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Re-victimization patterns in a national longitudinal sample of children and youth $\stackrel{\text{tr}}{\sim}$

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Abstract

Objective: To understand to the degree to which a broad variety of victimizations, including child maltreatment, conventional crime, peer, and sexual victimizations, persist for children from 1 year to the next.

Design: A national sample of 1467 children aged 2–17 recruited through random digit dialing and assessed via telephone interviews (with caretakers and youth themselves) about a comprehensive range of victimization experiences in the previous year, and then re-assessed (72.3% of baseline sample) after a 1-year interval.

Results: The risk for re-victimization in Year 2 was high for children victimized in Year 1, with risk ratios ranging from 2.2 for physical assault to 6.9 for sexual victimization. Victimization of any one type left substantial vulnerability even for different types of subsequent re-victimization (e.g., property crime victimization was associated with higher risk of sexual victimization the next year). Children with four or more types of victimization in Year 1 ("poly-victims") were at particularly high risk of persisting poly-victimization. Persisting poly-victimization was more likely for children who scored high on anger/aggression and who had recent life adversities. Desistence from poly-victimization was associated with having more good friends. Onset of poly-victimization in Year 2, in contrast to persistence from Year 1, was associated with violent or maltreating families, family problems such as alcohol abuse, imprisonment, unemployment and family disruption. Having more older siblings acted as both a risk factor and a protective factor for different groups of youth.

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Conclusion: Children previously victimized in 1 year are at higher risk of continued victimization, and the polyvictims are at particular risk. These findings suggest the potential merit of identifying these high-risk children and making them priority targets for prevention efforts.

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Introduction

The concept of re-victimization or repeat victimization is increasingly of interest to researchers who study maltreatment and crime. This interest is grounded in evidence that persons who experience one victimization (an assault, a burglary, sexual abuse, etc.) are at greater risk for subsequent victimizations and the obvious merit of interrupting this pattern (Weisel, 2005).

The issue has been addressed in different ways in somewhat different literatures with different conceptualizations and terminologies. In some research, for example, the term re-victimization has meant a connection between a childhood victimization and an adult victimization, such as child sexual abuse and adult rape (Arata, 1999; Arata & Lindman, 2002; Desai, Arias, Thompson, & Basile, 2002; Merrill et al., 1999; Messman & Long, 1996, 2000; Noll, Horowitz, Bonanno, Trickett, & Putnam, 2003; Wyatt, Guthrie, & Notgrass, 1992). In other research, where the more frequently used term is repeat victimization, it has meant two victimizations occurring in closer proximity, such as two burglaries over the course of several years (Farrell, Philips, & Pease, 1995; Hope, Bryan, Trickett, & Osborn, 2001; Lauritsen & Quinet, 1995; Menard & Huizinga, 2001; Outlaw, Ruback, & Britt, 2002). In yet another research context, it has meant the recurrence of an episode of child maltreatment typically at the hands of the same perpetrator after a first episode was identified (Depanfilis & Zuravin, 1999).

Despite these variations, an overall limitation to the re-victimization and repeat victimization literature has been the tendency to consider victimization in somewhat narrow terms. Typically, studies have examined the recurrence of only one or a few kinds of victimizations, for example sexual abuse or violent crime. But the possibility also exists that victimizations of one sort, such as child maltreatment, may create a vulnerability for other different kinds of victimization, such as peer assault or sexual victimization. Moreover, any single kind of victimization may signal a generalized vulnerability in that child for victimization. This could also lead to strong associations across victimization types. Defining re-victimization too narrowly as the reoccurrence of only a single kind of victimization may substantially underestimate the real magnitude of risk associated with victimization. In this article, we will be considering victimizations broadly to include conventional crime victimization, like theft and assault; child maltreatment, such as physical and sexual abuse and neglect; peer victimizations, like bullying; and even exposure to domestic and community violence.

Another limitation to the re-victimization literature is that it has tended, like much of the victimization field as a whole, to view victimization as an event rather than as a condition. Victimization has often been treated as a somewhat unusual, individual event of a particularly traumatic sort. But many victimizations are ongoing, as the literatures on bullying, child abuse, and intimate partner violence have made clear. Moreover, studies of peer relationships among young children have increasingly suggested that some children become trapped in a victimization condition, in which they are subjected to repeated attacks of different types from different children (Kochenderfer Ladd, 2003; Kochenderfer Ladd & Ladd,

2001). Such victimization proneness can continue for years. This suggests that an important focus of re-victimization studies should be on the persistence of victimization as a condition, rather than simply the recurrence of certain kinds of victimization events.

Still another limitation to the re-victimization literature is that it has not devoted much attention to the issue of how individuals escape re-victimization, or what might be termed "victimization desistence." If victimization is viewed as an unusual event, then it can be assumed that most victimized individuals will not be re-victimized, and, therefore, all that needs to be explained is subsequent re-victimization. But if victimization is a persisting condition for many youth, then the question of how they escape such a condition is both interesting and of great practical and clinical importance.

To the extent that vulnerability for re-victimization has been considered, it has mostly been analyzed in terms of what have been called "static" risk factors, things about individuals and their conditions that are impossible or very difficult to change. Thus, questions typically studied are whether children from some ethnic groups or from lower socioeconomic status are more likely to be re-victimized. However, the search for ways to prevent re-victimization and promote desistence needs to focus on risk and protective factors more amenable to manipulation or amelioration. Such a search would focus on short-term and modifiable antecedents to the persistence and desistence of victimization.

The findings on re-victimization in this paper come from an ongoing longitudinal study of a comprehensive range of victimizations experienced by children and youth across the full spectrum of child development. The screening for a broad range of victimizations allowed an analysis of how some kinds of victimization create vulnerability for other kinds of victimization. It also allowed the identification of children with extensive victimization profiles, children who might be considered trapped in a victimization condition. The interviews with children and parents at 1-year time intervals also allowed for the study of re-victimization over a relatively short time period, and the identification of relatively short-term antecedents of persistent victimization.

There were several keys questions of interest in this exploratory analysis:

- 1. Are children victimized in one year indeed at considerably increased likelihood to be victimized again during the next year? Based on the previous literature, we expected such enduring vulnerability to be present.
- 2. Does victimization of one sort create vulnerability for victimization of another sort? We expected that it would over a broad range of victimizations, if only because different victimizations do have common risk factors (Finkelhor & Asdigian, 1996). We also expected, however, that repeat victimization of the same sort might be more common than one kind of victimization leading to a different kind of victimization.
- 3. Are highly victimized youth in one year particularly vulnerable to re-victimization the next? We expected the most intensively victimized youth to be the ones most vulnerable to re-victimization. In earlier analyses of this sample (Finkelhor, Ormrod, & Turner, 2007), we identified a subset of children with high levels of different kinds of victimization, a group we have termed "poly-victims," for whom victimization was a potentially generalized condition rather than just a set of events. We expected these children to be especially vulnerable to continued victimizations. Moreover, based on literature suggesting the particularly large developmental insults posed by such experiences as child maltreatment and sexual abuse (Dube et al., 2005; Felitti, Anda, & Nordenberg, 1998), we also expected such victimizations might be particularly powerful "gateways" to persisting victimization or persisting high levels of victimization.

4. What are risk factors that may lead to conditions of high victimization vulnerability and persistence, as well as resilience factors that may allow children to escape or "desist from" such a condition? A diverse range of factors have been cited as possible risk factors for different kinds of victimization (Finkelhor & Asdigian, 1996), including such features as family problems and instability, neighborhood conditions and life course adversities. Other factors such as social support and social competence have been seen as resilience factors. We expected some of these to contribute to revictimization vulnerability and desistence.

Methods

Participants

This research is based on data from the Developmental Victimization Survey (DVS), a longitudinal study designed to assess a comprehensive range of childhood victimizations across gender, race, and developmental stage. Analyses are based on a sample of 1467 respondents who participated in two waves of data collection obtained approximately 1 year apart.

