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Pathways to Poly-Victimization

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What is This?

Pathways to Poly-Victimization

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Some children, whom we have labeled poly-victims, experience very high levels of victimizations of different types. This article finds support for a conceptual model suggesting that there may be four distinct pathways to becoming such a poly-victim: (a) residing in a dangerous community, (b) living in a dangerous family, (c) having a chaotic, multiproblem family environment, or (d) having emotional problems that increase risk behavior, engender antagonism, and compromise the capacity to protect oneself. It uses three waves of the Developmental Victimization Survey, a nationally representative sample of children aged 2–17 years. All four hypothesized pathways showed significant independent association with poly-victim onset. For the younger children, the symptom score representing emotional problems was the only significant predictor. For the older children, the other three pathway variables were significant predictors—dangerous communities, dangerous families, and problem families—but not symptom score. Poly-victimization onset was also disproportionately likely to occur in the year prior to children's 7th and 15th birthday, corresponding roughly to the entry into elementary school and high school. The identification of such pathways and the ages of high onset should help practitioners design programs for preventing vulnerable children from becoming poly-victims.

Keywords: child abuse; child maltreatment; peer victimization; exposure to violence; bullying

Some children are the unfortunate targets of many different kinds of victimization at the hands of a variety of offenders (Saunders, 2003). For example, they experience physical and emotional abuse by caregivers, assaults and harassment by peers, sexual victimizations by acquaintances and strangers and are exposed to crime and violence in their communities and neighborhoods—all this over the course of a relatively short period of time. These children, whom we have labeled "poly-victims," are not rare. In a nationally representative sample of 2- to 17-year-old children, 7% had 7 or more different kinds of victimizations at the hands of different offenders over the course of a single year and 20% had 5 or more (Finkelhor, Ormrod, & Turner, 2007b). Such children also had extremely high levels of traumatic stress symptoms. The undetected presence of such multiple victimization exposure among research samples of children identified because of a single victimization type (victims of sexual abuse or bullying) may be what accounts for a considerable portion of the association between these individual victimizations and traumatic symptom measures (Finkelhor, Ormrod, & Turner, 2007a; Finkelhor et al., 2007b; Finkelhor, Ormrod, Turner, & Hamby, 2005a).

Moreover, once children become poly-victims, their risk for additional victimization tends to remain very elevated (Finkelhor, Ormrod, & Turner, 2007c). Poly-victimization tends to persist over time. If researchers and practitioners can more effectively identify the children most clearly on the path to becoming poly-victims, they might be able to direct prevention resources to forestall the lengthy victimization careers and other negative mental health outcomes that confront these children.

One salient feature of poly-victimized children is not only the frequency of their victimizations, but also their vulnerability across multiple contexts. In addition to being victimized by different perpetrators, poly-victims typically experience victimization in several contexts simultaneously, such as within and outside the family, at the hands of the adults and peers, in the form of property crimes, violent crimes, and sexual offenses (Finkelhor et al., 2007b).

There have been several suggestions in the literature concerning how such pervasive and cross-context victimization might develop. One possibility is simply that poly-victim children are growing up in pervasively dangerous environments. Two literatures—one on children's exposure to community violence (Cohen, Mannarino, Murray, & Igelman, 2006; Gorman-Smith & Tolan, 1998; Menard & Huizinga, 2001; Salzinger, Feldman, Stockhammer, & Hood, 2001), and the other on adult multiple victimization (Lauritsen & Quinet, 1995; Outlaw, Ruback, & Britt, 2002)—both highlight the existence of very dangerous neighborhoods and crime hotspots, where social ties are weak, community supervision lacking, and criminally inclined individuals aggregate (Lauritsen, 2003). The dangers of living in such communities may place stresses on families that bring out coercive family behavior, motivated, for example, by a perceived need to tightly control children. The neighborhood chaos and lack of social support may also lower the inhibitions against abusive behavior within the family (Coulton, Korbin, & Su, 1999). These mechanisms might explain family violence in such community contexts, where children are also likely to face victimization or exposure to violence in the neighborhood and in the schools populated with other children from the neighborhood.

Another possibility is that poly-victim children are products of a particular developmental process that starts with victimization and violence inside the family, which then set a child up for further victimization in the peer group and other extrafamilial contexts. Two groups of researchers have observed connections between child maltreatment and peer victimization (see also, Mohr, 2006) and tried to explain the "contagion" of victimization across these contexts. Shields and Cicchetti (2001) emphasize how emotional residues from intrafamily maltreatment, such as hyperarousal, fear, and other elements of emotional dysregulation, may interfere with appropriate peer interaction and accurate social information processing (also, Maughn & Cicchetti, 2002; Schwartz, Dodge, Pettit, & Bates, 1997). Eventually this leads to peer group exclusion and the identification of maltreated children as potential targets for bullying and peer violence. Perry and Hodges refer to a family-induced "victim schema" that communicates vulnerability to peers, invites aggressive behavior, and interferes with cognitive processing that might lead to more effective avoidance reactions (Perry, Hodges, & Egan, 2001).

