

Specifying Type and Location of Peer Victimization in a National Sample of Children and Youth

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Abstract Much of the existing research on the prevalence and consequences of peer victimization focuses on “bullying” at school, often omitting from consideration non-bullying types of peer victimization as well as events that occur outside of school. The purpose of this study was to examine past-year exposure to peer-perpetrated victimization, occurring both within and outside of school contexts, among school-aged children in the United States. The study is based on a representative sample of 2,999 youth ages 6–17 (50% female; 45% non-white) from the 2008 National Survey of Children’s Exposure to Violence (NatSCEV). Findings revealed age, gender, race, and family structure variations in many forms of peer victimization and demonstrated significant independent and cumulative effects of six different types of peer victimization (physical assault, physical intimidation, emotional victimization, sexual victimization, property crime, and internet harassment) on trauma symptoms. Findings also showed that, although victimization at school is substantial, a considerable proportion of peer victimizations occur away from school contexts. The findings highlight the importance of comprehensive measurement of multiple forms of peer victimization that occur both at school and elsewhere, rather than focusing exclusively on traditional measures of school-focused bullying.

Keywords Bullying · Peer victimization · School violence · Trauma symptoms

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Introduction

Public and professional concern about peer victimization has increased dramatically over the past two decades, as have efforts to reduce its prevalence. Numerous studies have documented its high incidence (Nansel et al. 2001; Storch and Ledley 2005), and demonstrated its detrimental effects on children’s social and psychological well-being (Hawker and Boulton 2000; Reijntjes et al. 2010; Rigby 2003). Newspaper coverage has highlighted the potential role of peer victimization in some tragic episodes of school shootings and youth suicides. Moreover, considerable attention has been directed at developing and implementing prevention programs in schools (Olweus and Limber 2010; Ryan and Smith 2009). There is little doubt that youth victimization at the hands of other juveniles represents a serious public health issue.

Despite the substantial activity in this field, confusion exists about the definition of peer victimization and what is being studied and targeted. The core problem is often referred to as “bullying”, which has been defined and measured in a variety of ways, some that are narrow in scope and others that encompass many different forms of victimization in a single measure (Esbensen and Carson 2009). Until the most consequential elements of peer victimization can be clearly identified, a strong argument exists for a more comprehensive approach that uses behaviorally specific measures that both include and differentiate among a wide variety of peer perpetrated offenses. Such an approach also would include types of peer victimization that are often not considered in conventional “bullying” research and intervention, such as dating violence, peer sexual assault and harassment, and property crimes. This would facilitate a more complete assessment of children’s exposure to peer victimization beyond bullying and allow a

more detailed examination of how different forms of peer victimization may differ in their prevalence and consequences. In our program of research on peer victimization, we assess a wide range of victimizations, including sexual harassment, property crime, nonsexual assault to the genitals, dating violence, various kinds of peer sexual assault, and emotional victimization, in addition to more traditional forms of physical assault and intimidation. Specifically, we consider six aggregate measures: peer physical assault (being hit, punched, kicked, or attacked—with or without a weapon— or being a victim of dating violence), peer physical intimidation (being chased, grabbed, and forced to do something against one's will), peer emotional victimization (being called names, teased, or excluded), peer sexual victimization (sexual assault, attempted assault, flashing, or sexual harassment), peer property crime (experiencing robbery, theft, or vandalized property), and internet harassment (using the internet to harass or spread mean words or pictures). This comprehensive assessment will allow a more detailed analysis of the full range of peer victimization to which youth are exposed.

Another potential problem with current “bullying” research is its frequent exclusive focus on victimization that occurs in the school context. Indeed, most of the large literature on peer victimization emphasizes “bullying at school” or “school violence” as a core theme, and many studies rely exclusively on school-based assessments. For example, many studies use the Olweus questionnaire or similar measures that ask specifically about “bullying at school” (Currie et al. 2008; Felix et al. 2009; Olweus 1996; Solberg and Olweus 2003; Vaillancourt et al. 2010). Other studies use teacher ratings to categorize students as bullies and victims (Hanish et al. 2004). Others utilize classroom peer nomination approaches to identify students who are bullied by other children (and who bully others) (Hodges and Perry 1999; Kim et al. 2006; Schwartz et al. 2005). School-focused assessments of peer victimization may miss children who experience considerable exposure outside of school. Although school officials who implement bullying prevention programs have reasons to concentrate on episodes that occur within their domain of authority, there is little evidence that school-based peer victimization is more prevalent or more consequential. Indeed, studies demonstrate that children often are exposed to peer violence outside of school (Cornell and Loper 1998) and experience especially detrimental effects of exposure to multiple forms of victimization (Finkelhor et al. 2007, 2009; Turner et al. 2010). This suggests the importance of considering a broader array of peer victimizations that may occur both within and outside of school contexts. Thus, the current study will examine and compare multiple forms of peer victimization that occur in both school and non-school environments. Unlike the majority of peer victimization studies that utilize samples

with relatively narrow age ranges, such as early adolescence or children in elementary school, the current research examines peer victimization across the entire developmental spectrum of school-aged children.

Study Objectives

Using a nationally representative sample of 2,999 children age 6–17, this research has several objectives. First, in order to better specify the full range of peer victimization to which youth are exposed, we examine the incidence of six categories of peer-perpetrated victimization (assault, sexual victimization, physical intimidation, emotional victimization, property crime, internet harassment) in the total sample of children and across age, gender, and racial group. Next, we identify the locations (school vs. other) in which different types of peer victimization occurred and compare the characteristics of children whose most recent peer victimizations occurred only in school with those who reported victimizations occurring in non-school locations. Thus, we are able to consider how an exclusive focus on particular locations may under or over-represent certain types of peer victimization or certain types of victims. Given that youth often experience multiple types of peer victimization, we also examine the independent and cumulative effects of the 6 different categories of peer victimization on level of trauma symptoms. Finally, we determine the extent to which non-school based peer victimizations contribute to trauma symptomatology over and above victimizations occurring at school.

