim		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6			
	Coefficient (SE)	β	Coefficient (SE)	β	Coefficient (SE)	β	Coefficient (SE)	β	
Exposure to homicide	0.55 (0.09)	0.18***	0.24 (0.08)	0.08**	—	—	—	—	—
Time since exposure (Ref = no exposure)	—	—	—	—	—	—	—	—	—
<2 years	—	—	0.67 (0.16)	0.15***	0.40 (0.15)	0.09*	—	—	—
2-3 years	—	—	0.55 (0.17)	0.09**	0.11 (0.12)	0.02	—	—	—
4+ years	—	—	0.45 (0.11)	0.08***	0.15 (0.10)	0.03	—	—	—
Relationship to victim (Referent = no exposure)	—	—	—	—	—	—	—	—	—
Family	—	—	—	—	—	—	0.44 (0.13)	0.10**	0.16 (0.10)
Nonfamily	—	—	—	—	—	—	0.66 (0.13)	0.14***	0.26 (0.16)
Poly-victim	—	—	—	—	—	—	—	—	—
Personal adversities count	—	—	0.93 (0.07)	0.35***	0.93 (0.07)	0.35***	—	—	0.93 (0.08)
Community Disorder count	—	—	0.11 (0.01)	0.24***	0.11 (0.01)	0.24***	—	—	0.11 (0.01)
Number of cases	6,288	6,288	6,254	6,254	6,254	6,254	6,215	6,215	6,215
R <sup>2</sup>	.069	.303	.071	.304	.068	.300			

Note. Models also control for child, family, and community demographic characteristics, including child's age, race, and sex; family structure; and community urbanicity. OLS = ordinary least squares. \**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

**Table 4.** Negative Binomial Coefficients Predicting Delinquency Count, Examining Exposure to Family/Friend Homicide, Children Aged 10 to 17.

	Exposure to Family/Friend Homicide						Time Since Exposure						Relationship to Victim					
	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6		Model 5		Model 6			
	Coefficient	SE	Coefficient	SE	Coefficient	SE	Coefficient	SE	Coefficient	SE	Coefficient	SE	Coefficient	SE	Coefficient	SE		
Exposure to homicide	0.673	(0.09)***	0.116	(0.08)	—	—	—	—	—	—	—	—	—	—	—	—		
Time since exposure (Referent = no exposure)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
<2 years	—	—	—	—	0.65	(0.13)***	0.19	(0.12)	—	—	—	—	—	—	—	—		
2-3 years	—	—	—	—	1.09	(0.16)***	0.18	(0.12)	—	—	—	—	—	—	—	—		
4+ years	—	—	—	—	0.48	(0.13)***	0.03	(0.13)	—	—	—	—	—	—	—	—		
Relationship to victim (Referent = no exposure)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Family	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Nonfamily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Poly-victim	—	—	0.65	(0.07)***	—	—	0.65	(0.07)***	—	—	—	—	—	—	—	—		
Personal adversities count	—	—	0.12	(0.02)***	—	—	0.12	(0.02)***	—	—	—	—	—	—	—	—		
Community Disorder count	—	—	0.24	(0.02)***	—	—	0.24	(0.02)***	—	—	—	—	—	—	—	—		
Number of cases	6,288		6,288		6,250		6,250		6,215		6,215		6,215		6,215			
Pseudo R <sup>2</sup>	.064		.149		.065		.150		.065		.151		.065		.151			

Note. Models also control for child, family, and community demographic characteristics, including child's age, race, and sex; family structure; and community urbanicity. \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

geographic areas ( $p < .001$ ). Although those living in large cities represented less than 20% of the entire sample, they comprised 32.2% of those exposed.

There were also significant differences in poly-victimization (experiencing 11 or more different forms of victimization in their lifetimes) across the exposure groups. Poly-victims represented 10.9% of the entire sample, but they comprised 33.8% of the children and youth exposed to family/friend homicide. Poly-victims were especially overrepresented among those experiencing non-family homicides (39.4% of exposures). Children and youth who experienced the murder of a close network member also had significantly more nonvictimization adversities ( $M = 3.57$ ) relative to those without this experience ( $M = 2.06$ ), and lived in neighborhoods with substantially higher mean levels of disorder ( $M = 2.26$ ) than those with no exposure to family/friend homicide ( $M = 0.80$ ). Elevated adversity and community disorder were particularly evident for children and youth who had experienced nonfamily homicide exposure.