Another kind of family constellation might also increase risk for pervasive and cross-context victimization. In families characterized by considerable chaos and multiple, ongoing problems, children may be poorly supervised and subjected to a considerable amount of dislocation that exposes them to victimization in different contexts. For example, several studies have shown children to be at higher risk of victimization when they live in single-parent (Berger, 2004; Dubowitz, 1999; Lauritsen, 2003) or reconstituted families (Finkelhor & Asdigian, 1996; Radhakrishna, Bou-Saada, Hunter, Catellier, & Kotch, 2001; Turner, Finkelhor, & Ormrod, 2007), or when parents are incapacitated by illness, psychiatric problems, or substance abuse (Berger & Waldfogel, 2000; Finkelhor, 1979; Ondersma, Delaney-Black, Covington, Nordstron, & Sokol, 2006). In these family contexts, it is likely that children are exposed to more extraneous individuals circulating through their lives and households in the form of additional caregivers, partners, or helpers of parents or friends of stepsiblings. Such children may also lack adequate supervision in their activities in the neighborhood or in school. Their craving for security and attention may further impair their good judgment in the choice of associates or make them vulnerable to victimization and exploitation among peers and adults outside the family. Family and parental problems that lead to neglect often result in insecure attachment that in turn has been associated with subsequent victimization (Perry et al., 2001).

Finally, there is the possibility that some children have particular enduring behavioral patterns or emotional problems that make them victimization-prone (Bernstein & Watson, 1997). These patterns or problems, which may or may not be related to temperament, may make it hard for them to anticipate or protect themselves from dangerous people. They may also be widely perceived as annoying, frustrating, disruptive, passive, and difficult to relate to or weak—characteristics that may trigger victimization both in the family and outside the family, as well as compromise the likelihood that others will stand up on their behalf. The kinds of children discussed in the literature as attracting victimization include those who lack emotional self-control, who cry easily, who are ineffectually aggressive, disruptive,

argumentative or petulant, who are anxious or with-drawn, who behave submissively, have poor self-concepts or who are depressed (Hodges & Perry, 1999). While such problems may also result from the experience of maltreatment, they may in some cases be features that precede such maltreatment. There may be other personal characteristics such as disabilities of certain types (Perry et al., 2001) or gender atypicality (Williams, Connolly, Pepler, & Craig, 2003) that also predispose children to victimization in a variety of contexts.

While the four general mechanisms or pathways discussed above might be seen as competing hypotheses about the origins of poly-victimization, it is actually more probable that they are complementary processes. Several of these dynamics may be at work for the same child, and different poly-victim children may arrive at this condition through different pathways.

The goal of the current study is to determine whether there is evidence to support the contribution of these mechanisms in the development of poly-victimization. We will also examine whether there are variations to onset pathways according to the ages of children, and look for other features of the onset processes. We use a 3-wave longitudinal survey of a nationally representative sample that allows the identification of those children who had recently transitioned into a poly-victimized condition.

Methods

Participants

These analyses use data from the Developmental Victimization Survey (DVS), a 3-wave longitudinal study of a representative sample of U.S. children and adolescents designed to obtain incidence estimates of a comprehensive range of childhood victimizations across gender, race, and developmental stage. The Wave 1 survey conducted between December 2002 and February 2003 assessed the experiences of a nationally representative sample of 2,030 children aged 2–17 years living in the contiguous United States. Wave 2 of the survey was conducted between December 2003 and May 2004, approximately 1 year after the baseline interview, and Wave 3 was conducted between December 2005 and August 2006, approximately 2 years after Wave 2. Although most interview items were repeated in all three waves, some are unique to a particular wave as adjustments were made to the questionnaire during the course of the survey. Current analyses are based on a sample of 989

respondents who participated in all three interviews and used data collected in all three waves.

Data on victimization experiences were obtained using the Juvenile Victimization Questionnaire (JVQ; Hamby, Finkelhor, Ormrod, & Turner, 2004). The JVQ was designed to be a more comprehensive instrument than has typically been used in past research, screening for 33 specified victimization types that cover five general areas of concern: conventional crime, child maltreatment, peer and sibling victimization, sexual victimization, and witnessing and indirect victimization (see Appendix A in Finkelhor et al., 2007c) for a complete victimization screener list and specific item wording).

The sampling methodology and study procedures are detailed extensively elsewhere (Finkelhor, Ormrod, Turner, & Hamby, 2005b) and will only be summarized briefly here. The sample selection procedures were based on a list-assisted random digit dial (RDD) telephone survey design. A short interview 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 primary interview was conducted with the child. If the selected child was 2–9 years old, it was conducted with the caregiver who ''is most familiar with the child's daily routine and experiences.'' Consent was obtained from both the parent and the child.

As noted, the original sample consisted of 2,030 respondents, with interviews completed for 79.5 % of the eligible persons contacted. Concerted efforts were made to recontact respondents and elicit their participation in subsequent data collection waves. At the end of data collection, 989 children had taken part in all three interviews (49% of the original sample). Attrition was higher among younger children, nonwhites, and lower socio-economic status families, but did not differ by initial level of victimization.

Measurement

Victimization

This study uses victimization data collected during all three interview waves. Identically worded screeners were used to collect information on each type of victimization that had occurred within a 1-year period preceding the date of interview (past-year victimizations). The same screeners were also used during Wave 2 to collect

information about lifetime victimizations (these questions referred to a child's lifetime experience prior to the Wave 2 past-year data collection period).

