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Measuring poly-victimization using the Juvenile Victimization Questionnaire☆

David Finkelhor[a,*], Richard K. Ormrod[a], Heather A. Turner[a], Sherry L. Hamby[b]

[a] *Crimes against Children Research Center, University of New Hampshire, 126 Horton Social Science Center, Durham, NH 03824, USA*
[b] *University of North Carolina at Chapel Hill, Chapel Hill, NC, USA*

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Abstract

Objective: Children who experience multiple victimizations (referred to in this paper as poly-victims) need to be identified because they are at particularly high risk of additional victimization and traumatic psychological effects. This paper compares alternative ways of identifying such children using questions from the Juvenile Victimization Questionnaire (JVQ).
Methods: The JVQ was administered in a national random digit dial telephone survey about the experiences of 2,030 children. The victimizations of children 10–17 years old were assessed through youth self-report on the JVQ and the victimizations of children 2–9 assessed through JVQ caregiver proxy report.
Results: Twenty-two percent of the children in this sample had experienced four or more different kinds of victimizations in separate incidents (what we term poly-victimization) within the previous year. Such poly-victimization was highly associated with traumatic symptomatology. Several ways of identifying poly-victims with the JVQ produced roughly equivalent results: a simple count using the 34 victimizations screeners, a count using a reduced set of only 12 screeners, and the original poly-victimization measure using follow-up questions to identify victimizations occurring during different episodes.

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* Corresponding author.

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Conclusion: Researchers and clinicians should be taking steps to identify poly-victims within the populations with which they work and have several alternative ways of doing so.

Keywords: Crime; Abuse; Bullying; Witnessing; Sex assault

Introduction

While interest in child victimization has grown, much of the research and public policy has focused on specific individual kinds of victimization, such as sexual abuse, bullying or exposure to domestic violence (Duncan, 1999; Fantuzzo & Mohr, 1999; Kendall-Tackett, Williams, & Finkelhor, 1993; Kolbo, Blakely, & Engleman, 1996). The focus on single types of victimization may have obscured the degree to which children suffer from multiple kinds of victimization (Rossman & Rosenberg, 1998; Saunders, 2003). Recent research has confirmed that multiple victimizations are common, that victimization risks are intercorrelated, and that children with multiple victimizations are more likely to be distressed and symptomatic (Finkelhor, Ormrod, & Turner, in press; Lauritsen & Quinet, 1995; Outlaw, Ruback, & Britt, 2002).

In previous research on this topic, we reported that one half of a national sample of children 2–17 had been victimized *more than once* in the previous year, and that the mean number of victimizations per victimized child was 3 (Finkelhor et al., in press). We proposed that the group of children with extremely high levels of victimization be called poly-victims. Poly-victims had considerably higher levels of traumatic stress symptoms than non-victims or even victims who had suffered a single type of victimization. In fact, the total number of different victimizations for a child was a much more powerful predictor of symptomatology than the presence of any particular type of victimization. These results suggested the importance of identifying poly-victims for both research and clinical purposes and the utility of a comprehensive instrument like the Juvenile Victimization Questionnaire (JVQ) in such identification.

In a number of fields there appears to be a convergent interest in individuals with multiple and reinforcing adversities (Felitti, Anda, & Nordenberg, 1998), such as poly-drug users or dual mental health diagnoses (Kaufman, 1977; Sacks, 2003). The importance of cumulative risk is being increasingly recognized and adopted in child development (Evans, 2003; Rutter, 1983, 1993). We expect that the interest in juvenile poly-victims will also grow, and this will inevitably raise questions about the best way to operationalize the concept. While it appears a matter of commonsense that poly-victimized children would be more distressed, it does not follow that poly-victimized children should be identified through a simple, unweighted count of the number of their different victimizations. It has long been believed that some victimizations are more consequential than others. Should some victimizations be counted more than others? Is a complete inventory of all victimizations necessary? Could poly-victims be identified from a short inventory of victimization types? The intent of this paper is to explore possible alternative ways of operationalizing the concept of poly-victimization using the Juvenile Victimization Questionnaire (JVQ).

Methods

Participants

This research is based on data from the Developmental Victimization Survey (DVS), designed to obtain 1-year incidence estimates of a comprehensive range of childhood victimizations across gender, race, and

developmental stage. The survey, conducted between December 2002 and February 2003, assessed the experiences of a nationally representative sample of 2,030 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 concerning violence exposure (Hausman, Spivak, Prothrow-Stith, & Roeber, 1992).