### *Youth Relationships to Murder Victims and Exposure Recency*

Table 2 presents the distribution of respondents' relationships to the murder victim, for the entire sample of exposed children and youth, and separately for 2 to 9 year olds and 10 to 17 year olds. When considering the full sample who have been exposed to family/friend homicide, a larger percentage of the victims were family members or relatives (59.4%) than were nonfamily (40.6%). Most homicides involving family members were relatives who did not live with the youth (44.2% of all homicides). The large majority of nonfamily victims fell in the broad category of friend/schoolmate/neighbor (35.7% of all homicides), while 5% of all family/friend homicides occurred to teachers or coaches. The primary difference between the 2 to 9 year old and 10 to 17 year old groups is the larger portion of family homicides relative to nonfamily among the younger children. For the younger group, 73.4% of all murder victims were family members or relatives compared with 55.3% among the 10 to 17 year olds.

Approximately 44% of the full sample of children and youth were exposed to a family or friend homicide within 2 years prior to the survey; for 28.5% of those exposed, it occurred 2 to 3 years ago, and 27.2% were exposed 4 or more years ago. As would be expected, a greater percentage of the 10 to 17 year olds (30.2%) were exposed 4 or more years ago than were the 2 to 9 year olds (17.5%).

### *Effect of Exposure to Family/Friend Homicide on Trauma Symptoms*

Table 3 presents analyses examining the impact of family/friend homicide on trauma symptoms. Results are shown for the 10 to 17 year old sample (findings for 2-9 year olds are discussed below).

Exposure to any lifetime family/friend homicide was significantly related to trauma symptoms ( $b = .55; p < .001$ ), controlling for child's age, race, and sex; family structure; and community urbanicity (Model 1). When potential confounding or co-occurring stressors, including personal poly-victimization, cumulative nonvictimization adversity, and level of community disorder, were added to the equation (Model 2), the coefficient for homicide exposure was reduced by about 56% ( $b = .24$ ), but remained significant ( $p < .01$ ). When comparing the standardized coefficients, poly-victimization ( $B = .35; p < .001$ ) and number of nonvictimization adversities ( $B = .24; p < .001$ ) showed considerably stronger independent effects on trauma symptoms than did exposure to family/friend homicide.

Model 3 presents the effect of family/friend homicide exposure for the different recency groups, again controlling for demographic factors. All three groups had significantly higher trauma scores than the nonexposure group. However, when poly-victimization, cumulative nonvictimization adversity, and level of community disorder were added to the equation (Model 4), only family/friend homicide that occurred within the last 2 years was still significantly related to trauma symptoms ( $b = .40; p < .05$ ).

Model 5 examines the effect of family homicide and nonfamily homicide on trauma symptoms, relative to no exposure. Both types of exposures were significantly associated with trauma symptoms, with demographic factors controlled. Interestingly, the relationship was somewhat stronger for nonfamily homicides than for family homicides ( $B = .14$  and  $B = .10$ , respectively). However, when poly-victimization, cumulative adversity, and community disorder were added to the equation (Model 6), both coefficients were reduced substantially and were no longer statistically significant. Poly-victimization and cumulative adversity, in contrast, had strong effects on trauma symptoms.

The same analyses depicted in Table 3 were performed separately for the 2 to 9 year olds (analyses not shown). For these younger children, exposure to any friend/family homicide, and even exposure to recent homicide, was not significantly related to trauma symptoms with demographic variables controlled. The same was true when testing the effects of family and nonfamily homicide separately. However, poly-victimization, cumulative adversity, and community disorder each had significant independent effects on trauma symptoms, when added to the equations.