A multiple victimization measure was constructed for each data collection period that summed for each child the number of victimization types experienced across all 33 specific types (number of screeners endorsed as "yes"). The count of types was determined in earlier research to be a better predictor for various purposes than the total count of victimization episodes (Finkelhor, Hamby, Ormrod, & Turner, 2005). These aggregates are referred to as the lifetime, Wave 1, Wave 2, or Wave 3 screener sums. Screener sums were used to identify some children as poly-victims within each of the data collection periods.

For the current analysis, we used the thresholds derived in previous studies to identify children as poly-victims (Finkelhor et al., 2007a, 2007b, 2007c; Finkelhor, Ormrod et al., 2005a). Thus, a child who has suffered 5 or more victimizations types (a screener sum of 5 or larger) in the past year for any data collection wave is identified as a poly-victim for that wave. Lifetime poly-victims are those children who exceeded age-specific poly-victimization threshold scores identified in earlier research on lifetime victimization patterns (Finkelhor, Ormrod, & Turner, in press). These thresholds varied by age to account for the fact that older children have a longer period for lifetime victimization exposure: for ages 3–6 years, 9+ screeners; 7–10 years, 10+ screeners; 11–14 years, 12+ screeners; and 15–18 years, 15+ screeners).

Victimization Characteristics

Follow-up questions were asked about each victimization identified at each time period (lifetime, Waves 1, 2, and 3) including queries about injury and perpetrators. This information was used to create injury (yes or no), perpetrator age (any adult, any juvenile, both adult and juvenile), and perpetrator relationship (any family, any nonfamily, both family and nonfamily) measures. In addition, measures were created to indicate whether any victimization of each of the following types had been experienced during each data collection period: physical assault, maltreatment, sexual, property, peer-sibling, witnessed-indirect.

Victimization Pathways

Measures of the four possible pathways to victimization described above were constructed from Wave 1 and Wave 2 survey questions that investigated a variety of background circumstances and victimization conditions for each child. Measures for each pathway were first converted (when necessary) to binary indicators of specific conditions or events. For example, the item accessing a caregiver's perception of neighborhood violence (How much of a problem is violence in your neighborhood?) had four possible response levels (big problem, somewhat of a problem, not too much of a problem, not a problem at all). This item was recorded as one indicator of a dangerous neighborhood, with "big problem" and "somewhat of a problem" representing "yes" and the other responses evaluated as "no." Other indictor items, such as, "Did the family move to a worse house or neighborhood?" (during the Wave 2 data period), were answered "yes" or "no" in their original form. Pathway indicators were selected from those items available in the data that were felt to reflect the sort of conditions represented by each pathway type. Once all indicators were in binary format, summary pathway measures were computed by summing the number of "yes" codes present in each set. Larger scores (sums) were interpreted as representing a stronger and more consistent presence of each pathway condition.

The dangerous community score was derived from six possible indicators: school violence problem Wave 1, school violence problem Wave 2, neighborhood violence problem Wave 1, neighborhood violence problem Wave 2, moved to worse neighborhood Wave 2, and residence in a large city (Wave 2). Children who did not attend school (because of age, home schooling, or other reason) were coded as "no" for the school violence problem indicators.

A dangerous family score was also constructed from six indicators: witnessed family violence Wave 1, any maltreatment Wave 1, witnessed family violence Wave 2, parents/caregivers always arguing Wave 1, frequent parent-child arguments Wave 1, frequent parent-child arguments Wave 2. Any maltreatment indicated whether any of four possible maltreatment screeners (physical abuse, emotional abuse, neglect, or custody violation) had been endorsed at Wave 1. Witnessing family violence marked whether the child had witnessed domestic violence or the physical abuse of a sibling. The Wave 1 and Wave 2 questions about the frequency of parent-child arguments was only asked for children 6 years and older; for younger children, this indicator was coded "no."

The family problems score was the sum of 13 indicators of possible stresses or disruptions within a child's household during the past year. The items from Wave 1 included homelessness, job loss or unemployment,

parent or caregiver in prison, and family drug or alcohol problems. Items from Wave 2 included family trouble with police, parents separated or divorced, parent lose job, parent move to worse job, money problems, parent lose driver's license, family had to go on public assistance, family forced off public assistance, and family drug or alcohol problems. (A somewhat different group of indicators was asked about in Wave 2.)

The study does not have a true measure of enduring behavioral patterns or temperament, so to represent the fourth possible pathway to victimization we will use a measure of children's symptomatic behaviors that could reflect temperament or other early emotional dysregulation. This measure, which we label child symptom score, used the anger, depression, and anxiety scales of two closely related measures: the Trauma Symptoms Checklist for Children (TSCC; Briere, 1996), which was 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 the 2–9 year olds. All item responses for the three scales together were summed to create an aggregate trauma symptom score (following TSCC and TSCYC guidelines for creating t scores; TSCC $\alpha =$ .909, TSCYC $\alpha =$ .854). Because the specific items used for each age group differed, a child score was created for the 2–9 year olds and a youth score for the 10–17 year olds. A unified symptom score for all children in the sample was constructed by merging the standardized trauma scores for each age group. The child symptom score was based on Wave 1 responses only.