The first wave of the survey, conducted between December 2002, and February 2003, assessed the experiences of a nationally representative sample of 2030 children age 2–17 living in the contiguous United States. The interviews with parents and youth were conducted over the phone by the employees of an experienced survey research firm specially trained to talk with children and parents. Telephone interviewing is a cost-effective methodology (Weeks, Kulka, Lessler, & Whitmore, 1983) that has been demonstrated to be comparable in reliability and validity with in-person interviews, even for sensitive topics (Bajos, Spira, Ducot, & Messiah, 1992; Bermack, 1989; Czaja, 1987; Marin & Marin, 1989). The methodology is also used to interview youth in the US Department of Justice's National Crime Victimization Survey (Bureau of Justice Statistics, various years), and in a variety of other epidemiologic studies of youth violence exposure (Hausman, Spivak, Prothrow-Stith, & Roeber, 1992).

The sample selection procedures were based on a list-assisted random digit dial (RDD) telephone survey design. "List-assisted" dialing confines the random digit selection to telephone exchanges nationwide that have known listed residential phone numbers. This design yielded a random national sample of households, since each telephone number within the set of exchanges had an equal chance of being dialed. A short interview was conducted with an adult caregiver (usually a parent) to obtain 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. If the selected child was 10–17 years old, the main telephone interview was conducted with the child. If the selected child was 2–9 years old, the interview was conducted as proxies for this age group because the ability of children under the age of 10 to be recruited and participate in phone interviews of this nature has not been well established, yet such children are still at an age when parents tend to be well informed about their experiences both at and away from home. In 68% of these caretaker interviews, the caretaker was the biological mother, in 24% the biological father, and in 8% some other relative or caretaker.

Up to 13 callbacks were made to select and contact a respondent and up to 25 callbacks were made to complete the interview. Consent was obtained prior to the interview. In the case of a child interview, consent was obtained from both the parent and the child. Respondents were promised confidentiality and

were paid \$10 for their participation. For youth respondents (ages 10–17 years), special attention was paid to protecting child privacy during data collection to aid in the assessment of sensitive victimizations. For example, interviewers were trained in how to help youth find times and locations when they would not be overheard, and to arrange callbacks when appropriate. Children or parents who disclosed a situation of serious threat or ongoing victimization were re-contacted by a clinical member of the research team, trained in telephone crisis counseling, whose responsibility was to stay in contact with the respondent until the situation was resolved or brought to the attention of appropriate authorities. All procedures were authorized by the Institutional Review Board of the University of New Hampshire. Data were collected using a CATI (Computer Assisted Telephone Interview) system. The use of CATI minimizes recording errors and provides substantial quality control benefits.

Only interviewers with extensive experience interviewing children and in addressing sensitive topics were chosen. Interviewers then went through extensive training on the questionnaire and interview protocol. The final Wave 1 sample consisted of 2030 respondents: 1000 children (age 10–17) and 1030 caregivers of children age 2–9. These completed interviews represented 79.5% of the eligible persons contacted.

Wave 2 of the survey was conducted between December 2003 and May 2004, approximately 1 year after the baseline interview. The same careful interviewing procedures and human subjects' protocol used in Wave 1 were implemented in this second wave of data collection. Respondents were again paid \$10 for their participation. A total of 1467 respondents (72.3% of the baseline sample) were re-interviewed in Wave 2.

All Wave 1 questions about victimization types and victimization circumstances were repeated in Wave 2 to insure that comparable data were collected for the 2 years surveyed. Further information about the child, the child's family, living circumstances, non-victimization experiences, and other characteristics were gathered by additional questions. Some of these additional questions were repeated in both Wave 1 and Wave 2, and some were unique to a single interview wave.

Attrition analyses show that respondents lost to follow-up were more likely to be Hispanic, lower in socioeconomic status (as assessed by a composite of income and parent education), and younger (i.e., children in the 2–9-year-old sample). However, there were no significant differences between Wave 2 respondents and those lost to follow-up on level of victimization reported at baseline.

Measurement

Victimization. Victimization exposure was obtained using the Juvenile Victimization Questionnaire (JVQ) (Hamby, Finkelhor, Ormrod, & Turner, 2004a). The JVQ was designed to be a more comprehensive instrument than has typically been used in past research, providing a description of 34 offenses that cover five general areas of concern: conventional crime, child maltreatment, peer and sibling victimization, sexual assault, and witnessing and indirect victimization (Appendix 1) (Hamby, Finkelhor, Ormrod, & Turner, 2004b). Follow-up questions for each screener item gathered additional information needed to classify event types, including perpetrator characteristics, the use of a weapon, whether injury resulted, and whether the event occurred in conjunction with another screener event.

A previous evaluation of JVQ performance found few indicators of respondent confusion and little resistance to even the most sensitive questions (Finkelhor, Hamby, Ormrod, & Turner, 2005). In a test of construct validity, endorsements of JVQ items correlated well with measures of traumatic symptoms. The

instrument also showed adequate test-retest reliability in a 2-week re-administration. Large numbers of victimizations were reported across the range of ages, and there were no major discontinuities between the self-reports and caregiver reports, suggesting that caregivers provided generally adequate and comparable information to child self-reports about the experiences of children under age 10 for all categories of victimization.

The individual screener items were used to construct aggregate summaries of victimization indicating whether respondents were exposed to *any* victimization within each of seven categories of victimization screener (conventional crime, property crime, physical assault, peer/sibling victimization, sexual victimization, child maltreatment, and witnessing/indirect victimization).

In addition, a summary measure of victimization was developed that assesses exposure to multiple forms of victimization across all 34 specific types. Multiple victimizations were defined as victimizations of a different type (a different screener) occurring as part of a separate incident (separate time and place of occurrence). Children with higher levels of multiple victimization (four or more different types within the same year, those above the Year 1 average of three) were identified as "poly-victims." The development and utility of this poly-victimization measure is discussed in more detail elsewhere (Finkelhor et al., 2007).

Possible predictor variables. An important goal of the analysis was to explore a wide range of possible factors from the assessment at both Year 1 and Year 2 that might act as risks for or protectors from repeat victimization or new victimization. Factors for which measures were available included child personal, household, and locational characteristics, parent relations, delinquency, life course events, adversities, family problems, and Year 1 victimization characteristics (Appendix 2). While most measures were available for all children in the sample, those that referred to some aspect of school experience were asked only of children 6 years and older. Because of the large number of potential predictor variables (54), only those of particular theoretical interest, or found to be influential in predicting re-victimization or new victimization, are described here.

Personal, household, and location factors. Child *race/ethnicity* was coded into four mutually exclusive dichotomous variables based on information obtained in the initial parent/caregiver interview for Year 1. Variables are: (1) White non-Hispanic, (2) Black non-Hispanic, (3) other race non-Hispanic, and (4) Hispanic any race. *Local violence* is the sum of responses to two questions that asked how much a problem violence was in (1) the child's school and (2) the child's neighborhood. Possible responses ranged from 1 ("not a problem at all") to 4 ("big problem"). Cases with only one non-missing response were given a score of twice the remaining response.

Number of siblings is the count of all other children (regardless of actual familial relationship) living in the household (as reported by the parent/caregiver). *Number of older siblings* was determined by comparing the age of all other household children to that of the selected child. *Family structure* was based on the composition of the household reported in Year 1 and described the nature of the child's primary caregiver(s). Specifically, three household types were categorized, those with: (1) two biological parents, (2) one biological parent plus partner, and (3) single biological parent or other caregiver.

Dangerous family is a measure that reflected actual family violence that occurred in Year 1 and was based on responses to selected victimization screeners for that interview wave. A dichotomous variable was constructed indicating whether a child had been physically abused, had witnessed domestic violence, or had witnessed physical abuse of a sibling in Year 1 (0 = no; 1 = yes).

Parental supervision. Parental supervision is the summary score of year 1 responses to the following three statements: "I know who my ___year olds' friends are," "I know where he/she is when he/she is not home," "I know what my ___year old is doing when I'm not with him/her." Parents responded on a four-point scale ranging from strongly disagree to strongly agree. The reliability coefficient for the measure is .76.

Delinquency. The *Delinquency score* is the sum of "yes" responses to 17 questions about possible delinquent behaviors during Year 1. These items included such behaviors as breaking or damaging other people's property, fighting, stealing, cheating, skipping school, carrying a weapon, and using drugs or alcohol.