Methods

Participants

The National Survey of Children's Exposure to Violence (NatSCEV) was designed to obtain incidence and prevalence estimates of a wide range of childhood victimizations. Conducted between January 2008, and May 2008, the survey focused on the experiences of a nationally representative sample of 4,549 children age 0–17 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.

Telephone interviewing is a cost-effective methodology (McAuliffe et al. 1998; Weeks et al. 1983) that has been demonstrated to be comparable to in-person interviews in data quality, even for reports of victimization, psychopathology, and other sensitive topics (Acierno et al. 2003; Bajos et al. 1992; Bermack 1989; Czaja 1987; Marin and Marin 1989; Pruchno and Hayden 2000). In fact, some

evidence suggests that telephone interviews are perceived by respondents as more anonymous, less intimidating, and more private than in-person modes (Acierno et al. 2003; Taylor 2002) and, as a result, may encourage greater disclosure of victimization events (Acierno et al. 2003).

The primary foundation of the design was a nationwide sampling frame of residential telephone numbers from which a sample of telephone households was drawn by random digit dialing (RDD). This nationally representative cross-section yielded 3,053 of the 4,549 completed interviews. To ensure that the study included a sizeable proportion of minorities and low-income respondents for more accurate subgroup analyses, there was also an over-sampling of U.S. telephone exchanges that had a population of 70% or more of African American, Hispanic, or low-income households. Random digit dialing (RDD) employed with this second “over-sample” yielded 1,496 of the completed interviews. Sample weights were applied to adjust for differential probability of selection due to study design, demographic variations in non-response, and variations in within-household eligibility. Given our interest in contrasting peer victimization at school with that occurring elsewhere, the current research focuses on the sub-sample of 2,999 school aged children (ages 6–17). This sample is 55% non-Hispanic white, 20% non-Hispanic black, 5% other, and 19% Hispanic of any race. Approximately half (49.5%) were male and half (50.5%) were female. At the time of the survey, 59% were living in two-parent households, 11% in households with one parent and a step-parent or partner, 24% with single parents, and 6% with some other adult caregiver. Thirty percent were 6–9 years old, 31% were 10–13 years old, and 39% were 14–17 years old.

Procedure

A short interview was conducted with an adult caregiver (usually a parent) in each household 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 under the age of 10, the interview was conducted with the caregiver who “is most familiar with the child’s daily routine and experiences.”

Comparison between proxy vs. self-reports with this instrument in past studies found little evidence of reporter bias (Finkelhor et al. 2005a). In the current study, comparisons between past-year victimization exposure among 9 year olds (the oldest age for proxy report) and among 10 year olds (youngest age for self report) showed significant differences in only 4 of 18 victimization categories, differences that could very well reflect actual variations in

exposure between the two age groups. Indeed, similar differences were evident for other contiguous age pairs (e.g. 8 and 9 year olds differed on 3 of 18 victimizations). Respondents were promised complete confidentiality, and were paid \$20 for their participation. The interviews, averaging 45 min in length, were conducted in both English and Spanish. Two hundred and seventy-nine of the interviews with the parents were done in Spanish. Nearly all of the adolescents aged 10–17 chose to be interviewed in English. Respondents 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. All procedures were authorized by the Institutional Review Board of the University of New Hampshire.

Response Rates and Non-Response Analyses

The cooperation rate for the RDD cross-section portion of this survey was 71% and the response rate was 54%. The cooperation and response rates associated with the smaller over-sample were somewhat lower at 63 and 43%, respectively. These are good rates by current survey research standards (Babbie 2007; Keeter et al. 2006), given the steady decline in response rates that have occurred over the last three decades (Atrostic et al. 2001) and the particular marked drop in recent years (Curtin et al. 2005; Keeter et al. 2006; Singer 2006). Although the potential for response bias remains an important consideration, several recent studies have shown no meaningful association between response rates and response bias (Curtin et al. 2000; Groves 2006; Keeter et al. 2000; Merkle and Edelman 2002). We also conducted our own non-response analysis with the current data and found that respondents who refused to participate (or could not be reached), but for whom parent screener information was obtained, were not systematically different from respondents on factors related to victimization risk (details of the non-response analyses can be obtained from the authors).

Measurement

Victimization

This survey utilized an enhanced version of the Juvenile Victimization Questionnaire (JVQ), an inventory of childhood victimization (Finkelhor et al. 2005a, b; Hamby et al. 2004). The JVQ obtains reports on 48 forms of youth victimization covering five general areas of interest: conventional crime, maltreatment, victimization by peer and siblings, sexual victimization, and witnessing and exposure

to violence (Finkelhor et al. 2005c). Follow-up questions for each screener item gathered additional information about each victimization, including whether the event occurred in the past year and perpetrator characteristics.

The current analysis focuses only on past year victimizations perpetrated by other juveniles who are not family members or otherwise related to the victim (referred to hereafter as past year peer victimizations). Screener follow-up questions were used to identify this specific form of victimization. Because some kinds of screeners can be considered to be variations of a general class of victimizations, aggregate measures, such as any property crime, any physical assaults, and any sexual victimization, can be constructed. For this analysis, any occurrence in the past year of: (1) physical assault, (2) physical intimidation, (3) emotional victimization, (4) sexual victimization, (5) property victimization, and (6) internet harassment, perpetrated by a non-related peer were flagged for each child (the individual screeners used to identify these types of victimizations are shown in Appendix 1). In the case of internet victimization, we did not have perpetrator information. Since this type of internet victimization appears to be a peer-perpetrated phenomenon among children and teens (for reviews, see Juvonen and Gross 2008; Tokunaga 2010), we make the assumption that all incidents reported represent peer victimizations. A measure of multiple peer victimization was also created by summing the aggregate measures. Thus, the measure ranged from 0 to 6, and represented the degree to which respondents were exposed to multiple types of peer victimization across the 6 aggregate categories or domains.