Demographic Measures

Information about the child's gender, age, and race/ethnicity (coded into 4 groups: White non-Hispanic, Black non-Hispanic, other race non-Hispanic, and Hispanic any race) was collected during each of the three victimization interviews. Although gender and race/ethnicity are non-changing, the longitudinal nature of the survey produced shifting age measures for each data wave.

Data Analysis

The particular interest of this article is those factors that contribute to children becoming poly-victims. Thus we focused particularly on children who had not yet been poly-victims, but who became so during the course of our survey (called onset poly-victims). (This restriction means that the analyzed sample is no longer nationally representative of all children.) The appropriate

comparison was children who were not poly-victims at Wave 1, and who continued to avoid becoming poly-victims during the course of the study (never poly-victims). (This meant excluding from the analysis children who were already poly-victims at Wave 1 or in the Lifetime assessment. But children with levels of victimization that did not reach poly-victimization frequency remained in the analyzed sample.) Because only limited numbers of children become poly-victims for the first time in any year, we decided to aggregate children who became poly-victims in either Wave 2 or Wave 3 for the onset group. None of these children had been a poly-victim by our past year criteria in Wave 1 or in the Lifetime assessment.

To describe poly-victims in general, we looked at all children who were poly-victims in either Wave 2 or Wave 3. For the analysis of victimization pathways, however, we focused on the onset poly-victims alone, excluding those poly-victims in Wave 2 or Wave 3 who had been poly-victims previously in either Wave 1 or in the lifetime poly-victim assessment.

The hypothesized pathways associated with the onset of poly-victimization were evaluated through multiple logistic regression, with models assessing all four pathway measures simultaneously. (Associations among pathway measures were checked for multicolinearity and no problems were found.) Models were based on comparisons between children who were never poly-victims and those who became poly-victims at either Wave 2 or 3. A number of models were constructed and evaluated to explore different circumstances that might be relevant to increased victimization (e.g. models based on all qualified cases, on cases distinguished by initial age level, on cases distinguished by the amount of victimization increase). A cluster analysis was also used to assess the characteristics of children who might be associated with particular pathways. All analyses were conducted using SPSS.

Results

Of the full sample, 24% was classified as poly-victims at either Wave 2 or 3. Among these poly-victims, the mean number of victimizations suffered in the previous 12 months (the Wave 2 or Wave 3 data collection period) was 7.0, ranging from the cutoff minimum of 5 to a maximum of 22. The poly-victims displayed a tremendous diversity and seriousness in their victimization profiles. Fifty-nine per cent had victimizations at the hands of both family and nonfamily members; 50% had

Figure 1
Victimization Types Before and After Onset of Poly-Victimization
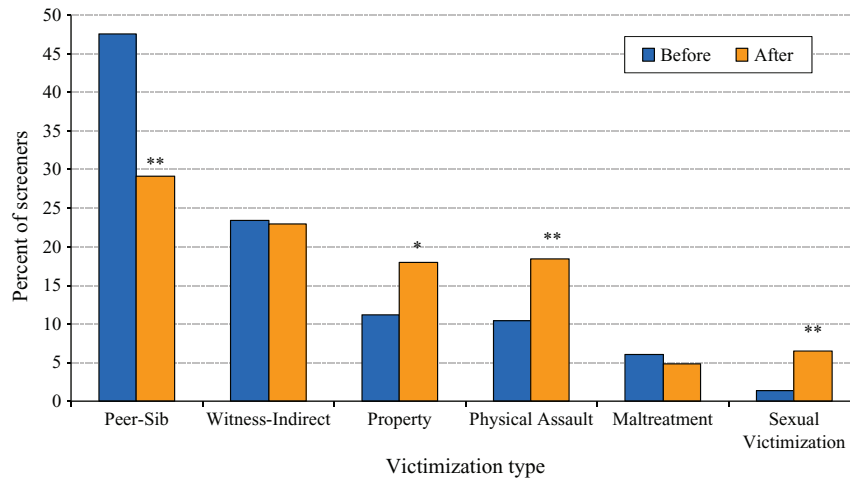
Note: *Before and After difference is significant at $p < .05$; **at $p < .01$.
Onset cases, $n = 112$; Total screeners: Before, $n = 231$; After, $n = 705$.

victimizations from both adults and peers; 30% of the poly-victims had a sexual victimization, and 41% a victimization-related injury. Poly-victimization was not associated with age or race/ethnicity, but there was a slightly higher proportion of boys among the poly-victims (male 54.4%, female 45.6%; $p = .053$).

Of the Wave 2 and Wave 3 poly-victims, 47% had not previously been poly-victims in an earlier timeframe; that is, they did not qualify as poly-victims in Wave 1 nor did they meet our criteria for lifetime poly-victimization. They are the "poly-victim onset" group, and comprise 11% of the full sample. In Wave 2, 41% became poly-victims and in Wave 3, 59%. In the year of their "onset," these poly-victims had on average 4.2 additional victimizations from the number they had had in the Wave 1 year. Of this poly-victim onset group, 63% had had increments of four or more victimizations during this period of onset year compared to Wave 1, and the increment total number ranged all the way to 12.