Life events. Life events measures represented conditions that prevailed or events that occurred in either Year 1 or Year 2. For example, respondents were asked about any of six non-victimization adversities that might have occurred in Year 1—the child experiencing a natural disaster (fire, flood, tornado, earthquake, etc.), being hospitalized for illness or accident, having someone close be hospitalized for an illness or accident, or having someone close die. *Number of adverse events* was a simple count of the number reported. Similarly, *Number of family problems* was the number of intra-family stressful events (out of five) experienced in Year 1—homelessness, unemployment, family member imprisoned, drug or alcohol problem within family, or parents fighting and arguing.

Changed school type was assessed by comparing the parent/caregiver's report of the child's current school type (public school, boarding school, parochial/religious school, other private school, and home school) in Year 2 compared to Year 1. Cases with different types were coded as "yes," with the same types as "no." *Moved to worse house/neighborhood* was a simple yes/no answer to one of a number of questions asked of the respondent (child or caregiver, depending on age) on "whether the following things happened" during Year 2. *Number of good friends* is the response to a question asked of the respondent in Year 2: "How many really good friends does [do] your child [you] have at school? These would be kids that he/she [you] plays with or hangs out with a lot." For coding purposes, the maximum number was truncated at 10.

Individual adverse events and individual family problems. These variables were the responses to questions about the individual events described above for the Number of adverse events and Number of family problems measures (0 = no; 1 = yes).

Victimization characteristics. A number of variables were constructed that captured details of the victimizations suffered in Year 1: whether any *Injury*, *Weapon*, *Caregiver perpetrator*, or *Household perpetrator* was part of any reported victimization; whether there was *Chronic victimization* of any one type (defined as 10 or more episodes of the same type of victimization in the past year); whether a child had been victimized by multiple types of perpetrators, such as both *Peer and adult*, *Family and non-family*, and *Male and Female*; or had been victimized in *Multiple domains* (in more than one of the aggregate victimization types described above).

Trauma symptoms. Measures of child *Anger/aggression*, *Depression*, and *Anxiety* at Year 1 were constructed from responses to items from the Trauma Symptoms Checklist for Children (TSCC) (Briere, 1996), used with the 10–17-year-old self-report interviews, and the Trauma Symptom Checklist for Young Children (TSCYC) (Briere et al., 2001), used in the caregiver interviews for 2–9-year olds. Anger/aggression, depression and anxiety scores for each age group were standardized and merged into single variables, which were then re-standardized to center the means among the entire sample.

Data analysis

For purposes of comparison, children within the sample were grouped in a number of ways, based on their victimization experiences. Those who had suffered any victimization within each type of aggregated victimization (conventional crime, property crime, physical assault, peer/sibling victimization, sexual victimization, maltreatment, witnessed/indirect victimization) in *both* Year 1 and Year 2 were considered "re-victimized" (with regard to that specific type of victimization). Similarly, children who were identified as poly-victims (four or more different victimization incidents) in *both* Year 1 and Year 2 were considered re-victimized (or repeat) poly-victims.

Those children who had been victimized in a specific aggregate category in Year 1, but *not* in Year 2, were considered "desistors," as were poly-victims in Year 1 who were *not* poly-victims in Year 2. Finally, children who had suffered a particular aggregate victimization type or who were a poly-victim in Year 2, but *not* in Year 1, were identified as "new victims" (for each type).

These comparison groups were used to determine and compare rates (percentages) of re-victimization, desisting, and new victimization among children for each type of victimization. Risk ratios and correlations were computed to determine how likely previously victimized children were to be re-victimized, relative to non-victimized children.

In an effort to identify risk factors of particular importance to those children suffering high levels of victimization, we examined those who suffered re-victimization as poly-victims in Year 2 and those who became "new" poly-victims in Year 2. These groups of children are of particular interest because poly-victims not only experience the greatest number of victimizations, but also suffer the most serious victimizations and show the most serious mental health consequences (Finkelhor et al., 2007).

Two sub-samples were used to explore the risk factors for poly-victimization. The first consisted of children who had been poly-victims in Year 1. These were children who might either persist as poly-victims (suffer at least four victimizations) in Year 2 or desist as poly-victims (suffer fewer than four victimizations) in Year 2. Poly-victim persistors were compared to poly-victim desistors to determine what risk factors were associated with re-victimization. The second sub-sample consisted of children who had not been poly-victims in Year 1 and who might either persist as non-poly-victims (suffer fewer than four victimizations in Year 2) or become new poly-victims (experience at least four victimizations in Year 2). Comparison of the persistent non-poly-victims with the new poly-victims was used to isolate risk factors for new victimization.

Bi-variate correlations were performed for each sub-sample, comparing the possible predictor variables identified in Appendix 2 with re-victimization (persistence) for the first sub-sample and new victimization for the second. In order to assess the factors related to degree of desistence (rather than rely on simple yes/no re-victimization), the re-victimization variable encoded not only the occurrence of re-victimization, but also the degree of desistence for those children who moved from poly-victimization in Year 1 to non-poly-victimization in Year 2. Similarly, the new victimization variable recorded the degree of increase in victimization for those children who shifted from non-poly-victimized to poly-victimized status. Degree of desistence and degree of increase calculated how far above or below the poly-victimization threshold (more than three or less than four victimization incidents) a child's total number of incidents shifted from

Year 1 to Year 2. The bi-variate results were then used to guide the construction of multiple regression models predicting either re-victimization or new victimization.

While correlation and multiple regression can reveal which variables are significantly associated with re-victimization and new victimization, they do not disclose whether a particular variable's influence was driven by a protective (dampening) or risk (vulnerability) effect on victimization. Thus, if number of good friends is related to a child's risk of victimization, it could be primarily that having few friends is a vulnerability factor, facilitating victimizations, or alternatively that having many friends is a protective factor, shielding a child from victimization, or both effects might be present. Where possible, we followed Stouthammer-Loeber's (Stouthamer-Loeber, Wei, Loeber, & Masten, 2004) procedure in exploring whether a variable's statistically significant association with re-victimization or new victimization was driven by the high end or low end of the variable's measurement scale.

Results

Victimization rates in the Year 2 were roughly comparable to rates in the Year 1 (Table 1), but there were declines in most categories. Some of the decline may be due to the aging of the sample. Another factor may be that respondents, familiar with the interview format in the second wave, knew that each screener endorsement led to a series of follow-up questions, and may have curtailed endorsements to limit the length of the interview.

Does victimization persist?

There was considerable continuity of victimization over 2 years. For example, 59% of the youth who experienced a conventional crime victimization at Year 1 experienced another such victimization at Year

Aggregate victimization	<i>n</i> (unweighted)	Victimization rate (%)		Risk of re-victimization	Re-victimized ^a (%)	Desisted ^b (%)	New victims ^c (%)
type		Year 1	Year 2	(relative risk)			
Conventional crime	1467	40	39	2.4	59	41	39
Property crime	1467	30	30	2.9	55	45	45
Physical assault	1467	55	49	2.2	65	35	27
Peer/sibling victimization	1467	61	52	2.2	66	34	23
Sexual victimzation	1467	8	8	6.9	39	62	61
Maltreatment	1467	14	10	6.7	36	64	49
Witness/indirect victimization	1467	38	33	3.6	60	40	32
Poly-victimzation	1467	23	17	5.1	46	54	40

Table 1

Victimization rates, re-victimization, and desisting in a national sample of children followed for 2 years

^a % of Year 1 victims victimized again in Year 2.

^b % of Year 1 victims NOT victimized again in Year 2.

^c % of Year 2 victims NOT victimized in Year 1.

* Risk ratios indicated in bold are significant at p < .001.