The sample selection procedures were based on a random-digit dial (RDD) telephone survey design. 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 with the caregiver who "is most familiar with the child's daily routine and experiences." Caregivers were interviewed 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.

It is recognized that caretakers may not be aware of all victimizations children have experienced and may be prone to underreport maltreatment they themselves may inflict. But direct interviewing of young children poses other serious problems, including difficulties in understanding concepts, memory retrieval and time span estimation. In a methodological analysis to address this concern (Finkelhor, Hamby, Ormrod, & Turner, 2005), there was little difference in victimization occurrence frequency or child maltreatment reports comparing the self-reports for 10- and 11-year olds with the caretaker responses for 8- and 9-year olds (the children in the proxy interview group most likely to have experiences that would be unknown to parents). This led us to conclude that proxy interviews were an acceptable solution.

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 complete confidentiality, and were paid $10 for their participation. 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. The final sample consisted of 2,030 respondents: 1,000 children (age 10–17) and 1,030 caregivers of children age 2–9. Interviews were completed with 79.5% of the eligible persons contacted.

Data were collected using a CATI (Computer Assisted Telephone Interview) system. The use of CATI minimizes recording errors and provides substantial quality control benefits. For this survey, only interviewers who had extensive experience interviewing children and in addressing sensitive topics were chosen. Interviewers then went through extensive training on the questionnaire and interview protocol.

Measurement

Victimization. This survey utilized the Juvenile Victimization Questionnaire, a recently constructed inventory of childhood victimization (Hamby & Finkelhor, 2004; Hamby, Finkelhor, Ormrod, & Turner, 2004; Finkelhor, Hamby, et al., 2005; Finkelhor, Ormrod, Turner, & Hamby, 2005). The JVQ was designed to be a more comprehensive instrument than has been typically used in past research, providing an inventory of all the major forms of offenses against youth. The instrument covers a wide range of events, including non-violent victimizations and events that children and parents do not typically conceptualize as crimes.

The use of simple language and behaviorally specific questions clearly define the types of incidents that children should report. Clear instructions were given about how to identify a 1-year interval (e.g., "we are talking about the time from around last Valentine's Day when you were 12 in Grade 6 until now") and some practice items were offered about non-victimization experiences (e.g., swimming at the pool or beach). Considerable attention was paid to translating clinical and legal concepts such as "neglect" or "sexual harassment" into language that children could understand. Prior to its use in the survey, the JVQ was extensively reviewed and tested with victimization specialists, focus groups of parents and children, and cognitive interviews with young children to determine the suitability of its language and content. As a result, the JVQ is appropriate for self-report by children as young as age 8. The caregiver version, designed for proxy interviews with even younger children, uses wording very similar to the self-report questionnaire, allowing for direct comparability of items across the two versions. Therefore, unlike other victimization instruments, the JVQ permits direct comparisons of victimization experiences across the full range of childhood and adolescence. Psychometric evaluation showed little respondent confusion or resistance, good reliability and validity, and comparable information from both youth and caretaker proxy sources (Hamby et al., 2004).

Special attention was also paid to protecting privacy during data collection to aid in the assessment of sensitive victimizations. Moreover, the JVQ incorporates the use of probes to assist respondents in accurately reporting the time frame of victimization events. We believe this technique of establishing time frames by points of reference within the respondent's own life substantially increases the accuracy of 1-year incidence reports.

The JVQ obtains reports on 34 forms of offenses against youth that cover five general areas of concern: Conventional Crime, Child Maltreatment, Peer and Sibling Victimization, Sexual Victimization, and Witnessing and Indirect Victimization. Specific screener items reflecting the 34 types of events are listed elsewhere (Finkelhor, Ormrod, et al., 2005). Follow-up questions for each screener item (not shown) gathered additional information, including perpetrator characteristics, the use of a weapon, whether injury resulted, and whether the event occurred in conjunction with another screener event. The instrument takes 20–30 minutes to complete depending on the number of victimizations reported. All demographic information was obtained in the initial parent interview, including the child's age, race/ethnicity, and household income (including all wages, public assistance and child support).