Victimization Location

Screener follow-up questions also reported whether the victimization occurred “inside or near home”, “at school (inside, in school yard, or on bus)”, “at daycare or an after-school program”, or “somewhere else”. If respondents reported more than one incidence of the victimization, information was obtained for the last time (within the past year) the victimization occurred. For this analysis, each peer victimization was flagged as to whether it took place in a *school* setting (either inside the school, in the school yard, or on the bus) or *elsewhere* (at or near home, elsewhere). With respect to internet harassment, location of victimization was not asked. Indeed, the issue of “location” of internet victimization is ambiguous, since the location and time of perpetration can be different from the location and time in which it is experienced by the victimization. Given that the internet itself represents a “place” outside of school, the current analyses code all internet victimization incidents as occurring outside of school contexts (i.e. “elsewhere”).

Victimization Characteristics

Some analyses specify whether the peer victimization incident resulted in an injury and how afraid the child felt during the event. A screener follow-up question asked: “Were you (your child) physically hurt when this happened? Hurt means you could still feel pain in your body the next day. You are also hurt when you have a bruise, a cut that bleeds, or a broken bone”. Respondents were also asked: “Thinking back to when it happened, how afraid did you (your child) feel?” Response categories were “not at all afraid”, “a little afraid” and “very afraid”. For the current analyses respondent were coded “yes” if they were “very afraid”. These follow-ups were not asked of the internet harassment question.

Trauma Symptoms

Mental health status was measured through the use of trauma symptom scores for the anger, depression, anxiety, dissociation, and post-traumatic stress 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 6–9 year-olds. For the purpose of this study the instruments were shortened for a total of 28 items in the TSCC and 25 items in the TSCYC. For both instruments, respondents are asked to indicate how often they (or their children) have experienced each symptom within the last month. Response options are on a 4-point scale from 1 (not at all) to 4 (very often). All item responses for the five scales together were summed to create an aggregate trauma symptom score. The TSCC and TSCYC have shown very good reliability and validity in both population-based and clinical samples (Briere 1996; Briere et al. 2001). In this study, the alpha coefficient was .93 for the TSCC (25 items) and .86 for the TSCYC (28 items). Because the specific items of the two measures differed, a child trauma symptom score was created for the 6–9 year-olds and a youth trauma symptom score for the 10–17 year-olds. A unified trauma symptom score for all children 6–17 years of age in the sample was then constructed by merging the standardized trauma scores for each age group.

Demographics

Demographic information was obtained in the initial parent interview, including the child’s gender, age (in years), race/ethnicity (coded into four groups: white non-Hispanic, Black non-Hispanic, other race non-Hispanic, and Hispanic any race), socio-economic status (SES), and perceptions of

neighborhood dangerousness. SES is a composite based on the sum of the standardized household income and standardized parental education (for the parent with the highest education) scores, which was then re-standardized. Family structure, defined by the composition of the household, was categorized into four groups: children living with: (1) two biological or adoptive parents, (2) one biological parent plus partner (spouse or non-spouse), (3) single biological parent, and (4) other caregiver. Respondents were asked “How much of a problem is violence in your neighborhood?” Responses were collapsed into three groups: 1 = “big problem” or “somewhat of a problem”, 2 = “not too much of a problem,” and 3 = “not at all a problem”.

Results

Demographic Variations in Peer Victimization

The first objective of this research is to establish the incidence of different types of peer victimization and to assess how these rates vary across developmental stage, gender, and race. Table 1 presents the percentage of the total sample exposed to any victimization within each of the 6 summary types. Physical assault is the most common form of peer-perpetrated victimization experienced by the sample with over 22% of the entire sample experiencing at least one type of violence exposure within this category in

the past year. Physical assault by peers occurs substantially more often for males, and adolescents (middle school and high school age), than for females and younger children. Black children report significantly more peer assault exposure than do children of other race/ethnicities.

Physical intimidation, involving certain types of more “minor” violence exposure such as being chased, grabbed, and forced to do things, is less common overall but more common among boys and elementary school age children. Both black and white children report more physical intimidation than do children of other races. No significant gender or racial differences in emotional victimization were evident, although there is a trend towards more emotional victimization among girls and whites. This form of victimization is substantially more common in elementary and middle school years, and less common among older adolescents. Sexual victimization, which includes sexual assaults from peers, flashing, and sexual harassment, was reported to have occurred in the past year to 6.6% of the sample. However, this form of victimization is more common among girls (8.5%) and is heavily concentrated in the 14–17 age group, with almost 14% of older adolescents experiencing some form of sexual victimization. Youth in the “other and mixed race” category were most likely to be exposed to sexual victimization (12%), while blacks were also over-represented (8.0%).

Property crime victimization by peers (theft, robbery, and vandalism) was quite common, with 14.5% of the sample experiencing this form of victimization in the past

Table 1 Past year incidence (%) of peer-perpetrated victimization (six types) by gender, age, and race

	Any physical assault	Any physical intimid.	Any emotional victimiz.	Any sexual victimiz.	Any property crime	Any Internet harassmt.	N
Total sample	22.1	5.0	20.0	6.6	14.5	2.7	2999
Gender	***	*	NS	***	NS	**	
Males	28.6	5.9	18.8	4.8	14.8	1.8	1485
Females	15.3	4.2	21.2	8.5	14.2	3.7	1514
Age group	***	**	***	***	*	***	
6–9 years	14.9	6.5	23.1	1.2	12.2	0	904
10–13 years	24.6	4.9	23.3	4.9	15.0	2.6	920
14–17 years	27.0	3.6	13.2	13.8	16.5	5.6	1175
Race/ethnicity	***	**	NS	**	NS	*	
White, non-Hispanic	20.7	5.7	20.7	6.1	13.4	3.1	1660
Black, non-Hispanic	31.5	6.2	17.9	8.0	17.5	1.9	597
Other, non-Hispanic	18.3	2.6	17.2	12.0	13.5	4.2	157
Hispanic, any race	19.1	2.5	19.6	5.4	16.0	1.3	578

Note Percentages derived from weighted data; *N*'s are un-weighted Chi-square:

- * Significant group differences within victimization type at $p < .05$
- ** Significant group differences within victimization type at $p < .01$
- *** Significant group differences within victimization type at $p < .001$

year. Property crime appears to increase in a linear fashion with age, but does not differ significantly for boys and girls or across race/ethnicity. Finally, internet harassment was experienced by 2.7% of the sample in the past year. This type of victimization is significantly more common among girls (3.7%) and is concentrated among middle school (2.6%) and especially high school aged (5.6%) youth. Whites (3.1%) and youth in the “other and mixed” race category (4.2%) were more likely to experience internet harassment than were black (1.9%) and Hispanic (1.3%) youth.

