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To cite this article: Heather A. Turner, Kimberly J. Mitchell, Lisa Jones & Anne Shattuck (2017) Assessing the Impact of Harassment by Peers: Incident Characteristics and Outcomes in a National Sample of Youth, Journal of School Violence, 16:1, 1-24, DOI: [10.1080/15388220.2015.1066257](https://doi.org/10.1080/15388220.2015.1066257)

To link to this article: <https://doi.org/10.1080/15388220.2015.1066257>



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Published online: 06 Jan 2016.



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Assessing the Impact of Harassment by Peers: Incident Characteristics and Outcomes in a National Sample of Youth

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Although there are widely held assumptions about the characteristics of peer bullying that are of greatest concern, very few studies have empirically assessed which characteristics most affect its impact. The current research addresses this gap by using a nationally representative U.S. sample of youth ages 10–20 to examine the relative effects of a variety of potentially aggravating incident characteristics on emotional, physical health, and school-related outcomes. Findings show support for power imbalance and duration (a stronger predictor than repetition) as incident characteristics that exacerbate the negative impact of peer harassment. However, several other incident characteristics have substantial effects with or without the presence of these qualities. Injury, sexual content, involvement of multiple perpetrators, and hate/bias components of peer harassment incidents each increased at least one negative outcome. Findings point to several features of peer harassment that can provide a basis for prioritizing victimization experiences in greatest need of intervention efforts.

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Received September 16, 2014; accepted June 23, 2015.

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KEYWORDS bullying, emotional impact, missed school, peer victimization, power imbalance, physical assault, physical health, relational aggression, verbal harassment

INTRODUCTION

Peer victimization or peer harassment among children and adolescents continues to be a prevalent problem in the United States and elsewhere (Nansel et al., 2001; Storch & Ledley, 2005). Numerous studies have documented physical health problems, emotional and behavioral difficulties, problematic social development, and poor academic achievement associated with youth exposure to peer violence and harassment (Hawker & Boulton, 2000; Reijntjes, Kamphuis, Prinzie, & Telch, 2010; Rigby, 2003). Research on this issue has been accompanied by considerable efforts to combat the problem through school educational programs and interventions (Olweus & Limber, 2010; Ryan & Smith, 2009).

The core element of peer harassment has generally been referred to with the colloquial term “bullying.” Although early conceptualizations of bullying emphasized mostly physical forms of victimization, most contemporary bullying definitions also include verbal and relational forms of aggression. Physical or *direct* forms of bullying include hitting, pushing, kicking, or restraining another child (Olweus, 1993). *Indirect* forms of victimization generally involve emotional or psychological forms of victimization. These may include verbal assaults like teasing, taunting, name calling, or telling a child they are disliked or unwanted; or they may involve relational aggression, which entails excluding someone from a social group, spreading rumors, or other activities intended to damage someone’s reputation or social relationships (Crick, 1996; Espelage, Low, & De La Rue, 2012; Griffin & Gross, 2004).

Although the subject of some disagreement (Finkelhor, Turner, & Hamby, 2012; Turner, Finkelhor, Hamby, Shattuck, & Ormrod, 2011), bullying is generally defined by a specific set of criteria: only incidents that are part of a pattern of repeated aggression in a relationship with an imbalance of power qualify as bullying (Olweus, 1984, 1991, 2001). These requirements were, in their inception, not an empirically derived criterion, but one created as a way of trying to differentiate more serious and harmful peer victimization from minor and less consequential peer conflict (Olweus, 1993). As has been discussed elsewhere (Turner, Finkelhor, Shattuck, Hamby, & Mitchell, in press), the use of any criteria to “screen out” incidents of peer victimization from consideration does not allow empirical investigations of which features best differentiate more and less serious peer victimization. Although a few recent studies do suggest that power imbalance may heighten the negative impact of peer victimization (Hunter, Boyle, & Warden, 2007; Turner et al., in press), its importance has not been adequately established empirically, nor has there been sufficient research that directly compares it to other

characteristics that may be equally or more impactful. Moreover, past studies have not typically addressed the complexity and variability of peer harassment at the incident level. Such information is critical for understanding the characteristics of peer harassment that cause youth most harm, and for crafting effective intervention strategies.

The current research addresses this gap by examining the relative impact of a variety of potentially aggravating incident characteristics on emotional, physical health, and school-related outcomes in a nationally representative sample of youth.