Trauma symptoms. In this paper, alternative measures of poly-victimization were validated through their ability to predict trauma symptoms, because such symptomatology is one of the most important correlates of and reasons for identifying poly-victimization. Symptoms were measured using three scales each (anxiety, depression and anger/aggression) of two closely related instruments: the Trauma Symptom Checklist (TSCC), administered to the 10–17-year-old respondents and the Trauma Symptom Checklist for Young Children (TSCYC), for caregivers of the 2–9-year-old respondents. The TSCC and the TSCYC

were designed to evaluate children's responses to unspecified traumatic events in different symptom domains. In the TSCC, children are presented with a list of thoughts, feelings and behaviors and asked to indicate how often each of these things happened to him or her in the last month. In the case of the TSCYC, the caregiver indicates the frequency of symptoms displayed by their young child. In both versions, each item was rated on a 4-point scale ranging from 0 (not at all) to 3 (very often). Questionnaire length did not allow for the inclusion of the full TSCC or TSCYC, and in particular its lengthy post-traumatic symptom subscales that we believed would be less relevant to the broader spectrum of victimization outcomes assessed in this study.

All components of the TSCC have shown very good reliability and validity in both population-based and clinical samples (Briere, 1996). In the present study, TSCC α coefficients are .75 for the anxiety subscale (7 items), .82 for the depression subscale (9 items) and .87 for the anger/aggression subscale (9 items). Although developed more recently, the TSCYC caregiver report has also shown good psychometric properties (Briere et al., 2001). In the present study, TSCYC α coefficients are .72 for the anxiety subscale (9 items), .72 for the depression subscale (9 items), and .83 for the anger/aggression subscale (9 items).

Survey sample

The final sample represented 2,030 children age 2–17 living in the contiguous United States. Half (50%) of the sample is male; 51% are 2- to 9-year-olds, while 49% are age 10–17. Almost 10% of the sample reported a household income of under $20,000 while about 34% had annual incomes between $20,000 and $50,000. The survey sample was 76% White (non-Hispanic), 11% Black (non-Hispanic), 9% Hispanic (any race), and 3.5% from other races including American Indian and Asian. The sample somewhat under-represented the national proportion of Blacks and Hispanics, and as a result, using 2002 Census estimates (US Census Bureau, 2000) post-stratification weights were applied to adjust for race proportion differences between our sample and national statistics. It should be noted that, since interviews were conducted in English only, this weighting procedure can only increase representation among English speaking Hispanics. We also applied weights to adjust for within-household probability of selection due to variation in the number of eligible children across households and the fact that the experiences of only one child per household were included in the study.

Data analysis

Alternative versions of a poly-victimization measure were validated through their ability to predict trauma symptoms. Three alternatives were developed and compared. The first was the original conceptualization of poly-victimization (Finkelhor et al., in press) based on counting separate victimization incidents of different types. In this version, termed the Separate Incident Version (SIV), each counted incident represented a different type of victimization occurring at a different time and place, as ascertained using follow-up questions asked about each endorsed screener. Thus, a robbery and an assault occurring in the same incident would not be counted as two victimizations even if two screener items were endorsed. The second was a measure based on a simple count of endorsed screeners from the JVQ ("endorsed" denotes a "yes" response to a victimization screener question). In this case, the robbery and assault in the same incident would both be counted as long as the respondent endorsed the screener about robbery and also the one about assault. This was termed the Screener Sum Version (SSV). And finally, a measure

based on a count of endorsed screeners from among a selected sub-set of 12 screeners, the Reduced Item Version (RIV). Multiple regression analyses were run using three symptom scales: anger/aggression, depression and anxiety. Regressions were run separately for younger children (2–9) and older children (10–17) because the symptoms for each group were measured somewhat differently using different scale items (TSCC for older children vs. TSCYC for younger children).

Results

Original poly-victimization measure

Assessed with the JVQ, many children and youth in a national sample were found to have experienced multiple types of victimization in the last year. Of the 71% who had experienced any victimization, 69% had experienced at least one additional, different type of victimization in a different episode (separate time and place of occurrence) in the last year (the original, incident-based measure of victimizations that we will refer to as the Separate Incident Version). The mean number of victimizations identified by the JVQ among victimized children in this way for the 1-year period was 3.0, with the range extending all the way to 15. Because of the high frequency of victimization and inclusion of many relatively less serious types of victimization in the inventory, we defined poly-victimization originally as the experiencing of four or more different types of victimization in different incidents in a given year (i.e., all children with victimization levels above the mean; Finkelhor et al., in press). Twenty-two percent of the sample had four or more different kinds of victimizations. We made a further distinction between children with low poly-victimization (four to six victimizations), who comprised 15% of the full sample and children with high poly-victimization (seven or more victimizations), who comprised 7%.