The mixture of victimization types also shifted for onset poly-victims compared to their victimizations in Wave 1 (Figure 1). Almost half of victimizations for the onset group in Wave 1 were peer and sibling victimizations, but these dropped to less than 30% during the year of poly-victim onset. The year of poly-victim onset showed a very disproportional increase in sexual victimizations, as well as disproportional increases in physical assault and property victimization.

The age profile for the onset poly-victims showed them spread across the developmental spectrum. Figure 2

shows the percentage of onsets by the child's age at the end of the year in which the onset occurred. Interestingly, there were two spikes for the onset group at ages 7 and 15 and one trough at age 8 (overall, $\chi^2 = 46.8$; $p < .001$ with values at ages 7, 8, and 15 each differing significantly from the other ages grouped together in post hoc analyses). It is possible that the spikes at 7 and 15 coincide with the first year of enrollment for most children into elementary school and high school, respectively.

When the poly-victim onset group was compared at Wave 1 (prior to becoming poly-victims) to other children who never became poly-victims, there were no differences in demographic characteristics such as gender, race/ethnicity, and socioeconomic status. The onset group did have an overall higher level of Wave 1 victimization (mean 2.1 for onset vs. 1.3 for nononset, $F = 33.839$; $p = .000$). However, there were no differences in the proportion of victimizations of any individual type.

To examine whether the hypothesized pathways might help explain poly-victimization onset, we tested a logistic regression model in which the dependent variable contrasted onset poly-victims with nononset children using the four composite measures representing the pathways described earlier: dangerous community, dangerous family, family problems and symptom score, also controlling for age group (Table 1). Each of these variables did significantly predict poly-victim onset in Wave 2 or 3. For example, the odds ratio (OR) can be read to mean that a one unit increase in the measure of

Figure 2
Poly-Victim Onset by Age
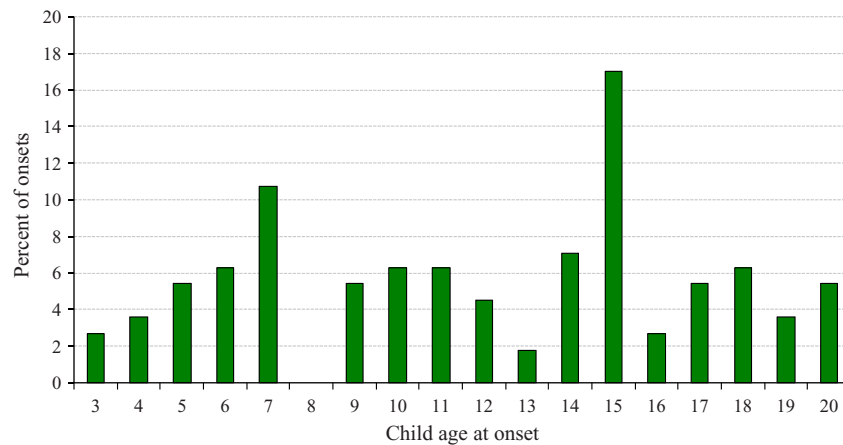
Note: $\chi^2 = 46.8$, $df = 17$, $p < .001$, $n = 112$.

Table 1
Predictors of Poly-victimization Onset

	Model					
	All Children		Younger Children (2–9 yrs at Wave 1)		Older Children (10–17 yrs at Wave 1)	
Variable	OR	CI	OR	CI	OR	CI
Dangerous community	1.25[*]	1.01–1.55	1.34	0.87–2.08	1.28[*]	1.00–1.65
Dangerous family	1.46[**]	1.12–1.89	1.34	0.91–1.97	1.60[**]	1.11–2.29
Family problems	1.30[**]	1.07–1.57	1.03	0.75–1.41	1.59[***]	1.21–2.09
Symptom score	1.46[**]	1.15–1.85	1.80[***]	1.31–2.48	1.13	78–1.64
Age group (older)	1.31	0.85–2.01	—	—	—	—
Model χ^2	42.32(5df)[***]		21.13(4df)[***]		27.54 (4df)[***]	
R^2 (Cox & Snell)	.05		.05		.07	
R^2 (Nagelkerke)	.09		.10		.12	
	($n = 768$)		($n = 384$)		($n = 384$)	

Note: OR = odds ratio; CI = confidence interval.
*Statistically significant at $p = .05$; **statistically significant at $p = .01$; ***statistically significant at $p = .001$.

dangerous communities for a child is associated in a 25% increase in their risk of becoming a poly-victim. (Some of the measures have more component items, so ORs for different measures cannot be directly compared to one another). Because of possible developmental contrasts and to check for the effect of data source differences, we also tested the same model for the younger and older children separately. The symptom score measure was clearly the largest and only significant contributor to be model for younger children. For the older children, the symptom score measure became nonsignificant, but the other three pathway variables remained significantly associated with onset.