	Year 2 Victimization:								
	Conventional	Property	Physical	Peer/Sibling	Sexual	Maltreatment	Witness/Indirect	Poly-	
Year 1 Victimization:	Crime	Crime	Assault	Victimization	Victimization	L	Victimization	Victimization	
0 101	2.4	2.7	1.6	1.5	2.0	2.0	2.1	4.2	
Conventional Crime	2.4	2.7	1.6	1.5	3.9	2.9	2.1	4.2	
Property Crime	2.2	2.9	1.4	1.4	3.7	2.7	2.0	3.5	
Physical Assault	2.4	2.3	2.2	2.1	2.8	2.8	1.6	3.8	
Peer/Sib Victimization	2.2	2.4	2.1	2.2	3.2	3.1	1.6	3.8	
Sexual Victimization	1.8	2.3	1.2 ^a	1.1 ^a	6.9	3.7	2.1	3.3	
Maltreatment	1.9	2.2	1.3	1.2	4.3	6.7	1.6	3.5	
Witness/Indirect Victzn	1.3	2.0	1.7	1.2	6.4	3.3	3.6	5.2	
Poly-Victimization	2.2	2.5	1.6	1.5	6.8	4.3	2.4	5.1	

Re-vicunization across unrefent types of vicunization. relative fisk of vicunization in fear 2, based on vicunization in fear

Note: shaded cells represent repeat victimization of the same type.

^aNot significant at p < .05 (all other risk ratios are significant).

2 (Table 1). This meant that 41% of the youth with a conventional crime victimization in Year 1 did not experience the same category of victimization in Year 2. Looking at victimization retrospectively, 61% of the youth who experienced a conventional crime victimization in Year 2, also had a similar victimization the previous year, meaning that 39% of these conventional crime victims were new victims, who had not experienced a conventional crime in the previous year.

To represent comparative re-victimization risks, we calculated the relative risk for all types of victimization in Year 1 with all types of victimization in Year 2 (Table 2). The risk ratios for re-victimization of the same type (e.g., the conventional crime in Year 1 to conventional crime in Year 2, shown along the diagonal) range from the 2.2 for physical assault to 6.9 for sexual victimization, illustrating that a victimization in 1 year signifies a high risk of being victimized again the next year for all victimization types. The ratios, however, were particularly high for sexual victimization and child maltreatment.

In previous analyses of Year 1 data about the burden of victimization (Finkelhor et al., 2007), we identified a subset of child victims with a particularly high level of vulnerability: those youth (about one fifth of the sample) who experienced four or more different kinds of victimizations within a single year. These 22% of all children, whom we termed poly-victims, accounted for 57% of all the victimizations suffered by anyone. These children were also the ones most likely to experience the most serious victimizations and to manifest the most serious psychological symptomatology (Finkelhor et al., 2007). These are the children who might be most readily thought of as having victimization as a condition rather than an event.

The persistence of poly-victimization status from Year 1 to Year 2 was large, given the seriousness of the condition. Nearly half of Year 1 poly-victims (46%) were poly-victims again in Year 2 and poly-victims at Year 1 were 5.1 times more likely than non-poly-victims to suffer that condition (again) at Year 2.

Nonetheless, in spite of the high risk of re-victimization and the persistence of poly-victimization, some youth did achieve a greater level of safety in Year 2 after a year of poly-victimization. Thus, 54% of Year 1 poly-victims decreased to three or fewer victimizations by Year 2. Thirty-one percent of Year 1 poly-victims even dropped to one or no victimizations by Year 2. The youth whose victimizations dropped below poly-victimization level (three or fewer) are a particularly important group, possibly on the road to escaping from a victim condition that may become more long-standing for other youth.

Table 2

Does one type of victimization create vulnerability for another?

Re-victimization often is defined as the recurrence of only a single type of victimization of interest—for example, the likelihood that a sexual assault victim will experience another sexual assault. But a victimization can also create a vulnerability to other kinds of victimization, a process that is often not seen when information on only one type of victimization is gathered. In the matrix shown in Table 2, most victimizations are associated with increased vulnerability for other kinds of victimizations. For example, maltreatment in Year 1 is associated with a 1.9 times greater rate of conventional crime or 2.2 times greater rate of property crimes in Year 2. While the risk ratios are generally the greatest for the same type of victimization from Year 1 to Year 2, they are also significantly high for almost all cross-victimization combinations.

Are highly victimized youth in 1 year particularly vulnerable to re-victimization the next?

The presence of poly-victimization in Year 1 had a high risk of persisting, and it generally increased the risk for every individual kinds of victimization in Year 2, in some cases dramatically so. Thus, poly-victims in Year 1 were 6.8 times more likely than non-poly-victims to have a sexual victimization in Year 2 and 4.3 times more likely to suffer maltreatment in Year 2. Although both sexual victimization and maltreatment had high risks of persisting, their presence in Year 1 created risks for other kinds of victimization in Year 2 that were not much different from any other kind of Year 1 victimization.

What other factors may predict persistence and desistence?

As noted earlier, to identify factors that might help explain why children cease being victimized or are re-victimized, we focused particularly on the poly-victimized youth. Factors that were found to have significant bi-variate associations with either poly-victim re-victimization/desistence are reported in Table 3. To assess their relative importance and independence, these variables were entered into a multi-variate regression, whose results are also shown in Table 3.

Interestingly, relatively few so-called "static" or background characteristic variables identified children who had repeat poly-victimization rather than desistence (Table 3). Gender, family structure, and socioeconomic status were not significant factors. Among ethnicity variables, Black children had a higher probability of desistence. However, age was not significantly associated with re-victimization/desistence, indicating that children of any age have a roughly equal opportunity to escape from a condition of multiple victimization within the period of a year.

Notably, there were two social network factors that were clearly related to desistence from polyvictimization: having more older siblings and having more good friends. The number of general adversities experienced in the past year (things such as hospitalizations or accidents to the child family and friends) was also significantly associated with desistence. Separate analyses of both low adversity and high adversity youth suggested the stronger influence was from low adversity's contribution to the desistance, rather than high adversity's contribution to repeat poly-victimization. Living in a dangerous family (one in which recent domestic violence or child maltreatment had occurred) was significant at the bi-variate level, but not in the multivariate model. Poly-victimized youth who had moved to a worse neighborhood sometime during Year 1 were at significantly greater risk to persist as poly-victims.

Table 3

Predicting repeat poly	y-victimization	/desistence in	Year 2
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Variables	Multi-variate model (standardized coefficients)				Bi-variate	
	β	SE	t	Sig. ^a	r	Sig. ^a
Constant			-3.833	0.00		
Personal						
Child age	-0.083	0.073	-1.135	0.26	0.08	0.14
Black	-0.203	0.059	-3.466	0.00	-0.16	0.00
Household						
Number of older siblings	-0.196	0.063	-3.105	0.00	-0.13	0.02
Dangerous family	0.105	0.061	1.721	0.09	0.16	0.00
Parental supervision	-0.004	0.062	-0.070	0.94	0.14	0.02
Life course						
Number of adversities	0.128	0.061	2.085	0.04	0.21	0.00
Changed school type	0.084	0.063	1.339	0.18	0.12	0.04
Move worse neighborhood	0.142	0.059	2.426	0.02	0.15	0.01
Number of good friends	-0.120	0.060	-1.995	0.05	-0.15	0.01
Delinquency						
Delinquency score	-0.040	0.077	-0.522	0.60	0.24	0.00
Victimization type						
Conventional crime	0.119	0.058	2.060	0.04	0.12	0.03
Physical assault	0.090	0.059	1.513	0.13	0.11	0.04
Non-family witness/indirect victimization	0.200	0.060	3.310	0.00	0.20	0.00
Victimization character						
Injury	0.063	0.065	0.964	0.34	0.19	0.00
Chronic victimization	0.062	0.058	1.069	0.29	0.18	0.00
Weapon	0.031	0.063	0.487	0.63	0.15	0.01
Trauma symptoms						
Anger/aggression	0.226	0.086	2.642	0.01	0.28	0.00
Depression	-0.053	0.080	-0.663	0.51	0.13	0.02
Anxiety	0.031	0.077	0.400	0.69	0.14	0.01

 $R^2 = .30$, adjusted $R^2 = .24$, model p < .001, unweighted n = 308.

^a Bold face indicates variables significant at $p \le .05$.