Poly-victims compared to non-poly-victims (as defined by our original measure) were more likely to have certain characteristics and certain kinds of victimizations (Table 1). They were disproportionately from single parent families and resident in large cities (at least 300,000 population). They were also more likely to be older than non-poly-victims and have considerably higher rates of other adverse life events. Compared to other non-poly child victims, poly-victims were more likely to have had a victimization involving an injury, a weapon, a caregiver perpetrator or a sex offense.

Similarly, high poly-victims had a number of differences from low poly-victims (Table 1). Compared to low poly-victims, the high poly-victims were more likely to come from lower socio-economic status homes, reside in one-parent households, be older, and have higher rates of other adverse life events. Their victimizations were also more likely to include an injury, a weapon, a caregiver perpetrator, and a sex offense than those of low poly-victims.

The original, *Separate Incident Version* of poly-victimization, measured as the total number of victimization incidents over the course of a year, was a powerful predictor of trauma symptoms (anger, depression, and anxiety). In multiple regressions for younger and older children, that controlled for demographic factors and other lifetime adversities, poly-victimization had a standardized regression coefficient (beta) equal to or greater than .30. With the exception of anxiety symptoms in the 2- to 9-year-old age group, poly-victimization was more important in predicting symptom levels than was a measure of other lifetime adversities that included such things as serious illnesses, accidents, homelessness, family conflict, and the death, unemployment, substance abuse or imprisonment of family members (for details, see Finkelhor et al., in press).

Table 1
Characteristics of poly-victimized and non-poly-victimized children

Characteristic	Victimization Category			
	Not poly-victimized (n = 1,617)	Poly-victimized (n = 413)	Low poly-victimized (n = 295)	High poly-victimized (n = 118)
Demographic				
Child male (%)	49	53	56	46
Child black, non-hispanic (%)	15	17	15	22
Child hispanic, any race (%)	17	19	17	22
Socio-economic status below average (%)	23	26	22[d]	37
Single parent family (%)	20[b]	25	20[d]	36
Large city residence (%)	16[b]	21	22[d]	21
Child age (mean, years)	9.1[c]	11.7	11.1[d]	13.0
Lifetime adversity score (mean)	2.0[b]	4.4	3.9[d]	5.6
Victimization characteristic[a]				
Any injury (%)	8[c]	40	27[d]	69
Any weapon (%)	6[c]	25	15[d]	48
Any parent/caregiver perpetrator (%)	7[c]	28	23[d]	38
Any sexual victimization (%)	2[c]	32	23[d]	53

Note: values derived from weighted data.
[a] Excludes non-victimized children from "Not poly-victimized" group (n = 980).
[b] Different from "Poly-victimized" group at p <.05.
[c] Different from "Poly-victimized" group at p <.01.
[d] Different from "High poly-victimized" group at p <.01.

Even more noteworthy, the inclusion of poly-victimization in the analyses either eliminated or greatly reduced the predictive power of individual types of victimization (Finkelhor et al., in press). These substantial reductions in the associations between individual victimizations and trauma symptom levels suggest that poly-victims are the children carrying much of the mental health morbidity, and that simple associations between specific victimizations and psychopathology without controlling for the presence of other victimizations may overstate the contribution of any one particular victimization type.

While a count of the number of different victimizations does appear to be a powerful predictor of trauma symptoms, such a measure of poly-victimization might nonetheless be criticized for treating victimizations too homogeneously. Most people assume that victimizations differ in their severity and hence in their impact, and might want a measure of poly-victimization to take this into account. Among the victimizations presumed to be more traumatizing are sexual victimizations, victimizations involving caregiver perpetrators, or victimizations involving injury. One might also hypothesize that certain victimization combinations might contribute more damage than others. For example, children victimized in more domains in their lives, both inside the family and outside the family, by both peers and adults, and by persons of both genders, might be thought of as more broadly victimized.

To test whether taking account of such factors might enhance the measurement of poly-victimization, we looked for victimization characteristics and types that explained additional variance in trauma symptoms beyond poly-victimization. We used the poly-victimization measure just described—simple, equal-weight item count of the number of different kinds of victimization occurring in separate incidents. We also included in the models our standard set of background covariates (demographics and lifetime adversity). We then examined whether there were victimization characteristics or types that, when added to the multiple correlation models, could account for unexplained variance in the trauma symptoms (i.e., beyond that explained by the poly-victimization measure alone). The results are shown in Table 2, which highlights those characteristics and types of victimization that added something significant and important to the model (as indicated by a significant partial correlation coefficient of at least .10). These partial correlations are all after controlling for the powerful effect of poly-victimization, which was highly significant in all models.