Incident Characteristics and Peer Victimization Impact

As already noted, a common definition of bullying requires: “an imbalance in power or strength, an asymmetric power relationship between perpetrator(s) and target” (Olweus & Breivik, 2014, p. 2595). It has been suggested that this criterion is important because it signifies the victims’ perceived inability to defend or protect themselves and is associated with greater perceived threat and less control over the situation (Hunter et al., 2007; Olweus, 2013). Consistent with this idea, Turner et al. (in press) found that victimization incidents with a more powerful perpetrator were more strongly associated with being “very afraid” at the time of the incident and increased the odds of missing school because of the victimization.

Although the power imbalance definition acknowledges that power can extend to attributes beyond physical power (Olweus, 2013), the most well-known and widely used measure presents a definition of bullying that is likely to be interpreted by children as emphasizing physical strength differences:

When we talk about bullying, these things happen repeatedly and it is difficult for the student being bullied to defend himself or herself. We also call it bullying when a student is teased repeatedly in a mean and hurtful way. It is not bullying when two students of about the same strength or power argue or fight. (p. 756)

Power assessments that more explicitly include nonphysical forms of power imbalance and distinguish between different forms may provide valuable insights into the elements of peer victimization experiences that are most damaging. In particular, the distinction between physical power (e.g., being stronger, bigger, taller) and social power (e.g., being smarter, richer, more popular) deserves more investigation. It seems plausible that different types of power may be associated with different types of peer victimization, have different effects across different negative outcomes, and/or have different consequences for different groups of youths.

The duration of the harassment may also represent a significant aggravating feature of peer victimization. Longer durations, in this context, can reflect multiple related events over time or chronic harassment that is more insidious and difficult to define as discrete incidents. Stress process theory and research suggests that more chronic forms of adversity are often more damaging than individual discrete events (Turner, Wheaton, & Lloyd, 1995; Wheaton & Montazer, 2010), yet this has generally not been assessed in peer victimization research. Although bullying definitions typically assume a “pattern of repeated aggression,” the consequences of shorter versus longer duration harassment still need investigation.

The perpetrator’s relationship to the victim may also have significance for how the victimization is experienced. For example, when the aggression is perpetrated by a current or former friend or romantic partner, the victimization may prove particularly devastating because it represents a betrayal of trust and possibly the loss of a valued association. Conversely, when the perpetrator is a stranger, the impact may be heightened because the motivations and intent of the perpetrator are less likely to be known and, as a result, may be viewed as more threatening or dangerous. Victimitizations that involve multiple perpetrators may also be more impactful. In the case of physical harassment, multiple perpetrators may increase perceptions of threat and vulnerability; for verbal and relational types of victimization, multiple perpetrators may signify broader or more extensive social consequences.

The literature suggests that victimizations that result in injury can be especially damaging, increasing risk of post-traumatic stress disorder (PTSD) (Resnick, Kilpatrick, Best, & Kramer, 1992) and trauma symptoms (Briere & Elliott, 2000). Victimitizations that involve a weapon may also be more impactful. Both may more often elicit life threat or fear of death, a quality that has also been associated with higher symptom levels (Briere & Elliott, 2000; Resnick et al., 1992). In a recent study by Turner et al. (in press), injury due to a peer victimization incident was the strongest predictor of fear (i.e., being very afraid at the time of the incident) and missing school. Moreover, experiencing a victimization that involved a weapon increased trauma symptoms, independent of injury.

There is also considerable reason to suspect that victimizations involving a sexual component increase the impact of victimization. A great deal of research on sexual assault has highlighted its particularly devastating results (Molnar, Buka, & Kessler, 2001), over and above exposure to multiple other forms of victimization (Finkelhor, Ormrod, & Turner, 2009). Some researchers point to feelings of shame, self-blame and reduced self-esteem as explanations for uniquely damaging effects of sexual victimization (Bolger, Patterson, & Kupersmidt, 1998; Feiring, Taska, & Lewis, 2002; Turner, Finkelhor, & Ormrod, 2010). Turner et al. (in press) found that victimizations with sexual content, such as sexual harassment and flashing, were the strongest predictors of child trauma symptoms.

The concern over “cyberbullying” or harassment that occurs through Internet, texting, or various social media outlets has also generated hypotheses of differential impact. Although cyberbullying or Internet harassment often overlaps with traditional face-to-face victimizations (Cassidy, Faucher, & Jackson, 2013; Mitchell, Finkelhor, Wolak, Ybarra, & Turner, 2011), a theme among advocates has been that this form of victimization can be especially damaging, because a single incident can be broadcast to a much larger audience and can then be easily repeated and continued over time by others forwarding and reposting (Dooley, Pyżalski, & Cross, 2009). Many forms of traditional peer victimization, such as relational aggression and verbal aggression, can also occur on the Internet. Although recent evidence suggests cyber-aggression may have unique consequences above and beyond in-person aggression (Wigderson & Lynch, 2013), it is still not clear whether peer victimizations that include a technology component are significantly more impactful than those that do not.