### *Effect of Exposure to Family/Friend Homicide on Delinquency*

Table 4 presents the same set of analyses predicting level of delinquency among the 10 to 17 year old sample (these delinquency questions were not asked of children under 10). As with trauma symptoms, any family/friend

homicide, as well as exposure for all three recency groups, was significantly related to delinquency (Models 1 and 3), controlling for demographic factors (age, gender, race, SES, family structure, and area of residence). However, when personal poly-victimization, cumulative nonvictimization adversity, and level of community disorder were added to the equation (Models 2 and 4), the coefficients for exposure to homicide were reduced drastically and were no longer statistically significant. In contrast, these other factors were each significant independent predictors of delinquency ( $p < .001$ ). The same analyses were conducted to examine the effect of family and nonfamily homicide exposure separately. As can be seen in Model 5, both types of exposures were significantly associated with delinquency, with demographic factors controlled. Again, the size of the coefficient was greater for nonfamily homicides than for family homicides. After controlling for the other factors (Model 6), the coefficient for family homicide is no longer significant. However, the effect of nonfamily homicide on delinquency remained significant ( $p < .05$ ) with poly-victimization, cumulative adversity, and community disorder controlled.

## Discussion

The current study addressed the prevalence, distribution, and impact of lifetime exposure to family/friend homicide in a nationally representative sample of children and youth. It expands on past research in this area by considering exposure among younger children as well as adolescents, by considering exposure recency and relationship to victim, and by accounting for other important stressful experiences and contexts that may co-occur with family/friend homicide.

In terms of prevalence, this study found that approximately 8% of all children and youth ages 2 to 17 were exposed to a family/friend homicide, with 12.4% of 10 to 17 year olds experiencing this type of adversity. This rate is somewhat larger than the rate of 9% reported by Rheingold et al. (2012) among their national sample of 12 to 17 year olds. Older adolescents (16-17 year olds) were particularly overrepresented among those exposed to family/friend homicide. This is to be expected because, as children get older, they have more years of "opportunity" to experience an event in their lifetime. However, it is also likely that, as youth get older, they develop closer and more extensive peer networks that are also older and at greater risk for homicide. This is consistent with the substantially larger portion of nonfamily homicides found among older adolescents relative to younger children and youth.

Other important demographic differences between those exposed to family/friend homicide and those without this experience were also evident. Of

particular note, and consistent with past research, was the substantial overrepresentation of Black youth among those exposed to this form of adversity. Given tendencies toward racial homophily within social networks (Currarini, Jackson, & Pin, 2010; McPherson, Smith-Lovin, & Cook, 2001), this finding is consistent with studies showing that, at all ages, Blacks are more likely than Whites to become homicide victims and that this racial disparity is greatest for 15 to 24 year olds (Lo, Howell, & Cheng, 2013). This likely is, in part, explained by residential context, as Blacks are more likely than are Whites to reside in neighborhoods of concentrated disadvantage where the incidence of homicide is higher (Buka, Stichick, Birdthistle, & Earls, 2001; Peterson & Krivo, 1999). Also highlighting the links between friend/family homicide and structural disadvantage are findings showing overrepresentation of youth living in nonparent households, single-parent households, large cities, and families of lower socioeconomic status among those who had experienced the murder of a friend or family member. Interestingly, girls are more likely to report exposure to family/friend homicide than boys. This finding may, in part, reflect gender differences in the composition and qualities of social networks. Girls tend to have more close friendships and report more intimacy and disclosure in their network relationships than do boys (Belle, 1989; Colarossi, 2001; Furman & Buhrmester, 1992). As a result, girls may have more network members who they perceive as “close,” and events that occur within those social networks may have greater salience for them.

As we hypothesized, children and youth who have been exposed to a family or friend homicide in their lifetimes are substantially more likely to have experienced multiple personal victimizations (poly-victimization), have been exposed to more nonvictimization adversities, and live in neighborhoods characterized by greater community disorder. This confirmed our suspicion that family/friend homicide exposure often co-occurs with other violence experiences, major stressful events, and dangerous environmental contexts, and that these represent important factors that should be considered in assessments of impact. To this end, we conducted multivariate analyses of the effect of family/friend homicide (overall, at three different levels of recency, and separately for family and nonfamily exposures) on both trauma symptoms and delinquency, controlling for demographic factors, poly-victimization, cumulative adversity, and community disorder.