Certain kinds of Year 1 victimization experiences were associated with repeat victimization in Year 2, particularly experiencing a conventional crime (physical assault or property crime) and witnessing non-family violence. Experiencing a victimization with an injury or a weapon carrying assailant or experiencing chronic victimization of one type (e.g., a number of times in the past year) in Year 1 were related to repeat victimization at the bi-variate level, but not when additional factors were controlled in the multi-variate analysis.

The most influential variable related to repeat poly-victimization/desistence was the psychological measure of anger/aggression. It is noteworthy that anger/aggression (measured in Year 1) predicted repeat poly-victimization, but depression or anxiety—two other traumatic effects of victimization that have often been associated with a decreased capacity to protect oneself—did not. Delinquent behavior,

which had also been associated with repeat poly-victimization at the bi-variate level, did not remain significant once anger/aggression and a number of other factors were accounted for in the multi-variate model.

What predicts new poly-victimization

In addition to understanding the factors that may help to lock a child into a sustained pattern of high victimization, it is also important to understand the factors associated with the movement of children from a lower to higher victimization level in the course of 1 year. Forty percent of the youth who qualified as poly-victims in Year 2 had not been poly-victims in Year 1.

Many of the variables associated with becoming a new poly-victim in Year 2 (Table 4) were different from those associated with persisting in a poly-victimization condition. Multi-variate analysis indicated that becoming a new poly-victim was more likely for older children (which had not been the case for poly-victim persistence). Hispanic children were protected from movement into poly-victimization.

Variables	Mu	Bi-variate				
	β	SE	t	Sig. ^a	r	Sig. ^a
Constant			-1.553	0.12		
Personal						
Child age	0.074	0.031	2.368	0.02	0.05	0.10
Hispanic	-0.091	0.029	-3.145	0.00	-0.08	0.01
Household						
Single parent	0.091	0.029	3.108	0.00	0.08	0.01
Parent + partner	0.067	0.030	2.258	0.02	0.09	0.00
Two parents (reference category)					-0.13	0.00
Number of older siblings	0.121	0.030	4.051	0.00	0.10	0.00
Dangerous family	0.121	0.030	4.095	0.00	0.16	0.00
Life course						
Number adversities	0.005	0.030	0.176	0.86	0.09	0.00
Number of family problems	0.066	0.031	2.161	0.03	0.12	0.00
Victimization type						
Multi-domain victimization	0.049	0.032	1.538	0.12	0.14	0.00
Victimization character						
Injury	0.040	0.030	1.342	0.18	0.12	0.00
Chronic victimization	0.065	0.032	2.073	0.04	0.11	0.00
Weapon	0.060	0.030	2.041	0.04	0.09	0.01
Trauma symptoms						
Anger/aggression	0.024	0.036	0.68	0.50	0.09	0.00
Depression	0.051	0.036	1.421	0.16	0.12	0.00
Anxiety	-0.008	0.035	-0.246	0.81	0.07	0.02

Table 4Predicting new poly-victimization in Year 2

 $R^2 = .10$, adjusted $R^2 = .08$, model p < .001, unweighted n = 1115.

^a Bold face indicates variables significant at $p \le .05$.

Meanwhile, children in single parent and parent-plus-partner (stepparent) families had a disproportionate risk of new poly-victimization, as did those living in dangerous families (those with domestic violence or child maltreatment). Of particular interest was the effect of having more older siblings on the risk of new poly-victimization. This factor, which had been a protective factor in regard to repeat poly-victimization, was actually a risk factor in this analysis (showing a positive association with new poly-victimization).

Although number of adversities and number of family problems in Year 1 were both associated with new poly-victimization at the bi-variate level, it was only the number of family problems (alcohol, homelessness, family member imprisonment) that proved to be influential in the multivariate analysis. The kinds of Year 1 victimization experiences that best predicted new poly-victimization in Year 2 were having a single kind of victimization on a chronic basis and facing an assailant with a weapon. None of the trauma symptom measures turned out to be independently associated with new poly-victimization.

Overall, despite the several significant variables, the multivariate model predicting new polyvictimization was not very strong, with an overall R^2 of only .10 (adjusted $R^2 = .08$). This may reflect in part the fact that new poly-victims constituted only 9% of youth who had not been poly-victims in Year 1. But it also suggests that predicting entry into poly-victimization in the short-term may be difficult.

Discussion

Taking a comprehensive and longitudinal perspective does highlight the burden of victimization on children. Large numbers of children experience a diverse variety of victimizations that continue over time. Not only does this study reconfirm the findings from Year 1 that children suffer high quantities of different sorts of victimization (Finkelhor, Ormrod, Turner, & Hamby, 2005), it also emphasizes that such victimizations have a very high likelihood of persisting. Children victimized in one year are two to seven times more likely than non-victimized children to be victimized again in the following year.

Moreover, in answer to the second research question, re-victimization vulnerability extended to a very broad range of victimizations. That is, children who experienced a property crime, to take but one example, were at increased risk to experience a subsequent sexual victimization. Children who witnessed victimizations were more likely to experience a subsequent property crime, and so forth.

In answer to the third research question, poly-victimization had a high risk of persistence and a strong association with all other future types of victimization as well. The highly victimized children were very likely to remain so, and also had high levels of vulnerability to every specific kind of victimization. The matrix of interrelationships among victimizations, moreover, did not suggest that child maltreatment or sexual victimization were unique "gateway" victimizations; that is to say, they did not produce a notably higher vulnerability than other types to later victimizations. The hypothesis that maltreatment is a special gateway victimization was only supported in the vulnerability it created for sexual victimization, not other victimizations. Most striking was how virtually all types of victimization were associated with elevated vulnerabilities for all other kinds of subsequent victimizations.

This heterogeneity of associations may reflect a number of factors. The present study is not a longitudinal study from birth onward, but rather is a tracking of a sample in the middle of a developmental progression. Therefore, the importance of possible gateway victimizations such as child maltreatment or sexual abuse may be lost, since for much of the sample these gateway events may have happened prior to our first assessment. The heterogeneity of association may also reflect the fact that victimization vulnerability is a generalized condition for a lot of children; that is to say, that the environmental and personal factors creating vulnerability apply across a wide range of victimizations. Thus, it might not be surprising that a child living in a dangerous neighborhood or a child who has a poor ability to perceive risk would be vulnerable to a wide variety of victimizations, and would experience one type during one year and another type during the next. There may also be generalized causal pathways among different kinds of victimization. For example, a hypothesis consistent with the data would be that any form of victimization may create psychological states that may increase the risk of different kinds of future victimizations. Another hypothetical generalized pathway might be that any form of victimization may promote gang membership, which may ironically increase the risk of a variety of kinds of victimization rather than foster protection.

The pervasiveness of victimization and the heterogeneity of associations do reinforce the sense that for many children vulnerability to victimization is an ongoing condition, rather than a discrete set of events. This possibility is reinforced by the analysis of the group of youth whom we have termed poly-victims. The persistence of the poly-victimization condition was particularly high, with a risk ratio for repeat poly-victimization at 5.1, and poly-victims in Year 1 were at increased risk to experience subsequent sexual victimization, child maltreatment, and virtually all other forms of victimization in Year 2. This reinforces findings from our earlier Year 1 analysis (Finkelhor et al., 2007) suggesting that poly-victims are a group of highly vulnerable youth who merit considerable research and clinical attention. Efforts to identify them, mitigate their condition and interrupt their high vulnerability to ongoing victimization should be an important priority of intervention.

In response to our fourth question about risk factors, our exploratory analysis suggested a number of factors associated with the onset, persistence of and desistence from the poly-victimization condition. Living in a dangerous family, in which children witnessed or experienced violence, seemed to predict a debut into poly-victimization. In addition, single parent or stepparent families, or families with more family problems were also precursors. These findings suggest that family violence, family conflict, and related developments may be gateway events in the onset of poly-victimization.

However, these family issues were not necessarily predictors of the persistence of poly-victimization. Rather, a strong factor predictive of persistence was anger/aggression, which was not influential in explaining onset. A possible sequence which might join the conditions predicting the onset of poly-victimization with those associated with its persistence is a pathway in which child maltreatment, domestic violence, family conflict, and disruption propel children into an intensively and generalized victimized condition that in turn generates general anger/aggression, which by fueling and sustaining defiant, challenging, rule-violating behavior, tends to lock them into an even more persistent victimized condition.