Another form of peer victimization that has been highlighted by statute and by advocacy for its particular toxicity is aggression motivated by hostility to race, ethnicity, religion, or sexual orientation. There is substantial evidence that racial discrimination constitutes an important risk factor for the mental health of minority children (Romero & Roberts, 2003; Wong, Eccles, & Sameroff, 2003). Similarly, research finds that being at the receiving end of harassment involving homophobic slurs contributes to worse outcomes among youth (Espelage & Swearer, 2008). Thus, it may be that victimizations with a discriminatory or bias component are particularly impactful.

Finally, the issue of where different types of peer harassment occur and how location may influence their impact is also of importance. Much of the bullying research relies exclusively on school-based assessments, using measures that ask specifically about “bullying at school” (Olweus, 1996). Such assessments are likely to miss a substantial number of peer harassment incidents that occur outside of school contexts (Turner et al., in press) and do not allow a comparison of the impact of harassment that occurs at school versus elsewhere. At a minimum, specifying the location where peer harassment occurs is essential for prevention and intervention efforts.

The specific aims of this research are to: (a) describe child and incident level characteristics associated with three common forms of peer victimization: verbal aggression, relational aggression, and physical aggression, and (b) examine the relative impact of a variety of potentially aggravating incident characteristics on emotional, physical health, and school-related outcomes. Incident characteristics to be considered include power imbalance (physical and social), duration of the harassment, whether multiple perpetrators were involved, injury, weapon use, whether the harassment included a technology component (e.g., Internet, text messaging), whether the victimization had a sexual component, whether there was a bias element related to the victim’s race, ethnicity, religion, or sexual orientation, and whether the incident occurred at school.

METHODS

Study Design

The Technology-Based Harassment Victimization (THV) Survey, funded by the National Institute of Justice (NIJ), is a telephone follow-up study of a subset of households that completed the Second National Survey of Children's Exposure to Violence (NatSCEV II) in 2011–2012. The THV was designed to gather information on youth's experience of peer harassment involving technology such as the Internet or a cell phone, as well as other forms of victimization. THV data were collected from December 2013 to March 2014.

The NatSCEV II study, from which the THV study respondents were drawn, was designed to obtain up-to-date incidence and prevalence estimates of a wide range of childhood victimizations, as well as information about parenting practices, social support, and stressful life events. It consists of a national sample of 4,503 children and youth ages 1 month to 17 years of age in 2011. Study interviews were conducted over the phone by the employees of an experienced survey research firm. For children ages 1 month to 9 years ($N = 2,191$), a parent or guardian answered both a short interview to gather demographic information as well as the main interview about the child's experiences of victimization. For children ages 10 and over ($N = 2,312$), the parent interview was completed by an adult caregiver and the main interview was completed by the child.

The primary foundation of the NatSCEV II design was a nationwide sampling frame of residential telephone numbers from which a sample of telephone households was drawn by random digit dialing (RDD). However, given concerns about residential RDD coverage in recent years, the predominant best practice recommendation for telephone surveys are multiple frame designs (AAPOR Standards Committee Cell Phone Task Force, 2010). Accordingly, two additional samples were obtained in order to represent the growing number of households that rely entirely or mostly on cell phones: a small national sample of cellular telephone numbers drawn from RDD methodology ($N = 31$), and an address-based sample (ABS; $N = 750$). The ABS sample started with a national sample of addresses from the postal delivery sequence file. These addresses were mailed a one-page questionnaire. The ABS study sample was drawn from the pool of returned questionnaires that represented households with children 17 years old and younger. These households were then re-contacted by interviewers and asked to participate in the survey. Approximately one half of the eligible households obtained through ABS were cell phone-only households and thus represented an effective way of including households without landlines in our sample.

THV Study Sample Characteristics

The subset of NatSCEV II respondents eligible for the THV survey was comprised of respondents who: (a) completed the NatSCEV II survey, (b) were 8 years old or older during NatSCEV II, and (c) agreed at the end of the NatSCEV II interview to be called again to be part of a follow-up study. This initial eligible sample consisted of 2,197 youths who were expected to be between the ages of 10 and 20 at the time of THV survey data collection.