When these other factors were added to the equation, only family/friend homicide that occurred within the past 2 years remained statistically significant for the 10 to 17 year olds. This suggests that the apparent longer term impact of family/friend homicide on trauma symptoms is explained by these other co-occurring risk factors. Moreover, cumulative adversity and, especially, poly-victimization had much stronger effects on trauma symptoms

than did any form of family/friend homicide, highlighting the particularly damaging role of personal victimization that occurs across different life contexts. In other words, it is the experience of poly-victimization, which often characterizes the lives of youth exposed to family/friend homicide, that has enduring effects on emotional health, rather than the event in and of itself. If it were not for the existence of other multiple sources of stress, most youth would be likely to recover from this stressor over time. At the same time, results suggest that when exposure to murder has been recent, it is, indeed, a traumatic experience. Independent of personal victimization, other major adversities, and residence in disordered communities, youth who have experienced the homicide of a friend or family member within the last 2 years show elevated trauma symptoms.

It is notable and interesting that the association between family/friend homicide and trauma symptoms was not significant for 2 to 9 year olds, independent of demographic factors. One possibility is that, because parents were reporting on the 2 to 9 year olds' exposure, the child him or herself may sometimes be unaware or only marginally aware of the particular circumstances surrounding the death of the network member. Although the responding parent knows what happened, the child (particularly young children) may often be protected from the distressing details of the event. In contrast, even young children are unlikely to escape the effects of events that they experience directly, such as poly-victimization.

Findings on the overall effect of family/friend homicide on delinquency among the 10 to 17 year olds largely mirrored the trauma symptom analyses, with all three recency groups significantly different from the nonexposure group with demographic factors controlled. However, even the most recent homicide exposure group was no longer significant after poly-victimization, other adversity, and community disorder were taken into account. Both family and nonfamily homicide exposure was significant with demographics controlled, but the relationship was stronger for nonfamily exposure. Moreover, nonfamily homicide remained significantly related to delinquency with all other factors controlled. The significant coefficient for community disorder, not evident in the trauma symptom analyses, together with the strong and unique effect of nonfamily homicide, suggest important linkages between criminal activities involving peers and youth delinquency. In other words, exposure to homicide of nonfamily network members, largely peers, likely reflects environments where young people are both involved in perpetrating violence and other forms of delinquency and are at particular risk for experiencing serious violence themselves.

Although we anticipated that family homicide might be more impactful than nonfamily homicide (as family/relatives, on average, would likely be

more emotionally close to the murder victim), this was not the case. Because most nonfamily homicides involve peers (schoolmates/friends/neighbors), it may be that closeness in age to the victim has particular impact because youth more strongly identify with the victim. Indeed, some research has found that premature deaths of peers to violence heightens young people's awareness of their vulnerability to violent death (Smith, 2015). These findings are also consistent with studies showing "lack of a future orientation" to importantly mediate exposure to adversity (especially violent adversity) and delinquency (Allwood, Baetz, DeMarco, & Bell, 2012). Thus, peer homicide may be associated with expectations among youth that they will not live long, which in turn may not only create emotional distress but encourage externalizing behaviors such as delinquency. More research is needed on mechanisms linking family/friend homicide and delinquent behavior.

### *Limitations*

The pooling of the three NatSCEV data sets allowed the examination of the relatively rare event of family/friend homicide, distinguishing between subgroups of youth who have been exposed, and accounting for co-occurring factors that have not been assessed in previous studies. Despite this advantage, there were a number of limitations to these data. Consistent with other survey research, especially phone surveys, NatSCEV experienced declining response rates over the three waves of data collection. Although response rate is a poor predictor of nonresponse bias (Czajka & Beyler, 2016), and sample weights were used to adjust for variations in nonresponse, it is still possible that declining response rates affected the representativeness of the sample. While a prospective study that follows youth over time and is able to assess symptomatology and delinquency both prior to and after exposure to friend/family homicide would be ideal, the cross-sectional nature of this study means that the temporal ordering of events and outcomes could not be definitively established.