Unfortunately, our analyses suggested few factors that were positively associated with desistence from or protection against continued poly-victimization. The most promising was the fact that youth with more friends had a lower risk of repeated poly-victimization. The possibility that enhanced social networks and social support could influence the persistence of poly-victimization could be the basis for important intervention approaches. This finding is certainly consistent with other literature showing that social support—in forms such as friendship or nurturant family members—protects against the negative consequences of adversity and victimization (Everson, Hunter, Runyan, Edelsohn, & Coulter, 1989; Quamma & Greenberg, 1994; Wills, Vacarro, & McNamara, 1992). Future research might want to examine whether the buffering role of friendship is of a general sort, enhancing self-esteem and self-efficacy, or whether friends provide specific help, such as alliances against bullies or advice on self-protection. Research does suggest that third parties can inhibit bullying and perhaps some sexually assaultive behavior (Banyard, Moynihan, & Plante, 2007; Hawkins, Pepler, & Craig, 2001), so perhaps a

prevention approach that emphasizes the education and mobilization of third party allies and bystanders may help highly victimized youth.

Another kind of support, receipt of counseling, was not associated with desistance. The design of this study, however, is not well suited to evaluating the effects of specific interventions, whose timing, intensity, and focus were not specified during data collection.

A curious, and potentially important finding from the study is the role that older siblings may play in both desistence and in vulnerability to new poly-victimization. Children with more older siblings were more likely to desist from poly-victimization over the 2 years of our study; in contrast, youth with more older siblings who were not poly-victims in Year 1 were also more likely to become new poly-victims in Year 2. This means that having more older siblings was a protective factor among poly-victims, but paradoxically a risk factor for everyone else. Additional exploration of the role of older siblings clearly indicated that it was *not* increases or decreases in sibling-perpetrated offenses themselves that were responsible for the risk and protection. Analysis revealed that sibling-perpetrated incidents decreased from Year 1 to Year 2 for poly-victims at about the same rate for children with no older sibs (-25%) and those with many older sibs (-24%). And, for non-poly-victims in Year 1, those with several older sibs had no increase in sibling-perpetrated incidents in Year 2. Rather the salient increases and decreases occurred in non-sibling offenses, which decreased disproportionately for those with more older siblings among poly-victims (-47% vs. -35% for those with no older siblings) and increased disproportionately for those with more older siblings among non-poly-victims (34% vs. 10% for those with no older siblings).

A possible clue to the bi-directional role of older siblings was the fact that the Year 1 poly-victims are a significantly older group (mean age 11.6 years) than the Year 1 non-poly-victims (mean age 9.3 years). It may be that for some children older siblings provide an escalator to higher victimization environments (bigger and older friends and dangerous contexts) than these children would ordinarily encounter. However, some of the older children with older siblings who become heavily victimized may be able to more easily decouple themselves from victimization risks and dangerous contexts by differentiating themselves from these siblings. Moreover, older siblings may also be decoupling themselves from younger sibs as they depart or prepare to depart from home. So having older siblings could operate in different directions for the two groups (the poly-victims and the non-poly-victims), that is to say, at different stages of the sibling influence trajectory. The study clearly suggests the need to study the influence of siblings on victimization risk in greater detail.

The study also has implications for the research on re-victimization. Clearly, the evidence from the study highlights the need to examine a broad range of victimizations in trying to assess how victimization vulnerability may cascade. Second, the large number, broad diversity, and interrelationship of victimizations have implications for how re-victimization should be conceptualized. Because a majority of children experience some victimization in each year and a substantial minority experience serious victimizations, it does seem unwise to presume that the first victimization identified in any study (other than one that starts prospectively at birth) is the *first* victimization and subsequent ones are re-victimizations. It is very likely that the first victimizations identified are actually re-victimizations. Unfortunately, asking about lifetime occurrence is not a solution to the problem. Given the frequency of victimizations, it is probably an impossible task to obtain a full inventory of victimizations in a retrospective question about lifetime occurrence. Moreover, it is almost certainly a difficult and unreliable task to get a correct sequencing of these retrospective victimizations. Thus, it may appear in a retrospective assessment of lifetime victimizations that a child's sexual abuse was a first victimization and the gateway to a cascade of subsequent

victimizations and other adversities (Browning & Laumann, 1995). But this child may have suffered from even earlier sibling assault, bullying, or forms of child maltreatment that created the vulnerability of sexual abuse, even though these experiences are not well remembered and inventoried.

The pervasiveness of victimization also to some extent calls into question the utility of the concept of re-victimization. Re-victimization as a concept almost presumes that victimization is unusual. But when experiences are common and nearly normative, different conceptualizations may be needed. A good comparison may be to the concept of illness. Children have many illnesses—and some have more than others because of a variety of environmental and individual vulnerabilities. Some illnesses do re-occur (ear infections) and some create direct vulnerabilities for other illnesses (bronchiolitis/asthma), and a wide variety of mechanisms may be involved. While the relationship among illnesses is important, they may be too numerous and complicated to think of in terms of illness and re-illness. Moreover, as with illness, to the extent that the relationships need to be understood, they must be studied prospectively to identify the timing and mechanisms that underlie the connection.

The current study is notable in that few previous studies have obtained comprehensive victimization assessments at such short intervals. Nonetheless, the findings are subject to important limitations. Although the sample is large and diverse, because of sample attrition it is no longer a true national sample. While 72.3% of respondents in the Wave 1 sample were re-interviewed in Wave 2, this means that only 57.5% of all the eligible persons contacted during the original sampling remained in the final set of respondents. It is possible that the final set of cases contains undetected biases. Some of the populations of greatest interest to this issue—for example, those with extremely adverse life circumstances—may not be well represented because they are difficult to access through a household telephone survey. Some of the findings may be artifacts of unmeasured dimensions, such as a willingness to disclose personal experiences. Because the JVQ was designed to capture a wide range of victimizations, it possesses less depth of detail about individual events than other more focused victimization instruments. Further studies of repeat victimization must take into account this continuing tension between breadth versus depth of victimization treatment. Moreover, broad as the measure of victimization was, the study undoubtedly did not get a complete inventory of victimizations. We do not have good information on the sequencing of victimization, and there may even have been some telescoping of victimizations across data collection vears.

The phenomenon known in the victimization literature as "telescoping" involves respondents who misplace the temporal occurrence of an event in time, possibly reporting the same victimization for 2 separate years, which in this analysis would artificially inflate re-victimization rates. Unfortunately, we had no exact date of occurrence information. We examined the possible effect of telescoping by identifying for each respondent all episodes from Year 1 and Year 2 that shared exactly all the same features (typically, in addition to the same endorsed screener, the same type perpetrator, the same presence or absence of injury, and the same presence or absence of a weapon). Because of their symmetry, these episodes might have been telescoped into Year 2 from Year 1.

Re-victimization rates were recalculated with the "possibly telescoped" events removed from the Year 2 data. Resulting rates for Year 2 were somewhat reduced (e.g., theft dropped from 17.9% to 17.4%, assault with no weapon from 19.1% to 17.4%, peer/sibling assault from 41.6% to 33.5%, while rape remained steady at 1.6%). Risk ratios predicting Year 2 victimization on the basis of Year 1 victimization were similarly reduced (e.g., that for assault with no weapon dropped from 2.7 to 2.1). In spite of these reductions, the likelihood of re-victimization, as reported by the relative risk ratios, remained strong for all screeners.

It was apparent, however, that the procedure for removing possibly telescoped events eliminated many Year 2 victimizations that were unlikely to be actual telescoped events. This was particularly true for those victimizations that had few follow-up features available for comparison and that tended to all look the same. We concluded that telescoping may be responsible for a small portion of re-victimization associations, but not enough to be a threat to the validity of the strong associations demonstrated here.

The study also had only a limited number of variables with which to examine predictors of persistence and desistence. The lack of a comprehensive approach to such risk factors may mean that important factors and confounding variables were omitted.