Procedure

The THV survey began with an advance letter, reply form, and \$5 cash mailed to the 2,127 sample households with an address on file. A total of 672 respondents returned reply forms expressing their interest in participating in the survey and 436 of these resulted in completed interviews. An additional 355 interviews were completed by contacting respondents who did not return their reply form using a phone number on file from the NatSCEV II survey, yielding a total of 791 completed interviews for the THV study. The survey was administered by computer assisted telephone interviewing. A total of 791 interviews were completed. The average time for a completed survey was 58 minutes. Youth respondents who completed the survey were sent a \$25 check.

After a brief parent/caretaker survey, consent to proceed to the child portion of the interview was obtained from both the parent and the child, and the remainder of the survey was conducted directly with the child. If a youth respondent who was 18 years or older was reached who did not have contact with a parent or whose parent spoke only Spanish, the entire interview (including a modified parent portion) was conducted with the youth respondent ($n = 15$; youth whose parents did not speak either English or Spanish were not included in the NatSCEV II survey.)

Respondents who disclosed a situation of serious threat or ongoing victimization during the interview 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 appropriately addressed locally. All procedures were authorized by the Institutional Review Board of the University of New Hampshire and complied with the confidentiality guidelines set forth by the U.S. Department of Justice.

Response Rates and Nonresponse Analyses and Weighting

The cooperation and response rates for the NatSCEV II survey, from which the THV sample was drawn, averaged across collection modalities, were 60% and 40%, respectively, which are good rates by current survey research standards.

(Babbie, 2007; Keeter, Kennedy, Dimock, Best, & Craighill, 2006; Pew Research Center, 2012). Of the NatSCEV II respondents eligible for the THV study, 36% completed a THV interview. To adjust for differential attrition, a new set of sample weights was calculated for the THV sample. Variables used in calculating the new weights included age, race/ethnicity, household income, number of children in household, parent demographics, and child's victimization and delinquent behavior at the NatSCEV II survey. Nonresponse biases are partially ameliorated when the nonresponse adjusted weights are used to analyze THV data (Wun, Ezzati-Rice, DiGaetano, Goksel, & Hongsheng, 2005). More details about THV study methodology and nonresponse analysis, and weight construction may be obtained from the authors.

Measures

HARASSMENT/PEER VICTIMIZATION

Youth were asked whether they had any past year experience of harassment committed by any nonfamily peer that involved technology in some way. If they reported that no harassment involving technology occurred, they were then asked if they had experienced any harassment that did not involve technology. Specific types of harassment that the youth were questioned about included: (a) someone calling them mean names, making fun of them, or teasing them in a hurtful way; (b) someone excluding or ignoring them or getting others to turn against them; (c) someone spreading false rumors about them or sharing something that was meant to be private (such as something they wrote or a private picture or video of them); and (d) someone hitting, kicking, pushing, shoving, or threatening to hurt them. Interviewers asked the youth to focus first on harassment incidents that "involved the Internet or a cell phone in some way" through such applications as text messaging, e-mail, or social networking sites and second on incidents that did not involve technology.

If a youth had experienced any harassment incidents in the past year, whether involving technology or not, the interviewer followed a protocol to have the youth identify *up to two unique incidents* for detailed follow-up questioning, with technology-related incidents taking priority. The following hierarchy was used to select two incidents: (a) At least two unrelated technology-involved harassment events: details were gathered about both; (b) one technology-involved harassment event and one non-technology involved harassment event: details were gathered on both; (c) No technology-involved events but one or more unrelated harassment events that did not involve technology: details were gathered on up to two of those events. Of the 791 youth who participated in the THV survey, 230 or 34% (weighted) had experienced at least one incident in the past year. Data were collected on 311 unique incidents for these 230 youth.

Youth were asked which of the four specific types of harassment described above were involved in each incident. For the purposes of this study, the 311 incidents were grouped into three categories: incidents that involved only verbal harassment (name calling, making fun of or teasing in a hurtful way; $n = 48$); incidents that involved relational aggression (excluding, ignoring, spreading false rumors or sharing something private) whether or not they also included verbal harassment ($n = 163$); and incidents that involved a physical component (someone hitting, kicking, pushing, shoving, or threatening to hurt them) whether or not they also included verbal and relational components ($n = 100$).