Table 2 is noteworthy for how few victimization types or characteristics were correlated with trauma symptoms across the board when poly-victimization was controlled, that is how few added anything to a broad explanation of symptomatology above and beyond the simple count of victimizations.

The prediction of at least two trauma symptoms for the younger children (2–9 years) was enhanced beyond an equal-item measure of poly-victimization by three victimization characteristics: whether the child had experienced an injury, a victimization involving a weapon or chronic victimizations of one particular type. (Chronic victimization was considered to have occurred when a child suffered 10 or more victimizations of the same type in the previous year.) The prediction of at least two of the trauma symptoms scores for young children was also enhanced by taking into account whether a child had experienced an assault with a weapon, a gang or group assault, or a sexual assault by someone they did not know (non-specific sexual assault). The assault with a weapon item is very similar and highly correlated with the variable measuring any weapon victimization noted above.

The prediction of trauma symptoms for older children (10–17 years) was not enhanced by any of the specific victimization characteristics, such as injury, weapon presence or having a caregiver perpetrator. It was also not enhanced by the other measures of diverse victimization domains. What did improve the prediction of at least two trauma symptoms for the older children, over and above their equal-item poly-victimization score, was whether they had experienced sexual assault by a known adult or emotional bullying.

Given that some victimization characteristics and types explained variance in trauma symptoms scores above and beyond an equal-item poly-victimization measure, we were interested in whether we might enhance the poly-victimization measure by loading it to take into account these additional elements. The results of these changes are presented in the first panel of Table 3. The first line shows the standardized multiple regression coefficient for the original, Separate Incident Version of the poly-victimization measure (the number of different kinds of victimization occurring in separate incidents in the course of a year). The second line shows the coefficient for the SIV poly-victimization measure enhanced by adding a value of 1 to the score of each child who suffered a sexual assault by a known adult and each child who experienced an emotional bullying, the two forms of victimization that added to the prediction of symptoms among the older children. These enhancements increased the coefficient predicting depression among the older children from .35 to .38, and that predicting anxiety from .31 to .33. They also very slightly increased two of the coefficients for younger children.

The third line in Table 3 shows the SIV poly-victimization measure enhanced with a value of 1 added for each of four of the six elements that explained additional variance in trauma symptoms for younger

Table 2
Victimization characteristics and types correlated with trauma symptoms after controlling for poly-victimization[a]

	Partial correlation[b] with trauma symptom score					
	Younger children (2–9 years)			Older children (10–17 years)		
	Anger	Depression	Anxiety	Anger	Depression	Anxiety
Victimization characteristic						
Any injury	0.10		0.16			
Any weapon	0.15		0.10			
Any chronic victimization	0.18	0.18				
Any caregiver perpetrator						
Peer and adult perpetrators						
Family and non-family perpetrators						
Male and female perpetrators						
Victimization types (screener questions)						
Robbery (C1)				0.11		
Theft (C2)						
Vandalism (C3)						
Assault with weapon (C4)	0.13		0.10			
Assault no weapon (C5)	0.14					
Attempted assault (C6)			0.13			
Kidnapping (C7)						
Bias attack (C8)						
Physical abuse (M1)		0.10				
Psychological/emotional abuse (M2)		0.14			0.15	
Neglect (M3)						
Custodial interference (M4)						
Gang/group assault (P1)	0.16		0.17			
Peer/sibling assault (P2)						
Non-sexual genital assault (P3)						
Bullying (P4)						0.15
Emotional bullying (P5)		0.15			0.18	0.18
Dating violence (P6)						
Sex assault, known adult (S1)				0.12	0.17	0.10
Sex assault, non-specific (S2)	0.10	0.11				
Sex assault, peer (S3)						
Rape/attempted rape (S4)						
Sexual exposure/flashed (S5)						
Sexual harassment (S6)						
Witness domestic violence (W1)						
Witness physical abuse (W2)						
Witness assault with weapon (W3)						
Witness assault no weapon (W4)						
Household burglary (W5)						
Person close murdered (W6)						
Witness murder (W7)						
Exposure to shootings, violence (W8)						
Exposure to war (W9)						

[a] All models controlled for poly-victimization, as well as lifetime adversity, age, gender, race/ethnicity, SES, family structure, and place size.

[b] Only correlations of at least $r = .10$ are shown; all correlations shown are significant at $p < .01$.