Conclusion

The second year of the Developmental Victimization Survey clearly confirms that children suffer from a considerable burden of victimization that is both diverse and repetitive. It points the need for and the possibility of charting the interrelationships among victimizations across time. With a broad view of the different forms that victimization can take, researchers should look much more closely at the individual and environmental factors that allow victimization conditions to persist, as well as those that allow escape. In addition, it is certainly not premature to evaluate whether interventions targeted at well-established risk and protective factors, such as social networks, school climate, and parent–child relationships, might also work to reduce such re-victimization.

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References

Arata, C. M. (1999). Sexual revictimization and PTSD: An exploratory study. Journal of Child Sexual Abuse, 8(1), 49-65.

- Arata, C. M., & Lindman, L. (2002). Marriage, child abuse, and sexual revictimization. *Journal of Interpersonal Violence*, 17(9), 953–971.
- Bajos, N., Spira, A., Ducot, B., & Messiah, A. (1992). Analysis of sexual behavior in France (ACSF): A comparison between two modes of investigation: Telephone survey and face-to-face survey. AIDS, 6(3), 315–323.
- Banyard, V. L., Moynihan, M. M., & Plante, E. G. (2007). Sexual violence prevention through bystander education: An experimental evaluation. *Journal of Community Psychology*, 35, 463–481.
- Bermack, E. (1989). Effects of telephone & face-to-face communication on rated extent of self-disclosure by female college students. *Psychological Reports*, 65(1), 259–267.
- Briere, J. (1996). Trauma Symptoms Checklist for Children (TSCC): Professional manual. Odessa, FL: Psychological Assessment Resources.
- Briere, J., Johnson, K., Bissada, A., Damon, L., Crouch, J., Gil, E., Hanson, R., & Ernst, V. (2001). The Trauma Symptom Checklist for Young Children (TSCYC): Reliability and association with abuse exposure in a multi-site study. *Child abuse* & Neglect, 25, 1001–1014.
- Browning, C. R., & Laumann, E. O. (1995). Sexual contact between children and adults: Tracking the long-term effects. American Sociological Review, 62(4), 540–561.

- Bureau of Justice Statistics. (various years). *National crime victimization survey*. Inter-University Consortium for Political and Social Research.
- Czaja, R. (1987). Asking sensitive behavioral questions in telephone interviews. *International Quarterly of Community Health Education*, 8(1), 23–32.
- Depanfilis, D., & Zuravin, S. J. (1999). Epidemiology of child maltreatment recurrences. Social Service Review, 73(2), 218–239.
- Desai, S., Arias, I., Thompson, M. P., & Basile, K. C. (2002). Childhood victimization and subsequent adult revictimization assessed in a nationally representative sample of women. *Violence and Victims*, 17(6), 639–653.
- Dube, S. R., Anda, R. F., Whitfield, C. L., Brown, D. W., Felitti, V. J., Dong, M., & Giles, W. H. (2005). Long-term consequences of childhood sexual abuse by gender of victim. *Journal of Preventive Medicine*, 28(5), 430–438.
- Everson, M. D., Hunter, W. M., Runyan, D. K., Edelsohn, G. A., & Coulter, M. L. (1989). Maternal support following disclosure of incest. American Journal of Orthopsychiatry, 59, 197–207.
- Farrell, G., Philips, C., & Pease, K. (1995). Like taking candy: Why does repeat victimization occur? British Journal of Criminology, 35(3), 384–399.
- Felitti, V. J., Anda, R. F., & Nordenberg, D. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The Adverse Childhood Experiences (ACE) Study. American Journal of Preventative Medicine, 14, 245–258.
- Finkelhor, D., & Asdigian, N. L. (1996). Risk factors for youth victimization: Beyond a lifestyles theoretical approach. *Violence & Victims*, *11*(1), 3–20.
- Finkelhor, D., Hamby, S., Ormrod, R. K., & Turner, H. A. (2005). The JVQ: Reliability, validity, and national norms. *Child abuse & neglect*, 29(4), 383–412.
- Finkelhor, D., Ormrod, R. K., & Turner, H. A. (2007). Poly-victimization: A neglected component in child victimization trauma. *Child Abuse & Neglect*, 31, 7–26.
- Finkelhor, D., Ormrod, R. K., Turner, H. A., & Hamby, S. L. (2005). The victimization of children and youth: A comprehensive, national survey. *Child Maltreatment*, 10(1), 5–25.
- Hamby, S. L., Finkelhor, D., Ormrod, R. K., & Turner, H. A. (2004a). The Comprehensive Juvenile Victimization Questionnaire. Durham, NH: University of New Hampshire.
- Hamby, S. L., Finkelhor, D., Ormrod, R. K., & Turner, H. A. (2004b). *The Juvenile Victimization Questionnaire (JVQ): Administration and scoring manual.* Durham, NH: Crimes against Children Research Center.
- Hausman, A. J., Spivak, H., Prothrow-Stith, D., & Roeber, J. (1992). Pattern of teen exposure to a community-based violence prevention project. *Journal of Adolescent Health*, 13(8), 668–675.
- Hawkins, D. L., Pepler, D., & Craig, W. M. (2001). Naturalistic observations of peer interventions in bullying. Social Development, 10, 512–527.
- Hope, T., Bryan, J., Trickett, A., & Osborn, D. R. (2001). The phenomena of multiple victimization: The relationship between personal and property crime risk. *British Journal of Criminology*, 41(4), 595–617.
- Kochenderfer Ladd, B. (2003). Identification of aggressive and asocial victims and the stability of their peer victimization. *Merrill-Palmer Quarterly*, 49(4), 401–425.
- Kochenderfer Ladd, B., & Ladd, G. W. (2001). Variations in peer victimization: Relations to children's maladjustment. In J. Juvonen & S. Graham (Eds.), *Peer harassment in school: The plight of the vulnerable and victimized* (pp. 25–48). New York: The Guilford Press.
- Lauritsen, J. L., & Quinet, K. F. D. (1995). Repeat victimization among adolescents and young adults. *Journal of Quantitative Criminology*, 11(2), 143–166.
- Marin, G., & Marin, B. (1989). A comparison of three interviewing approaches for studying sensitive topics with Hispanics. *Hispanic Journal of Behavioral Sciences*, 11(4), 330–340.
- Menard, S., & Huizinga, D. (2001). Repeat victimization in a high-risk neighborhood sample of adolescents. *Youth & Society*, 32(4), 447–472.
- Merrill, L. L., Newell, C. E., Thomsen, C. J., Gold, S. R., Milner, J. S., Koss, M. P., & Rosswork, S. G. (1999). Childhood abuse and sexual revictimization in a female Navy recruit sample. *Journal of Traumatic Stress*, 12(2), 211–225.
- Messman, T. L., & Long, P. J. (1996). Child sexual abuse and its relationship to revictimization in adult women: A review. *Clinical Psychology Review*, 16(5), 397–420.
- Messman, T. L., & Long, P. J. (2000). Child sexual abuse and revictimization in the form of adult sexual abuse, adult physical abuse, and adult psychological maltreatment. *Journal of Interpersonal Violence*, 15(5), 489–502.

- Noll, J. G., Horowitz, L. A., Bonanno, G. A., Trickett, P. K., & Putnam, F. W. (2003). Revictimization and self-harm in females who experienced childhood sexual abuse. *Journal of Interpersonal Violence*, 18(12), 1452–1471.
- Outlaw, M., Ruback, B., & Britt, C. (2002). Repeat and multiple victimizations: The role of individual and contextual factors. *Violence and Victims*, 17(2), 187–204.
- Quamma, J. P., & Greenberg, M. T. (1994). Children's experience of life stress: The role of family social support and social problem solving skills as protective factors. *Journal of Clinical and Child Psychology*, 23, 295–305.
- Stouthamer-Loeber, M., Wei, E., Loeber, R., & Masten, A. S. (2004). Desistance from persistent serious delinquency in the transition to adulthood. *Development and Psychopathology*, 16, 897–918.
- Weeks, M. F., Kulka, R. A., Lessler, J. T., & Whitmore, R. W. (1983). Personal versus telephone surveys from collecting household health data at the local level. American Journal of Public Health, 73(12), 1389–1394.
- Weisel, D. L. (2005). Analyzing repeat victimizations. In The Office of Community Oriented Policing Services (Ed.), Problemoriented guides for police: Problem-solving tool series. Washington, DC: U.S. Department of Justice.
- Wills, T. A., Vacarro, D., & McNamara, G. (1992). The role of life events, family support and competence in adolescent substance use: A test of vulnerability and protective factors. *American Journal of Community Psychology*, 20, 349–374.
- Wyatt, G. E., Guthrie, D., & Notgrass, C. M. (1992). Differential effects of women's child sexual abuse and subsequent sexual revictimization. *Journal of Consulting and Clinical Psychology*, 60, 167–173.