Some of the poly-victim onset group experienced particularly large increases in their victimization burden over a short period of time, whereas for others the increase was more modest. It is possible that the pathways and characteristics of children with such large increases may be different from those whose poly-victimization onset may be of a more gradual type. To explore this difference, we subdivided the poly-victim onset group into those whose victimization increment after Wave 1 was 4 or more additional victimizations in comparison to those with a smaller increase. Table 2 presents a multinomial logistic regression showing the predictors of the onset group with a large increase in

Table 2
Predictors of Large Increase and Small Increase Poly-Victimization Onset

Groups	Never PV versus			
	Large Increase to PV Onset		Small Increase to PV Onset	
Variable	OR	CI	OR	CI
Dangerous community	1.29[*]	1.01–1.64	1.16	0.80–1.68
Dangerous family	1.34	0.97–1.85	1.65[**]	1.15–2.39
Family problems	1.32[*]	1.05–1.66	1.26	0.94–1.69
Symptom score	1.30	0.97–1.76	1.73[**]	1.23–2.43
Age group (older)	1.73	1.02–2.92	0.81	0.41–1.59
Model χ^2	50.75(10df)[***]			
R^2 (Cox & Snell)	.06			
R^2 (Nagelkerke)	.10			
R^2 (McFadden)	.06			
	($n = 768$)			

Note: OR = odds ratio; CI = confidence interval; PV = poly-victim.
*statistically significant at $p = .05$; **statistically significant at $p = .01$; ***statistically significant at $p = .001$.

victimizations and those with a small increase. A large increase in victimizations is associated with onset among older children, and those with family problems, and residence in a dangerous community. Onset characterized by a smaller increase is associated more with dangerous family and elevated symptom scores.

Although the above analyses show that each of the pathway variables make an independent contribution to the likelihood that children become poly-victims, it would also be useful to know whether different groups of children tend to follow different pathways to poly-victimization onset. To explore this possibility, we used the pathway predictor variables in a K means cluster analysis. We looked at various cluster solutions, but the five-group solution was clearly superior based on distances between clusters. The results were the same when the clustering was generated from alternative arbitrary starting points. The results largely confirmed the proposed pathways model. Table 3 shows the scale mean scores for the five groups, first, in the top panel, for the full sample and, second, in the next panel, for the poly-victimization onset children alone. Their patterns are similar. Apart from a large group of low-risk children (Cluster 1), the analysis identified one group with a particularly high score on the dangerous community measure but average scores on other measures (Cluster 2), another group with a high score on the family problems measure while close to average on other measures (Cluster 3), and another group with a particularly high score on the symptom measure but average on other measures (Cluster 4). A final group (Cluster 5) had the expected high score on the dangerous family measure, but also an elevated score on the symptom measure. Thus three of the onset risk groups had different single pathway predictors, while the dangerous family group also had elevated symptoms. Within each of the onset risk clusters (Clusters 2–5), between 19% and 27% of the cluster members were identified as onset poly-victims. The largest number of poly-victim onsets (32%) was in the high symptom cluster (Cluster 4), but a large and similar number of onset children (33%) was in the low-risk cluster (Cluster 1), not characterized by any of the risk variables at all.

Table 4 shows some other differences among onset children according to their cluster membership. While gender ratios were not significantly different among clusters, there were differences for age, socioeconomic status, and in the number of victimizations children experienced in the year prior to onset. The dangerous community onset children were disproportionately older with low prior rates of victimization. The family problems onset children were also disproportionately older and came from the most impoverished families. The high symptom onset children were younger and of generally higher socio-economic status than the other risk groups. Finally, the dangerous family onset children had the highest rate of prior year victimizations.

Discussion

The exploratory findings from this national survey of children do support the idea that several pathways may predispose children to become the targets of multiple kinds of victimization. Children who were not initially

Table 3
Five-Cluster K-means Solution for All Cases and Onset Cases

a. Cluster Profiles

	Scale Means By Cluster For All Cases ($N = 768$)					
Cluster	1	2	3	4	5	
	Low	High Dangerous	High Family	High	High	All Cases
Description	Risks	Community	Problems	Symptoms	Dangerous Family	
Risk measure						
Dangerous community	−0.28	2.52	0.15	−0.15	−0.07	0.005
Dangerous family	−0.36	−0.17	0.30	−0.01	2.55	−0.004
Family problems	−0.32	−0.16	2.67	−0.18	0.13	−0.011
Symptom score	−0.54	−0.40	0.04	1.22	0.85	0.000
	Scale Means By Cluster For Onset Cases Only ($N = 111$)					
Risk measure						All Onsets
Dangerous community	−0.15	2.48	0.19	−0.07	0.27	0.230
Dangerous family	−0.21	0.18	0.55	0.23	3.23	0.421
Family problems	−0.27	0.09	2.78	−0.11	0.49	0.331
Symptom score	−0.28	−0.43	−0.26	1.40	1.01	0.382

b. Poly-Victim Onsets within Clusters

	Scale Means By Cluster For All Cases ($N = 768$)					
Cluster	1	2	3	4	5	
	Low	High	High Family	High	High	
Description	Risks	Dangerous Community	Problems	Symptoms	Dangerous Family	Totals
Cluster N	429	57	60	165	57	768
Onsets N	37	11	16	36	11	111
Onsets as % of cluster[*]	9%	19%	27%	22%	19%	14.5%
Cluster as % of all onsets	33%	10%	15%	32%	10%	100%

[*]$\chi^2 = 24.4$; $p = .000$, $df = 4$.