Table 3
Alternative poly-victimization measure versions: association with trauma symptoms

Version	Standardized regression coefficient* predicting					
	Younger children (2–9 years)			Older children (10–17 years)		
	Anger	Depression	Anxiety	Anger	Depression	Anxiety
Separate Incident Version (SIV)	**0.33**	**0.30**	**0.17**	**0.39**	**0.35**	**0.31**
SIV weighted for older children[a]	0.33	0.31	0.18	0.39	0.38	0.33
SIV weighted for younger children[a]	0.37	0.34	0.21	0.40	0.36	0.31
Screener Sum Version (SSV)	**0.34**	**0.34**	**0.21**	**0.39**	**0.36**	**0.34**
SSV weighted for older children[a]	0.34	0.35	0.21	0.39	0.38	0.36
SSV weighted for younger children[a]	0.37	0.37	0.24	0.39	0.36	0.34
Reduced Item Version	**0.31**	**0.34**	**0.20**	**0.37**	**0.38**	**0.34**

[a] Refers to weighting items favoring improvement in trauma prediction for either younger or older children (see text).
[*] All models include a poly-victimization measure, as well as lifetime adversity, age, gender, race/ethnicity, SES, family structure, and place size. All standardized regression coefficients (betas) significant at $p < .01$.

children (the item related to any victimization involving a weapon and the item specifying assault with a weapon were dropped because of their high correlations with the other four elements). This enhanced SIV poly-victimization measure increased the regression coefficient for anger among younger children from .33 to .37, for depression among younger children from .30 to .34, and for anxiety among younger children from .17 to .21. It also increased the coefficients slightly for two of the symptoms scores (anger and depression) for older children. In sum, while the weights increased some of the coefficients slightly, overall the augmentation was small.

Alternative scoring methods

In the original calculation of a poly-victimization measure—the Separate Incident Version—an effort was made to count only victimizations that occurred as part of separate incidents. Thus, a robbery and an assault that occurred as part of the same incident were not counted as two victimizations, even if both the robbery and assault screen questions were endorsed by respondents. This approach seemed to be the most clear-cut from a conceptual point of view, with each victimization representing a separate event or experience.

But there is an operational drawback to this scoring method. It requires the utilization of the long form of the JVQ, which asks a follow-up question about whether each victimization screener item being endorsed is part of the same incident identified by another victimization screener already endorsed. This scoring method also entails a somewhat complex process of identifying (and removing for counting purposes) the duplication of incidents identified by more than one screener endorsement. Since some users may only have time to employ the screener version of the JVQ without the follow-up questions, it is of interest to know whether an effective poly-victimization measure can be constructed based only on the screeners. This meant counting the number of endorsed screener items without attempting to differentiate among victimizations that occurred as part of the same episode.

This *Screener Sum Version* of the poly-victimization measure does as well or better than the original measure in predicting trauma symptom scores. The standardized regression coefficient for the Screener

Sum Version was higher than the original coefficient in relation to five of the six trauma symptom analyses, and was particularly higher for depression and anxiety among the younger children (Table 3, line 4).

Using the Screener Sum Version, however, does change the distribution of scores. The maximum number of victimization endorsements grows from 15 to 19, the mean score for victims' changes from 3.0 to 3.7, and the standard deviation from 2.3 to 2.9. In the original poly-victimization measure (SIV), poly-victimization status was set at the level of four or more victimizations and high poly-victimization at the level of 7 or more. Such cut-offs with the Screener Sum Version would inflate the number of children considered poly-victims and high poly-victims. Setting the cut-off at five or more for the Screener Sum Version would result in a classification of 20% of the sample as poly-victims. It would correctly classify 70% of the poly-victims classified as poly-victims by the SIV. Similarly, raising the cut off to 8 for high poly-victims would classify 7% of the sample as high poly-victims, and correctly classify 87% of the high poly-victims classified by the original, Separate Incident Version. The demographic and victimization characteristics of the set of poly-victims identified by the Screener Sum Version remain similar to those of the Separate Incident Version poly-victims (Table 4) with no significant differences between the two.

Lines 5 and 6 of Table 3 shows that loadings (discussed earlier) applied to the Screener Sum Version do result in some enhanced predictive power just as they did with the separate incident (SIV) of poly-victimization measure. One problem is that the assessment of injury and victimization chronicity, two of the elements of the enhanced measure, do require data gathered by the long form of the JVQ, and cannot be calculated using simply the screener version.