Because studies have sometimes demonstrated poor concordance between parent and child reports (Thomson, Roberts, Curran, Ryan, & Wright, 2002) and poor test-retest reliability in youth reports of events or behavior (Cornell & Loper, 1998; Cross & Newman-Gonchar, 2004), the self-report nature of the current study may also have implications for the validity of results. Fortunately, the JVQ used to assess friend/family homicide and other forms of victimization in this study has shown evidence of good test-retest reliability and construct validity across a wide spectrum of developmental stages, and similar victimization rates reported by parents as proxy reporters of 8 to 9 year olds and self-reports of 10 to 11 year olds (Finkelhor, Hamby, Ormrod, & Turner, 2005).

As the exposed group was identified through a single screener item, we were able to obtain only limited information on the incident. Moreover, it is possible, or perhaps even likely, that youth sometimes included individuals who would not typically be considered “close” network members. If this were the case, we may have overestimated the prevalence and/or underestimated the impact of family/friend homicide. In contrast, it is possible that youth are more likely to remember and report incidents that they found particularly distressing, which could potentially overestimate the impact of the event, regardless of how traditionally “close” the relationship to the victim.

## Conclusion

The impact of friend/family homicide among children and youth is largely explained by its association with poly-victimization and exposure to multiple other adversities. This does not imply, however, that family/friend homicide is a trivial event for youth or that it is unimportant in influencing emotional and behavioral outcomes. On the contrary, the findings suggest that it is a powerful marker for a broad level of victimization risk and adversity. Youth who have experienced friends, family members, neighbors, and classmates murdered often also experienced considerable violence themselves, have been exposed to other types of highly stressful events, and live in neighborhoods characterized by levels of high crime and disorder. As such, they are emotionally distressed and are more likely to engage in delinquent behaviors. The current findings highlight the bigger picture for these youths, showing that family/friend murder is often just one relatively small part of a more complicated life of adversity. It is the wider, co-occurring context of victimization and adversity that appears most impactful. At the same time, findings point to the first 2 years as a particularly vulnerable time for youth following a family/friend homicide event, when they are significantly distressed by the event whether or not other sources of victimization and adversity are present.

Because it can be extremely difficult to identify youth who have experienced multiple forms of victimization and adversity across several life contexts, targeting youth who have experienced a murder within their social networks (a single salient and often socially recognized event) may represent a useful strategy for identifying youth at particular risk for violence, distress, and delinquency and who are most in need of intervention. Thus, youth who have come to the attention of school counselors, mental health professionals, and community-based mentors and advocates, as a result of experiencing the homicide of a close friend or family member, should be assessed for a wide range of violence exposure experiences.

Our findings suggest that, while youth who have experienced this adversity in relative isolation may benefit from short-term grief counseling and efforts to foster positive peer associations, youth for whom friend/family homicide is only one of a large number of adversity experiences (especially multiple personal victimizations) require a much more comprehensive and holistic approach. Interventions that focus on only grief and adjustment after homicide exposure without attention to other types of personal violence exposure may fail to identify the contexts placing youth at greatest risk. An important implication of the linkage between friend/family homicide and poly-victimization is the need to avoid the compartmentalization of services that is still all too common in many communities and, instead, seek ways to promote interagency cooperation (e.g., education, public health, justice system) in addressing the needs of youth affected by violence.

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**David Finkelhor** is the director of Crimes against Children Research Center, and professor of sociology at the University of New Hampshire. He has been studying the problems of child victimization, child maltreatment, and family violence since 1977. He is well known for his conceptual and empirical work on the problem of child sexual abuse, and has also written about child homicide, missing and abducted children, and children exposed to domestic and peer violence. In his recent work, he has tried to integrate knowledge about the diverse forms of child victimization into a field he has termed Developmental Victimology.

**Megan Henly** is a research scientist at the Crimes against Children Research Center (CCRC) at the University of New Hampshire, where she is data manager and analyst for the National Surveys of Children's Exposure to Violence. She has worked in survey data collection and analysis for 17 years in the academic, government, and non-profit sectors. Her technical expertise as a survey methodologist has been utilized in both small- and large-scale surveys on wide-ranging topics, though her recent research has focused on inequalities over different phases of the life course. Her current work at CCRC focuses on identifying victimization risk factors for children.