Peer Victimization at School and Elsewhere

Having established that exposure to all six categories of peer victimization are quite prevalent among American

youth, our second aim was to address the assumption that exposure to victimization by peers is largely a school-based phenomenon. That is, we wished to determine the proportion of each form of peer victimization that occurred at school (or on school playgrounds, school transportation, daycare, after school care, or at school events) and what proportion occurred outside of any school context. Results are shown in Table 2. Because location may differ for individual types within categories we show variations for individual screeners as well as the 6 general categories.

Although peer victimization frequently occurs in school, it is also evident that a substantial portion of peer victimizations occur outside of school contexts. With respect to peer assaults, 41.5% of all assaults occurred at places other than school-related locations. Interestingly, the specific type occurring most disproportionately at school was bias attacks

Table 2 Past-year peer victimization by location (weighted frequencies and percentages)

	At school/daycare		At home/elsewhere		Total
	Count	%	Count	%	
Peer assault					
c4 assault with weapon	56	47.1	63	52.9	119
c5 assault with no weapon	182	59.9	122	40.1	304
c6 attempted assault	130	66.3	66	33.7	196
c8 kidnapping	0	0.0	2	100.0	2
c9 bias attack	45	77.6	13	22.4	58
p1 gang/group assault	34	49.3	35	50.7	69
p2 peer/sibling assault	85	54.1	72	45.9	157
p3 genital assault	101	68.2	47	31.8	148
p6 dating violence	15	27.8	39	72.2	54
Sub-total	648	58.5	459	41.5	1,107
Peer physical intimidation					
p4 physical intimidation	82	52.6	74	47.4	156
Sub-total	82	52.6	74	47.4	156
Peer emotional victimization					
p5 emotional victimization	508	82.3	109	17.7	617
Sub-total	508	82.3	109	17.7	617
Peer sex victimization					
s3 sexual assault by peer	4	25.0	12	75.0	16
s4 rape - attempted or completed	7	17.5	33	82.5	40
s5 flashing	33	36.7	57	63.3	90
s6 sexual harrassment	70	72.2	27	27.8	97
Sub-total	114	46.9	129	53.1	243
Peer property victimization					
c1 robbery	72	69.7	31	30.3	103
c2 theft	144	57.8	105	42.2	249
c3 vandalism	85	49.7	86	50.3	171
Sub-total	301	57.5	222	42.5	523
Peer internet harassment					
int1 internet harassment	0		84	100.0	84
Sub-total	0	0.0	84	100.0	84
Grand total	1,653	60.5	1,077	39.5	2,730

In cases where a child experienced a specific victimization type more than once, location refers to the place where the most recent incident of that type occurred

(being hit or attacked because of skin color, religion, nationality, a physical disability, or sexual orientation), with almost 78% of exposures occurring at school. Non-sexual genital assaults (hitting or kicking private parts) were also disproportionately in school (68%). In contrast, dating violence and assault with a weapon most often occurred elsewhere (72 and 53% respectively). Physical intimidation occurred at school and elsewhere at similar frequencies (52 and 48%, respectively), as did property crime victimization (57% vs. 43%). Peer emotional victimization was the most frequently occurring victimization at school, with 82% of past year exposures happening in school contexts. In contrast, with the exception of sexual harassment, sexual victimization (especially any type of sexual assault) was more likely to occur outside of school.

Child Characteristics by Location Group

We also were able to group respondents according to where the most recent peer victimization of each type occurred: school contexts only, elsewhere only, or both school and

elsewhere. Fifty-three percent of victimized children and youth experienced all their most recent victimizations only at school, while 27% of respondents experienced these events only outside of school (i.e. “elsewhere”). Another 20% of respondents reported both school and elsewhere victimizations. Among those experiencing peer victimization both at school and elsewhere, 49% of their most recent peer victimization exposures occurred outside of school contexts.

Table 3 presents select characteristics of respondents who fall into the three location groups. The groups differed significantly with respect to their gender, age, and family structure distributions. Those whose most recent victimizations occurred at school-only were more likely to be female while kids who experienced victimizations only outside of school or in both locations were more likely to be male. Younger children (ages 6–9) comprised a significantly larger proportion of those experiencing victimizations only outside of school contexts, but were underrepresented in the school only and mixed location groups. The school only group had a disproportionately high percentage of middle school age children while the

Table 3 Characteristics of past-year peer victimized youth by location

Weighted percentages and frequencies	All victims	School only (a)	Elsewhere only (b)	School-Elsewhere mix (c)
N	1,325	699	360	266
%	100	52.8	27.1	20.1
Gender*				
Female (%)	45.4	49.4 ^b	40.6 ^a	41.7
Male (%)	54.6	50.6 ^b	59.4 ^a	58.3
Age***				
6–9	29.8	29.2 ^b	36.4 ^{a,c}	22.2 ^b
10–13	36.0	40.3 ^b	28.4 ^a	35.0
14–17	34.2	30.4 ^c	35.2	42.8 ^a
Race (%)				
White non-Hisp (%)	60.0	61.2	59.3	58.1
Black non-Hisp (%)	17.6	15.4	18.9	21.5
Other non-Hisp (%)	6.2	6.1	6.9	5.1
Hispanic any race (%)	16.2	17.3	14.9	15.2
Family structure**				
Two parents (%)	57.3	61.9 ^{b,c}	54.0 ^a	49.7 ^a
Parent and step parent/partner (%)	12.8	11.9 ^c	10.9 ^c	17.8 ^{a,b}
Single parent (%)	23.6	21.2	27.6	24.8
Other adult (%)	6.3	5.0	7.5	7.8
Violence as a problem in neighborhood**				
Big problem or somewhat of a problem	18.9	15.2 ^{b,c}	21.5 ^a	25.2 ^a
Not much of a problem	26.2	25.5	26.4	28.1
Not a problem at all	54.9	59.4 ^c	52.1	46.7 ^a
Injured during a peer victimization (%)***	18.6	12.3 ^c	15.9 ^c	38.7 ^{a,b}
Felt “very afraid” during a peer victimization (%)***	12.0	7.4 ^c	8.6 ^c	28.6 ^{a,b}