A third issue in the assessment of poly-victimization concerns the length and number of items in the JVQ scale. The JVQ assesses the occurrence of 34 different kinds of victimization, and both the Separate Incident and Screener Sum Versions of the poly-victimization measure entail the administration of all these items. In reality, some of the victimizations measured by the JVQ are relatively rare. Would

Table 4
Characteristics of poly-victims and their victimizations

Characteristic	Poly-victimization measure		
	Separate Incident Version ($n = 413$)	Screener Sum Version ($n = 370$)	Reduced Item Version ($n = 454$)
Demographic			
Child Male (%)	53	55	54
Child Black, non-Hispanic (%)	17	18	19
Child Hispanic, any race (%)	19	20	15
Socio-economic status below average (%)	26	27	25
Single parent family (%)	25	28	26
Large city residence (%)	21	20	21
Child age (mean, years)	11.7	11.4	10.8
Lifetime adversity score (mean)	4.4	4.5	4.1
Victimization			
Any injury (%)	40	43	38
Any weapon (%)	25	30	28
Any parent/caregiver perpetrator (%)	28	27	25
Any sexual victimization (%)	32	34	24

Note. Values derived from weighted data.

Table 5
Screeners included in Reduced Item Version of poly-victimization measure

Identifier	Screener label	Victimization domain
C2	Personal theft	Property victimization
C4	Assault with weapon	Physical assault
C5	Assault without weapon	Physical assault
M2	Psychological/emotional abuse	Maltreatment
P1	Gang or group assault	Peer victimization
P2	Peer or sibling assault	Peer victimization
P5	Emotional bullying	Peer victimization
O1	Sexual assault by known adult	Sexual victimization
O2	Non-specific sexual assault	Sexual victimization
W1	Witness to domestic violence	Witnessing and indirect victimization
W4	Witness to assault with weapon	Witnessing and indirect victimization
W8	Exposure to random shootings, terrorism, or riots	Witnessing and indirect victimization

it be possible to identify poly-victimization using a more limited set of victimization items? Such a method might be of great value to people interested in poly-victimization, but who have considerable data collection constraints.

To arrive at a possible *Reduced-Item Version* of a poly-victimization measure, we examined the JVQ items in several ways. We looked at correlations between individual item endorsement and total victimizations (both incident-based and screener sum), the frequency of item endorsements, and which items contributed independently in unconstrained stepwise entry regressions of all JVQ items on the three trauma symptom measures for the younger and older children. Among the objectives was the selection of items that represented a diversity of victimization domains and that were effective in predicting symptoms for both younger and older children.

The result was a 12-item poly-victimization measure that summed endorsed screeners from among those listed in Table 5. This Reduced Item Version has items from all major victimization domains, including sexual victimization, physical assault, property victimization, maltreatment and witnessing/indirect victimization. It correlates strongly with the Separate Incident ($r = .87$) and the Screener Sum ($r = .92$) versions of the poly-victimization measure. And it has associations with symptom scores that are similar to those of the original Separate Incident Version (Table 3). Its standardized regression coefficients (betas) are somewhat higher than the SIV in predicting depression and anxiety for both younger and older children, while its regression coefficients are a bit lower in predicting anger for both these groups.

While the Reduced Item Version is quite close to the longer version in its prediction of trauma symptoms, because of its smaller number of items, it does not have quite the same utility in classifying poly-victimization subgroups. The mean number of victimization screeners endorsed by victims in the Reduced Item Version is 2. A cut-off for poly-victimization of 3 or more screeners classifies 23% of the sample and 35% of victims as poly-victims. This correctly classifies 81% of the children identified as poly-victims by the original Separate Incident Version. The Reduced Item Version does not do a very good job in classifying high poly-victims, correctly identifying with a cut-off of 5 or more only 61% of the children designated high poly-victims from the SIV. However, the demographic and victimization characteristics of the complete set of poly-victims identified by the Reduce Item Version remain roughly similar to those identified by both the Separate Incident and Screener Sum Versions (Table 4), but with

some differences. The mean age of poly-victims identified by the Reduced Items Version is lower and the percent suffering a sexual victimization was smaller than with other versions. The mean number of lifetime adversities was also smaller for the Reduced Item Version than for the Screener Sum Version.

Discussion

The concept of poly-victimization would appear to be an extremely important and useful one in understanding victimization risk and victimization trauma. Youth with a large number of victimizations are different in terms of their victimization profile. They are also the youth with the highest level of trauma symptoms. Moreover, associations between individual victimization types and trauma symptoms are greatly reduced or in many cases eliminated entirely when poly-victimization is taken into account. This means that it is primarily poly-victims, not all the victims in any individual category of victimization, who are manifesting symptomatology.