Table 4
Characteristics of Onset Cases by Cluster Membership

Cluster	1	2	3	4	5	
	Low Risks	High Dangerous	High Family	High Symptoms	High Dangerous	All Onset
Description	($n = 37$)	Community ($n = 11$)	Problems ($n = 16$)	($n = 36$)	Family ($n = 11$)	Cases ($n = 111$)
Characteristics (Wave 1)						
Male, %	57	55	38	50	27	49
Female, %	43	46	63	50	73	41
$\chi^2 = 3.96$, $df = 4$, $p = .411$						
Younger (2–9 years), %	46	9	19	61	54	44
Older (10–17 years), %	54	91	81	39	46	56
$\chi^2 = 14.40$, $df = 4$, $p = .006$						
Socio-economic status, mean	0.70	−0.11	−0.61	0.37	−0.06	0.25
$F = 6.29$, $df = 4$, $p = .000$						
Number of victimizations (mean)	1.7	1.6	1.8	2.4	3.3	2.1
$F = 4.04$, $df = 4$, $p = .004$						

poly-victims, but who became poly-victims over the next 3 or 4 years in this longitudinal study did have risk factors in at least one of four areas. First, they lived or moved into communities that might be deemed more dangerous. Second, they resided in families with more violence and conflict. Third, their families were beset with more problems, including employment, marital, money, and substance abuse difficulties. Finally, the

children themselves had preexisting symptoms of emotional problems that may have been signs of difficulty with emotional and behavioral regulation. Each of these risk areas made an independent contribution to the onset of poly-victimization controlling for the others in the multivariate logistic analysis, suggesting the possibility that there could be different onset mechanisms operating for different groups of children.

The cluster analysis confirmed four relatively distinct onset risk groups, three of them characterized by elevated risk on only a single dimension, either dangerous community, many emotional and behavioral symptoms or high levels of family problems. These analyses provide some evidence that different groups may be affected by different types of risks. However, the group of children characterized by dangerous families also had elevated symptoms. This is consistent with research suggesting that family violence and conflict are particularly likely to have negative emotional effects on children (Jaffee, Moffitt, Caspi, Taylor, & Arsenault, 2002; Kitzmann, Gaylord, Holt, & Kenny, 2003). These finding further suggest that onset children with both symptoms and dangerous families are distinct from those with symptoms alone.

The onset group with the elevated symptoms alone was the largest of the predicted groups, comprising about a third of all onset children, signaling mental health problems as a priority target for assessment of poly-victimization onset risk. It is also important to note, however, that nearly a third of the poly-victimization onset children appeared to be low on all the risk scales and could not be clustered into any of the risk groups. This suggests that there may be dimensions contributing to poly-victimization onset that are yet to be explained.

Developmental differences

Interestingly, the symptoms of emotional problems appeared to be the primary pathway for onset more among the younger children in the cohort, those aged ≤9 years, but not for the older children. It may be that those children with endogenous or early-onset emotional dysregulation start getting targeted very early and remain poly-victims for a long time, so that such high symptom levels are no longer associated with onset at a later age. Environmental factors become more important with the older onset group. This could also mean that it takes longer for the influence of these factors to show up.

However, it is important to acknowledge that the measure used in this study to assess difficult temperament or early-onset of emotional dysregulation may also be a marker for other conditions or life events of more recent origin. Because the measure actually assesses the emotional distress in the first year of the study, we are unable to judge how longstanding these distress symptoms are. They may be of recent emergence or they may be the products of earlier victimization experiences. Even though these children were not poly-victims at Wave 1, they may still have had significantly traumatic victimization that resulted in such symptoms. It would have been useful to have much earlier measures of temperament and behavior problems. However, even if the symptom scores used in this study are not exclusively a measure of temperament and endogenous emotional or behavioral problems, they do clearly signal that emotional distress is a very important precursor of poly-victimization onset, especially for younger children. Research is needed to disentangle the various strands that contribute to these distress symptoms among younger children to assess their duration and origin.

Timing of onset

Another very important finding from the study is that there were large spikes in poly-victimization onset associated with two of the major school transitions: entry into first grade of elementary school and entry into high school. In both cases children may be entering a new social and physical environment, without previous established friendship networks and status hierarchies, and exposed to a greatly increased number of children. Vulnerable children may experience increased victimization at this juncture for a number of reasons. In a less defined social environment, they may encounter more conflict. The stress and unfamiliarity of this transition may undermine the ability to assess and predict dangerous situations. Bullies and other offenders may particularly look for and target vulnerable individuals in the low status entry groups of the schools. Children may be encountering for the first time less supervised and more unfamiliar environments, such as school buses, new routes to school, where they have not yet learned to anticipate and prevent dangers. Abuse by family members may also increase at this juncture, if parents start to use physical and psychological coercion to get children to succeed in school or maintain compliance and authority now that children have new independence and distance from parental supervision.

The findings then show that for the younger children, after the high onset year, there is a marked abatement of poly-victim onset risk in the next year, the one prior to

age 8 or roughly during the second year of elementary school. One possibility is that the stresses and risks of the first year of school are so substantial that most of the vulnerable children become poly-victims early on, so that there are few additional high-risk children to fall prey to the condition in the second year. Another possibility is that the interpersonal relationships and social structures become so much better defined by the second year that vulnerable children gain some protection and respite. The finding may also be a chance variation.