Chi-square: * $p < .05$, ** $p < .01$, *** $p < .001$

Superscripts a, b, & c indicate that the value is significantly different from the value in the column with that superscript. Pairwise comparisons made using ANOVA and post-hoc Bonferroni tests

Victimization locations refer to the places where each victimization type occurred. For example, if a child is classified as “school only”, all of his or her most recent victimization incidents across all victimization types occurred at school

Table 4 The effect of six types of peer victimization on Trauma symptom levels: standardized and unstandardized regression coefficients (SE)

	Eq 1		Eq 2		Eq 3		Eq 4		Eq 5		Eq 6		Eq 7		Eq 8	
	β	b	β	b	β	b	β	b	β	b	β	b	β	b	β	b
Physical assault	.25***	.60 (.044)											.12***	.30 (.045)		
Physical intimidation			.13***	.61 (.083)									.05***	.22 (.079)		
Emotional victimization					.28***	.71 (.044)							.20***	.51 (.044)		
Sex victimization							.20***	.81 (.073)					.11***	.43 (.073)		
Property victimization									.25***	.72 (.050)			.14***	.42 (.05)		
Internet harassment											.15***	.92 (.114)	.06***	.41 (.110)		
Number of peer victim domains															.39***	.39 (.017)
Adjusted R ²	.08		.04		.10		.06		.08		.04		.17		.17	

All regression models control for age, gender, race, socio-economic status, and family structure

****p* < .001

elsewhere only group had a lower percentage in the 10–13 age range. Finally, 14–17 year olds were overrepresented among the mixed location group but underrepresented among those experiencing victimizations only at school.

Children whose most recent victimizations all occurred at school were more likely to reside in two parent families than were children who experienced any victimization outside of school. In contrast, youth in single parent families were over-represented among those who experienced peer victimization only outside of school contexts, while kids living in step families were overrepresented in the mixed location group. There were no significant race differences in the location of peer victimizations. However, the extent to which respondents resided in a violent neighborhood differed across groups. Kids who had experienced recent peer victimization only outside of school or both at school and elsewhere were significantly more likely to live in a neighborhood where violence was “a big problem” or “somewhat of a problem.” School-only victims, however, were more likely to live in neighborhoods where it was “not a problem at all.” The three groups also differed with respect to whether they were injured in any peer victimization and whether they felt “very afraid” during any such incident in the past year. Results show that the group experiencing both at-school and out-of-school victimizations were significantly and substantially more likely to have been both injured and very afraid during at least one peer-perpetrated victimization. Additional analyses (not shown) found that, while this group experienced injuries at school and elsewhere at similar frequencies, they were significantly more likely to have been “very afraid” during out-of-school incidents.

Peer Victimization and Trauma Symptoms

Another objective was to determine how past year exposures to different forms of peer victimization are related to symptomatology. Since children can be exposed to multiple forms of peer victimization (see [Appendix 2](#) for correlations among peer victimization types), we wished to consider the effects of each type with and without the other the types held constant, and to examine the effects of exposure to multiple victimization types. To this end, we examined: (1) the effects of each category of peer victimization on level of trauma symptoms, controlling for demographic characteristics; (2) the effect of each category of peer victimization, independent of the other categories of victimization, and (3) the cumulative effects of exposure to multiple types of peer victimization. Results are presented in [Table 4](#). Equations 1–7 show the regression coefficient associated with each category of peer victimization with age, gender, race/ethnicity, socio-economic status, and family structure

controlled. Each category is significantly associated with symptom level with demographics held constant, ranging from a low of $Beta = .13$ ($p < .001$) for physical intimidation and a high of $Beta = .28$ ($p < .001$) for emotional victimization. It is important to note that forms of peer victimization sometimes excluded from bullying research, like peer sexual victimization ($Beta = .20$; $p < .001$) and peer-perpetrated property crime ($Beta = .25$; $p < .001$), are clearly related to elevated symptomatology.

In Equation 7, all categories of peer victimization were entered simultaneously (with demographics also included). All forms of victimization show significant independent effects on symptomatology. However, overlap in exposure across categories is also evident, since substantial reductions in individual coefficients occurred when the other victimization types were controlled. Emotional victimization still shows the strongest association with symptom levels (and was reduced the least when other types were controlled). Equation 8 considers the effect of experiencing multiple forms of peer victimization across the five categories or domains on trauma symptom level, again controlling for demographic characteristics. The strength of the association ($Beta = .38$; $p < .001$) is substantially greater than any of the individual categories of victimization considered separately, suggesting the particular importance of cumulative across-type exposure. Again, some categories of peer victimization that contribute to this type of multiple victimization traditionally have not been considered in bullying research.