The fact that few individual victimization types or characteristics are strong, across-the-board predictors of trauma symptoms when controlling for poly-victimization has potential theoretical implications as well. It suggests that it is infrequent that a single victimization, even a serious one, by itself, has a large traumatic influence. Rather, when a child shows traumatic effects, it may be important to look beyond the proximal victimization experience, and consider whether the child has a longer history of victimizations that is also contributing to the distress. Moreover, the current analyses suggest that a wide variety of different, multi-victimization patterns can predict similar symptom elevations. These serious multi-victimization patterns associated with trauma do not need necessarily to include a sexual assault or intra-familial abuse or exposure to domestic violence. They can involve multiple types of peer victimization, for example. These findings should lead investigators away from a narrow focus on individual types of victimization, such as sexual abuse, physical abuse or bullying, and toward an effort to understand the risk factors for, the developmental sequences leading up to, and the impacts of poly-victimization.

As shown by the analyses just described, poly-victimization can be effectively measured in several different ways and still serve useful clinical and research purposes. The associations between poly-victimization and symptoms scores were high whether poly-victimization was measured using 34 screeners or a reduced set of 12, and whether victimizations occurring in the same incident were unduplicated or double-counted.

It did slightly enhance the ability of the poly-victimization measure to predict symptoms if the measure was weighted for certain characteristics or types of victimization. But the enhancements were relatively small in absolute terms. Given the conceptual and methodological complexity added, we do not on balance favor the use of these weightings for any of the versions.

Because all three poly-victimization versions yielded roughly equivalent results, the choice of which to use thus depends to a great extent on the objectives of the research. The Separate Item Version (SIV) will probably be of greatest value to those who, for other purposes, are interested in identifying, classifying and understanding distinct victimization incidents and types. For the other users, who have a primary interest in poly-victimization, we are inclined to recommend the Screener Sum Version as the preferred measure, because of its simplicity of administration. It does as well or better than the original Separate Incident Version, which does not double-count victimizations occurring in the same incident. The process of removing duplicate victimization counts seems to be a complexity that people interested in a measure of poly-victimization do not need to undertake. Users should be aware, however, that the Screener Sum

Version gives a somewhat more conservative estimate for the number of poly-victims (20% of the sample at a cut off of 5 or more vs. 22% with the SIV).

Researchers and clinicians who are not interested in a specific and comprehensive inventory of different victimizations should consider the Reduced Item Version, especially if interview or questionnaire time restrictions apply. From our analyses, the RIV seems to be a fairly equivalent measure in predicting trauma for those who do not want to administer the full JVQ. One important disadvantage is that users of the Reduced Item Version will not have access to a full victimization profile (the total number and range of victimizations suffered) that could be useful for other clinical and analytical purposes. The Reduced Item Version also inflates the number of poly-victims somewhat (using a cutoff of 3) compared to the SIV Version and is not as useful in distinguishing the two groups we have identified as High Poly-victims and Low Poly-victims. Nonetheless, the fact that it entails the administration of only 12 victimization items may be very appealing to some users.

Overall, while these results give some guidance to clinicians and investigators interested in the concept of poly-victimization and its measurement, a number of important cautions should be observed. The investigation of this concept has occurred entirely in the context of a single study, and important problems or weaknesses regarding it may only surface as the notion is investigated with different methodologies and samples. The current sample, while large, multi-aged and national in scope, has certain important limitations. It does not include households without telephones and probably misses some important high risk, hard-to-interview youth. It gathers victimization information on young children from caregivers, the validity of which is not clearly established. While the measure includes a broad and diverse array of victimizations, some of these, may be of a fairly minor sort, such as sibling assaults and property offenses. (Removal of these offenses from analyses, while reducing the total number of victimizations and the cut-offs for poly-victimization, does not alter in any material way the conclusions in the paper about poly-victimization and its measurement.) In addition, the various versions of poly-victimization contrasted in this study were evaluated with respect to some very limited criteria, such as their ability to predict trauma symptoms. It may be important to factor in a variety of other clinical and background characteristics to best classify a distinct group of children with high victimization risk. Hopefully the current study will stimulate more of such research.

Conclusion

Topics in the area of maltreatment and child victimization have been rich targets for social scientific inquiry, but they have not benefited from the integrative processes that some other broad fields, like juvenile delinquency and mental health, have been subjected to, which have forced a consideration of how various sub-phenomena fit together and interrelate. The identification of the importance of poly-victimization and the development of ways of measuring it may be positive steps toward the greater integration of these fields.

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Résumé

French-language abstract not available at time of publication.

Resumen

Spanish-language abstract not available at time of publication.