Appendix A. Juvenile Victimization Questionnaire: basic screen questions, child self-report version

A.1. Module A: conventional crime

(C1) Robbery

In the last year, did anyone use force to take something away from you that you were carrying or wearing?

(C2) Personal theft

In the last year, did anyone steal something from you and never give it back? Things like a backpack, money, watch, clothing, bike, stereo, or anything else?

(C3) Vandalism

In the last year, did anyone break or ruin any of your things on purpose?

(C4) Assault with weapon

Sometimes people are attacked WITH sticks, rocks, guns, knives, or other things that would hurt. In the last year, did anyone hit or attack you on purpose WITH an object or weapon? Somewhere like: at home, at school, at a store, in a car, on the street, or anywhere else?

(C5) Assault without weapon

In the last year, did anyone hit or attack you WITHOUT using an object or weapon?

(C6) Attempted assault

In the last year, did someone start to attack you, but for some reason, it didn't happen? For example, someone helped you or you got away?

(C7) Kidnapping

When a person is kidnapped, it means they were made to go somewhere, like into a car, by someone who they thought might hurt them. In the last year, did anyone try to kidnap you?

(C8) Bias attack

In the last year, were you hit or attacked because of your skin color, religion, or where your family comes from? Because of a physical problem you have? Or because someone said you are gay?

A.2. Module B: child maltreatment

(M1) Physical abuse by caregiver

Not including spanking on your bottom, in the last year, did a grown-up in your life hit, beat, kick, or physically hurt you in any way?

(M2) Psychological/emotional abuse

In the last year, did you get scared or feel really bad because grown-ups in your life called you names, said mean things to you, or said they didn't want you?

(M3) Neglect

When someone is neglected, it means that the grown-ups in their life didn't take care of them the way they should. They might not get them enough food, take them to the doctor when they are sick, or make sure they have a safe place to stay. In the last year, did you get neglected?

(M4) Custodial interference/family abduction

Sometimes a family fights over where a child should live. In the last year, did a parent take, keep, or hide you to stop you from being with another parent?

A.3. Module C: peer and sibling victimization

(P1) Gang or group assault

Sometimes groups of kids or gangs attack people. In the last year, did a group of kids or a gang hit, jump, or attack you?

(P2) Peer or sibling assault

(If yes to P1, say: "Other than what you just told me about ...") In the last year, did any kid, even a brother or sister, hit you? Somewhere like: at home, at school, out playing, in a store, or anywhere else?

(P3) Nonsexual genital assault

In the last year, did any kids try to hurt your private parts on purpose by hitting or kicking you there?

(P4) Bullying

In the last year, did any kids, even a brother or sister, pick on you by chasing you or grabbing your hair or clothes or by making you do something you didn't want to do?

(P5) Emotional bullying

In the last year, did you get scared or feel really bad because kids were calling you names, saying mean things to you, or saying they didn't want you around?

(P6) Dating violence

In the last year, did a boyfriend or girlfriend or anyone you went on a date with slap or hit you?

A.4. Module D: sexual victimizations

⁽S1) Sexual assault by known adult

In the last year, did a grown-up YOU KNOW touch your private parts when you didn't want it or make you touch their private parts? Or did a grown-up YOU KNOW force you to have sex?

(S2) Nonspecific sexual assault

In the last year, did a grown-up you did NOT KNOW touch your private parts when you didn't want it, make you touch their private parts or force you to have sex?

(S3) Sexual assault by peer

Now think about kids your age, like from school, a boy friend or girl friend, or even a brother or sister. In the last year, did another child or teen make you do sexual things?

(S4) Rape: attempted or completed

In the last year, did anyone TRY to force you to have sex; that is, sexual intercourse of any kind, even if it didn't happen?

(S5) Flashing/sexual exposure

In the last year, did anyone make you look at their private parts by using force or surprise, or by "flashing" you?

(S6) Verbal sexual harassment

In the last year, did anyone hurt your feelings by saying or writing something sexual about you or your body?

(S7) Statutory rape and sexual misconduct

In the last year, did you do sexual things with anyone 18 or older, even things you both wanted?

A.5. Module E: witnessing and indirect victimization

(W1) Witness to domestic violence

In the last year, did you SEE one of your parents get hit by another parent, or their boyfriend or girlfriend? How about slapped, punched, or beat up?

(W2) Witness to parent assault of sibling

In the last year, did you SEE your parent hit, beat, kick, or physically hurt your brothers or sisters, not including a spanking on the bottom?

(W3) Witness to assault with weapon

In the last year, in real life, did you SEE anyone get attacked on purpose WITH a stick, rock, gun, knife, or other thing that would hurt? Somewhere like: at home, at school, at a store, in a car, on the street, or anywhere else?

- (W4) Witness to assault without weapon
- In the last year, in real life, did you SEE anyone get attacked or hit on purpose WITHOUT using a stick, rock, gun, knife, or something that would hurt?

(W5) Burglary of family household

In the last year, did anyone steal some thing from your house that belongs to your family or someone you live with? Things like a TV, stereo, car, or anything else?

(W6) Murder of family member or friend

When a person is murdered, it means someone killed them on purpose. In the last year, was anyone close to you murdered, like a friend, neighbor, or someone in your family?

(W7) Witness to murder

In the last year, did you SEE someone murdered in real life? This means not on TV, video games, or in the movies?

- (W8) Exposure to random shootings, terrorism, or riots
- In the last year, were you in any place in real life where you could see or hear people being shot, bombs going off, or street riots?

(W9) Exposure to war or ethnic conflict

In the last year, were you in the middle of a war where you could hear real fighting with guns or bombs?

Appendix B. Predictor variable

Personal Child age (in years) Year 1 Child gender Year 1 Child race/ethnicity Year 1 Child relative height Year 2 Household

Socio-economic status (SES) Year 1 Number of siblings in HH Year 1 Number older sibling in HH Year 1 Family structure Year 1 Caregiver divorce/sep in Year 1 Caregiver divorce/sep in Year 2 New person in HH in Year 2 Dangerous family in Year 1

Location

Place type and population size Year 1 Local violence problem Year 1

Child–parent relations Parental support Year 1 Parental supervision Year 1 Parental criticism Year 1

Delinquency Delinquency score Year 1

Child life course Number of good friends Year 2

Recent residential move Year 1 Moved to worse house/neighborhood Year 2 In different school Year 2 Changed school type Year 2 Weak student Year 1 Repeat grade in school Year 1 Fail grade in school Year 2 Special services at school Year 1 Diagnosis of disorder Year 1 Counseling/therapy (ever) Year 1 Number of adverse events Year 1 Number of family problems Year 1

Individual adverse events Experienced disaster (fire, flood, etc.) Year 1 Child in hospital (accident) Year 1 Child in hospital (illness) Year 1 Person close to child in hospital (accident) Year 1 Person close to child in hospital (illness) Year 1 Person close to child died Year 1 Appendix B (Continued)

Individual family problems Family homeless Year 1 Family unemployment Year 1 Family member imprisoned Year 1 Family drug/alcohol problems Year 1 Parents yelling/arguing/fighting Year 1

Victimization characteristics Injury Year 1 Weapon Year 1 Caregiver perpetrator Year 1 Household perpetrator Year 1 Chronic victimization Year 1 Peer and adult perpetrator Year 1 Family and non-family perpetrator Year 1 Male and female perpetrator Year 1 Victimization in any multiple domains Year 1