School vs. Non-School Victimizations and Trauma Symptoms

Returning to the issue of the location of peer victimization, the next set of analyses considered the extent to which non-school-based peer victimizations contribute to elevated trauma symptoms over and above the contribution of victimizations occurring in school contexts. To this end, we first regressed trauma symptom scores on the total number of past year peer victimizations occurring *at school*, controlling for demographic and background factors. As expected, the number of school-based victimizations was significantly associated with levels of symptomatology ($Beta = .30$; $p < .001$) (analyses not shown). In the second model, the number of past-year peer victimizations occurring *outside of school* contexts was added to the equation. The number of out-of-school victimizations is related significantly and substantially to trauma symptoms ($Beta = .26$; $p < .001$), and close to the strength of the in-school coefficient ($Beta = .28$; $p < .001$). Importantly, the change in adjusted R-square from .110 to .155 when out-of-school victimizations are added is significant ($p < .001$) and non-trivial in size, explaining an additional

4.5% of variance in trauma symptoms. Thus, accounting for peer victimizations that occur outside of school contexts significantly contributes to the explained variance in child mental health, over and above that explained by in-school incidents.

Discussion

Past research on the prevalence and consequences of peer victimization has focused largely on “bullying” at school, often omitting from consideration other forms of peer victimization and events that occur outside of school contexts. Using a large nationally representative sample of school-aged children (age 6–17), the current study examined and compared multiple and diverse forms of peer victimization occurring in both school and non-school environments. The findings highlight the importance of taking into account a broader spectrum of peer victimization types beyond “bullying”, demonstrate substantial incidence of both in-school as well as out of school incidents of many forms of peer victimization, and confirm the detrimental effects of all types of peer victimization on child mental health.

Six different forms of peer victimization were considered in this study: assault, sexual victimization, physical intimidation, emotional victimization, property crime, and internet harassment. Results showed that each type of peer-perpetrated victimization was independently related to increased trauma symptoms, with all demographic factors controlled. Moreover, each type remained significant when all 6 types were considered together. The relative effects varied, however, with emotional victimization having the strongest independent effect followed by physical assault. Property crime also had relatively strong independent effects on symptomatology, confirming the importance of including this form of victimization in assessments. Importantly, although each type of peer victimization demonstrated independent effects, their combined effect was especially powerful. That is, when we considered a cumulative measure of cross-category peer victimization exposure, the effect on trauma symptoms was substantially greater than any one type considered alone. The results demonstrate the importance of multiple victimization exposure across types (i.e. poly-victimization), even when considering one category of perpetrator.

Greater specification of peer victimization types also provides a clearer picture of how different forms of peer victimization vary developmentally and by gender and race. For example, findings illustrate that different types of peer victimization sometimes considered under the general category of “bullying” occur at differing frequencies across age. Physical assault appears to increase linearly with age,

while less severe forms of physical violence (what we call physical intimidation) are most common in elementary school age children. Emotional victimization is also common in elementary school but remains high among middle school aged children. Past research on bullying has often shown decreasing rates in higher grades (De Voe et al. 2004; Nansel et al. 2001), especially for forms of physical aggression (Olweus 1993). Although our study finds lower levels of physical intimidation among older adolescents, physical assault in contrast increases with age. Similarly, past studies using global measures of bullying often show lower rates among blacks relative to whites (Spriggs et al. 2007). In contrast, we found comparable rates of both physical intimidation and emotional victimization among black and white youth in the current study and significantly higher rates of assault among blacks. Thus, greater measurement specification that differentiates physical intimidation and emotional victimization from assault (and that incorporates multiple forms of assault in its measurement) finds divergent age and race patterns. Property crime and, most notably, sexual victimization also increase with age.

As has been found in other research (Esbensen and Carson 2009; Finkelhor et al. 2009), boys experience more physical forms of peer violence while girls are more likely to be exposed to emotional and sexual forms of victimization. Although it varies somewhat by the types of peer victimization, blacks often experience elevated rates relative to whites and Hispanics. All these findings suggest that presumed developmental features of peer victimization need to be reassessed in the context of a more thorough inventory of the phenomenon and its various forms.

Another key implication from the study is that, rather than emphasizing “school violence” or “bullying at school”, peer victimization needs to be seen as a phenomenon that has frequent occurrence and serious consequences in *both* school and non-school environments. Although schools clearly represent an important and central arena for peer victimization, it is clear that peer perpetrated events very often occur outside of school environments. Indeed, several forms of peer victimization occur more often outside of school than within school. Although we might expect sexual assaults and dating violence to occur more often outside of school, even typical “school violence” types of victimizations like physical intimidation and assault, very often occur outside school contexts. School-based peer nomination approaches and self-report measures that ask only about “at school” events are likely to miss these important non-school exposures. Our findings suggest that such approaches may be especially likely to undercount peer victimizations occurring to boys, who were over-represented among youth experiencing their most recent peer victimizations only outside of school or in both school and non-school contexts. Peer victimization exposures

among youth living in non-traditional family structures and who live in dangerous neighborhoods may also more likely to be missed when using measures that focus exclusively on at-school events.

The group of youth whose most recent peer victimizations occurred at both school and out-of-school locations were particularly likely to have been injured and “very afraid” during at least one victimization event. This reminds us that some of the most endangered children will not be clearly identified unless cross-context victimization is assessed. The higher levels of injury and fear experienced suggest that this is a highly targeted group among peer perpetrators. They may suffer more opportunities for serious victimization and also be seen by perpetrators as easier targets or as deserving of more aggressive treatment. We have found in previous research that cross-context victimization is particularly predictive of high risk and poor mental health outcomes (Finkelhor et al. 2007; Turner et al. 2010).

The finding that the out-of-school victimizations in this “mixed-location” group were more often associated with feeling “very afraid” also suggests that there may be greater subjective danger linked to non-school contexts. It may be that an incident at school seems less likely to get out of control before an adult intervenes. In contrast, when peer victimization occurs away from school there may be few sources of protection or places for escape. This further confirms the importance of including out-of-school assessments (in addition to those that occur at school), since victimizations that occur off school property may often be particularly serious and fear-producing.