Other studies looking at victimization changes across school transition have not found a consistent pattern. For example, some have found bullying increasing across the transition from elementary to middle school (National Center for Educational Statistics, 1995; Smith, Madsen, & Moody, 1999), but some have not found victimization increasing (Pellegrini & Long, 2002). One found bullying highest for girls in 9th grade, but for boys in the 8th grade, prior to the transition to high school (Pepler et al., 2006). These studies, however, are typically based in single communities and concern school bullying and peer victimization, not the broad spectrum of poly-victimization we are interested in. Poly-victimization onset could be intensified at school transition even if school bullying and peer victimization are not, if, among other reasons, predisposed children react to the transition in more distressed and disorganized ways, while nonpredisposed children actually use the change to increase confidence and maturity.

Variations in onset process

Another feature of poly-victimization onset revealed by the study was a change in the mixture of victimizations children encountered as they experienced the transition. Prior to onset, nearly half of the victimizations for the onset children were of the peer and sibling variety. After onset, sexual victimization, physical assault, and property crimes assumed a much larger role in the mixture. The increase in sexual victimization was particularly large. This suggests that for many predisposed children, a sexual victimization may be a marker of a transition. This highlights the importance of paying attention to a broader context when sexual victimization occurs.

The study found that those at risk of poly-victimization onset had higher preexisting rates of victimization, at least by a small amount. But it also found that poly-victimization onsets could occur as a result of a small year-to-year increase in the number of victimizations to a child already experiencing considerable victimization,

or it could occur in the form of a large year-to-year increase in the number of victimizations to those with relatively low prior rates. Interestingly, when the onsets were of the large increase type, it was more likely to involve older children, and be associated with dangerous communities and family problems. It is plausible that large increases in victimization frequency would more often be the result of dramatically changed environmental circumstances. Older children, because of their independence, may be more likely to encounter such changed environmental conditions. Movement to a new, more dangerous community or the onset of some serious family problem like parental unemployment are the kinds of dramatic changes that could be associated with big increases in victimization frequency. By contrast, symptoms and levels of family violence and conflict may be more enduring elements less likely to experience a dramatic change and less likely to be associated with large increases in victimization over a short time.

Implications

The criminology field has for many years embraced the notion that repetitive offenders should be a central target of crime prevention policy. By contrast, the child maltreatment and juvenile victimization field has yet to fully embrace the value of identifying and targeting prevention resources to children experiencing multiple victimization. But the logic is very similar. In allocating scarce resources to reduce the volume of victimization and the scope of its effects, it may be best to target these high-risk children intensively.

The current study does not yield, however, a simple recommendation as to how this should be done. There is no single apparent leverage point for reaching and helping these developing poly-victims. The vulnerable children can be both young and older, and in fact there seemed to be multiple pathways by which these children arrive at their grim condition. But certain specific strategies are suggested by some of the findings.

One is to do more when children transition to new schools, particularly elementary and high schools. It may be useful to sensitize teachers and other school staff to quickly identify children who are being targeted in these entering classes. It may also be valuable to introduce victimization prevention skills very early to children in these environments.

A second strategy suggested by the findings is to encourage teachers and child welfare professionals to be particularly concerned about younger children with emotional distress symptoms. In addition to whatever

mental health interventions might be prescribed for these children, they may also need additional skills and additional supervision to help avoid victimization.

A third implication of the findings is to alert school staff and child welfare workers to pay particular attention when children report sexual victimizations, including sexual harassment by peers. These events may signal broader victimization vulnerability, and in responding to the child, the focus may need to extend beyond the specific sexual report to include an assessment of other forms of victimization exposure.

Limitations

An important shortcoming of the study is that the measures used to represent the four pathways were not predesigned or validated to operationalize these constructs. In particular, the dangerous community measure needs additional items reflecting other aspects of crime and community disorder. Too much of the measure rests on subjective parental perceptions that may be associated with their own child's personal experience. The family pathways may overlap in ways that should be established by more careful measurement. The symptom score measure, which is focused on certain mental health symptoms, surely also does not capture the full range of enduring personal characteristics that create pervasive risk, and does not represent well the pathway described in our conceptualization. More comprehensive and validated instruments are needed to test these pathways, as well as more complex analyses of the pathways to look for possible interactive effects because the pathways may certainly interrelate in complicated ways. In addition, some of the differences reported between younger and older youth may be related to the methodological differences in the two segments of the study (caregiver interview vs. youth self-report). Analyses looking for such differences have been reassuring (Finkelhor, Hamby et al., 2005), but cannot be ruled out as explanations for differences in the current study.

In addition, while the findings of the article are consistent with the existence of pathways, they do not substantiate the pathway concept itself, and its implication of a developmental process. They simply signal clusters of risk factors, which may not in themselves be causal. To support a pathway concept, a longer longitudinal assessment would be required along with a greater range and depth of measures.

It is encouraging that the fields of child maltreatment and juvenile victimization increasingly have prospective longitudinal and developmental studies from which to gain insight. These studies will allow us to shift the focus of the field from intervention and emergency child protection to prevention. However, we need additional concepts and an expanded vision to take advantage of this perspective. We think the two concepts of pathways and poly-victims can be of considerable assistance in helping to foster this transition.

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