Interestingly, one form of victimization that is particularly likely to occur *at school* is bias attacks. Schools more than other contexts bring together children of a variety of social, economic, and racial backgrounds providing increased opportunity for this type of victimization. Thus, despite considerable efforts by many schools to teach tolerance and reduce prejudice, schools remain a common venue for “hate crime” victimizations. Also especially common in schools contexts are emotional victimization and sexual harassment. It may be that these types of victimization are more easily hidden from school personnel and thus are less likely to be subject to intervention by adults. However, recent research (Finkelhor et al. 2011) shows that a surprisingly large percentage of emotional victimization incidents are in fact known to school authorities. Thus, the high incidence of emotional victimization in schools also may be influenced by perceptions that non-physical victimizations are less damaging or less important than “violent” ones. Given findings that, among all types of peer victimization, emotional victimization has the greatest independent effect on trauma symptoms, such perceptions would be clearly erroneous. “Anti-bullying” efforts should target emotional and sexual harassment as major

prevention/intervention components, including educating teachers and other school personnel of their particular importance and damaging effects.

The importance of assessing peer victimization that occurs outside of school environments was confirmed by analyses showing substantial mental health effects of non-school victimizations. These exposures clearly contribute to elevated trauma symptoms, over and above at-school events. It is evident that at-school assessments cannot substitute or serve as proxies for exposures that occur outside of school. Altogether, the findings reinforce the value of assessing and attempting to intervene with and prevent all the various forms that peer victimization can take.

Given the lack of conceptual clarity in much of the bullying literature, we suggest that a shift in emphasis away from “bullying” to a more inclusive focus on peer victimization may be more productive. By addressing a broader array of peer victimization types that occur both within and outside of school contexts, we can avoid the existing definitional problems associated with “bullying” research and encourage more comprehensive assessments. Moreover, we believe that current measurement approaches for bullying that require peer victimization incidents be repeated and that perpetrators be greater in power than victims (e.g. Currie et al. 2008; Olweus 1996; Solberg and Olweus 2003; Vaillancourt et al. 2010) may further miss important peer victimization exposures. As we know from sexual assault research, single victimization incidents even involving peers of equal power can also generate considerable distress; yet would be excluded by many formal bullying assessments. Although certain *qualities* of peer victimization, such as frequency and uneven power, might increase the potency of their effects, these are analytic questions and should not be used to screen out incidents from consideration. The logic for abandoning these criteria is further strengthened by the need to incorporate “cyber-bullying” into our assessments, since victims of this form of harassment do not always know who the perpetrator is. Finally, the use of such exclusion criteria is inconsistent with prevention philosophies. Certainly, interventions directed at reducing peer violence and harassment do not, and should not, be targeted only at stopping repeated violence or unequal power incidents. The message in prevention is that violence, aggression, harassment and denigration are wrong and harmful, however often and in whatever context they occur.

Limitations

Self report measures of victimization have the potential advantage of allowing respondents to report events that occur across multiple life contexts, since only the respondent him or herself is likely to be privy to experiences in all

arenas. However, self reports of both victimization exposure and symptoms can lead to inflated associations due to method covariance (McGee et al. 1995). It is also possible that we underestimated peer victimization occurring at school among the younger 6–9 year old group (for which information was obtained by caregiver reports), since parents may not always be aware of all school-based incidents.

Not all categories of peer victimization were equally represented by our measures. For example, physical intimidation, emotional victimization, and internet harassment were each assessed with only one item, while assault was assessed with several items. Multiple items directed at assessing these constructs may have yielded higher incidence rates for these forms of peer victimization. Although peer victimization was assessed more comprehensively than much of the research in this area, particularly research involving large national surveys, there still may be types of peer victimization that are missing from our current assessment. In addition, we only had information on event characteristics, including location, for the *most recent* victimization of each type. This means that some children who appeared to have been victimized at “school-only” or “elsewhere only”, may also have experienced earlier past year victimization at other locations. Thus, although assessments of most recent victimizations for each type will reflect trends or tendencies toward peer victimization in one location or the other, there likely were more youth experiencing “mixed-location” victimizations in the past year than were reflected in our analyses. Finally, we did not have follow-up information about internet harassment that was equivalent to the other forms of peer victimization. Victimization occurring through the internet may not always be linked to a “known” perpetrator and the issue of “location” is more ambiguous than with more traditional forms of victimization. Nevertheless, future research would benefit from explicit efforts to gather information on perpetrators and locations as well as other incident characteristics.

Conclusions

This study demonstrates the importance of more comprehensive and better specified assessments of peer victimization that includes and differentiates between multiple forms of peer-perpetrated offenses. Reliance on single narrow categories or overly broad definitions of “bullying” will not fully capture the experiences of many youth and are likely to underestimate the impact of peer victimization. Peer victimization research and prevention also should extend beyond school boundaries to include all contexts of children’s lives. That is, approaches should be child-centered. When research and practice focus only on individual locations, contexts, or types of peer

victimization, they do not capture the ways that children themselves experience problems and dangers involving peers.

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Appendix 1

NATSEV Screeners Used to Define Peer Victimization Types (Only incidents with non-family juvenile perpetrators counted)

Peer Property Victimization

- C1. At any time in (your child’s/your) life, did anyone use force to take something away from (your child/you) that (he/she was/you were) carrying or wearing?
- C2. At any time in (your child’s/your) life, did anyone steal something from (your child/you) and never give it back? Things like a backpack, money, watch, clothing, bike, stereo, or anything else?
- C3. At any time in (your child’s/your) life, did anyone break or ruin any of (your child’s/your) things on purpose?

Peer Physical Assault

- C4. Sometimes people are attacked with sticks, rocks, guns, knives, or other things that would hurt. At any time in (your child’s/your) life, did anyone hit or attack (your child/you) on purpose with an object or weapon? Somewhere like: at home, at school, at a store, in a car, on the street, or anywhere else?
- C5. At any time in (your child’s/your) life, did anyone hit or attack (your child/you) WITHOUT using an object or weapon?
- C6. At any time in (your child’s/your) life, did someone start to attack (your child/you), but for some reason, it didn’t happen? For example, someone helped (your child/you) or (your child/you) got away?
- C9. At any time in (your child’s/your) life, (has your child/have you) been hit or attacked because of (your

child's/your) skin color, religion, or where (your child's/your) family comes from? Because of a physical problem (your child has/you have)? Or because someone said (your child was/you were) gay?

- P1. Sometimes groups of kids or gangs attack people. At any time in (your child's/your) life, did a group of kids or a gang hit, jump, or attack (your child/you)?
- P2. (If yes to P1, say: "Other than what you just told me about...") At any time in (your child's/your) life, did any kid, even a brother or sister, hit (your child/you)? Somewhere like: at home, at school, out playing, in a store, or anywhere else?
- P3. At any time in (your child's/your) life, did any kids try to hurt (your child's/your) private parts on purpose by hitting or kicking (your child/you) there?
- P6. At any time in your life, did a boyfriend or girlfriend or anyone you went on a date with slap or hit you?

Peer Physical Intimidation (Formerly Referred to as Physical Bullying)

- P4. At any time in (your child's/your) life, did any kids, even a brother or sister, pick on (your child/you) by chasing (your child/you) or grabbing (your child/you) or by making (him/her/you) do something (he/she/you) didn't want to do?

Peer Emotional Victimization (Formerly Referred to as Emotional Bullying)

- P5. At any time in (your child's/your) life, did (your child/you) get really scared or feel really bad because

kids were calling (him/her/you) names, saying mean things to (him/her/you), or saying they didn't want (him/her/you) around?

Peer Sexual Victimization

- S3. Now think about other kids, like from school, a boy friend or girl friend, or even a brother or sister. At any time in (your child's/your) life, did another child or teen make (your child/you) do sexual things?
- S4. At any time in (your child's/your) life, did anyone TRY to force (your child/you) to have sex, that is sexual intercourse of any kind, even if it didn't happen?
- S5. At any time in (your child's/your) life, did anyone make (your child/you) look at their private parts by using force or surprise, or by "flashing" (your child/you)?
- S6. At any time in (your child's/your) life, did anyone hurt (your child's/your) feelings by saying or writing something sexual about (your child/you) or (your child's/your) body?

Peer Internet Harassment

- INT1. Has anyone ever used the Internet to bother or harass (your child/you) or to spread mean words or pictures about (your child/you)?

Appendix 2

See Table 5.

Table 5 Correlation matrix for past year peer victimization types

	Any past year peer assault	Any past year peer physical intimidation	Any past year peer emotional victimization	Any past year peer sex victimization	Any past year peer property victimization
Any past year peer assault					
Any past year peer physical intimidation	.166***				
Any past year peer emotional victimization	.221***	.187***			
Any past year peer sex victimization	.228***	.100***	.088***		
Any past year peer property victimization	.28***	.150***	.211***	.179***	
Any past year internet harassment	.146***	.031	.054**	.278***	.151***

*** $p < .001$; ** $p < .01$

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Heather A. Turner is Professor of Sociology and Research Associate at the Crimes against Children Research Center at the University of New Hampshire. Dr. Turner received her Ph.D. in Human Development from the University of California, San Francisco. Dr. Turner's research program has concentrated on social stress processes and mental health. She is especially interested in the effects of violence, victimization, and other forms of adversity on the social and psychological development of children and adolescents. Dr. Turner has conducted numerous surveys and published over 50 articles, including many focusing on the epidemiology of childhood

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David Finkelhor is Director of the Crimes against Children Research Center, Co-Director of the Family Research Laboratory, Professor of Sociology and University Professor at the University of New Hampshire. He has been studying the problems of child victimization, child maltreatment and family violence since 1977. He is well known for his conceptual and empirical work on the problem of child sexual abuse, and has also written about child homicide, missing and abducted children, children exposed to domestic and peer violence and other forms of family violence. He is editor and author of 12 books and over 150 journal articles and book chapters. He has received grants from the National Institute of Mental Health, and the US Department of Justice, and a variety of other sources.

Sherry Hamby is a Research Associate Professor of Psychology at Sewanee, the University of the South, studying the methodological and measurement challenges of violence research and cross-cultural issues in measuring and intervening for violence. Dr. Hamby is the Editor for a new journal, *Psychology of Violence*, published by the American Psychological Association. Dr. Hamby is author or co-author of more than 50 publications on family violence and youth victimization, including *The Conflict Tactics Scales Handbook* and *Sortir Ensemble et Se Respecter*, the first Swiss dating violence prevention program. Dr. Hamby is a co-author of the *Juvenile Victimization Questionnaire*—the core of the *National Survey of Children's Exposure to Violence*, which is the largest survey conducted on youth victimization and the source of the most up-to-date and comprehensive statistics on youth violence. With Mary Beth Skupien, she conducted the first reservation-based study of intimate partner violence among American Indians. She has served on two expert panels for the Centers for Disease Control and Prevention: the *Intimate Partner Violence and Sexual Violence Definitions Reconciliation panel* and the *National Intimate Partner and Sexual Violence Surveillance System panel*. A licensed clinical psychologist, Dr. Hamby has received awards from the *National Register for Health Service Providers in Psychology* and the *American Professional Society on the Abuse of Children*. Email: sherry.hamby@ewanee.edu.

Anne Shattuck is a research associate at the University of New Hampshire's Crimes against Children Research Center (CCRC). Her work at CCRC focuses on exploring patterns of crimes against juveniles and associations between juvenile crime victimization and outcomes such as mental health and juvenile delinquency. Before joining CCRC, she worked as a researcher at the Carsey Institute at UNH. Ms. Shattuck holds an undergraduate degree from Georgetown University and a master's degree from the University of New Hampshire. She is currently a PhD candidate in sociology at UNH.

Richard Ormrod is a Research Professor at the Crimes against Children Research Center (CCRC) at the University of New Hampshire. He holds a BS and MA from Arizona State University and a Ph.D. in geography from the Pennsylvania State University. He

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investigating the patterns and dynamics of juvenile crime victimizations using data from such sources as the National Crime Victimization Survey (NCVS), the National Incident-Based Reporting System (NIBRS), and the Supplementary Homicide Reports (SHR), among others, including databases created within the Center.