INCIDENT CHARACTERISTICS

Using data from the incident follow-up questions, a series of variables was created to indicate the characteristics of each peer harassment incident. The following dummy variables were coded 1 if the incident involved the characteristic described: (a) at school (at least part of the incident took place at school or on school grounds; 66.3% of incidents), (b) technology involvement (incident involved the use of a cell phone or the Internet; 46.4%), (c) weapon involved (perpetrator used or threatened the use of a weapon at any time during the incident; 8.9%), (d) injury (youth was “physically hurt in any way as a result of the incident”; 31.3%), (e) multiple perpetrators (two or more people perpetrated the harassment; 44.6%), (f) physical advantage (respondent answered “yes” to at least one of two questions asking if, when the incident first began, the perpetrator who was “most responsible” for the incident was “taller” or “stronger” than the victim; 55.5%), (g) social advantage (respondent answered “yes” to at least one of four questions asking if, when the incident first began, the perpetrator was “more popular,” “smarter,” or “richer” than the victim or “knew embarrassing things” about the victim; 68.9%), (h) bias involvement (perpetrator called the victim names, teased, or said mean things based on the victim’s religion, race or ethnicity or sexual orientation; 24.3%), (i) sexual content (youth were asked if the incident “was sexual in any way” and were told: “By sexual we mean that this person tried or actually exposed, touched or grabbed your private parts or their own, asked you sexual questions, spread false sexual rumors about you, or shared something sexual about you that was meant to be private”; 13.5%).

Perpetrator relationship is a categorical variable constructed from a question about the victim’s relationship to the person most responsible for the incident. The three categories include: dating partner or ex-dating partner, friend, or ex-friend (32.3%); acquaintance, neighbor, or schoolmate (56.9%); and stranger or other (10.8%). Duration of incident is a three-category variable indicating whether the peer harassment incident went on for 1 day (40.8%), more than a day but less than a month (37.1%), or 1 month or longer (22.2%).

INCIDENT IMPACTS

Youth were asked about whether the incident made them feel “upset,” “afraid,” “embarrassed,” “worried,” “angry,” “sad,” “like you couldn’t trust people,” or “unsafe.” Responses to each of these eight items were ranked on a 5-point scale (1 = *not at all* to 5 = *extremely*). Eight dummy variables were constructed, one for each of the eight items, coded 1 if the youth responded *very* or *extremely* to the item. In addition, two summary variables to describe the incident’s emotional impact were created based on the eight individual items: Any high emotional impact is a dummy variable coded 1 if the child responded *very* or *extremely* to any of the eight items for that incident. Total emotional impact score is a sum score of youth’s responses on each of the eight items for that incident ($M = 19.8$, Linearized $SE = 1.0$, Range = 8 to 40, Cronbach’s $\alpha = .89$). (Factor analysis on the eight items revealed one factor extracting 54.6% of variance.)

Youth were asked about whether they had experienced six school-related impacts as a result of the incident including losing any friends, staying home from school, avoiding any school activities, skipping classes, dropping out of school, or getting worse grades/getting behind on schoolwork. A dummy variable, any school impact, was coded 1 if the youth reported experiencing at least one of these outcomes. Finally, any physical health impact was coded 1 if the child reported experiencing any of five physical health outcomes as a result of the incident (headache, trouble sleeping, changes in eating or drinking, upset stomach, or feeling tired).

DEMOGRAPHIC VARIABLES

Demographic information was obtained for all 791 youth in the initial parent interview, including the child’s gender (49% male), age ($M = 14.7$, Linearized $SE = 0.2$, Range: 10–20), race/ethnicity (coded into four groups: White non-Hispanic, 58.8%; Black non-Hispanic, 12.6%; other race non-Hispanic, 8.1%; and Hispanic any race, 20.6%), and socio-economic status (SES). 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 restandardized. Family structure, defined by the composition of the household, was categorized into four groups: children living with: (a) two biological or adoptive parents (53.1%), (b) one biological parent plus partner (spouse or nonspouse; 8.6%), (c) single biological parent (34.1%), and (d) other nonparent caregiver (4.2%).

DATA ANALYSIS

Data analysis was done at the incident level using Stata 13. Because youth could report up to two incidents, adjustment was made for nonindependence

of incidents experienced by the same child by using Stata 13's "svyset" and "svy" commands. Incidents were clustered on the youth's ID number and analyses were weighted using the THV weight described earlier. Comparisons of incident characteristics and incident impacts across type of incident were made using chi-square tests (Tables 1 and 2). The likelihood of experiencing physical health outcomes or school impacts based on incident characteristics was assessed using binomial logistic regression (Table 3), while ordinary least squares regression was used to predict total emotional impact score based on incident characteristics (Table 4). Post-estimation regression diagnostics for the models in Tables 3 and 4 were performed to examine residuals and check for the impact of influential cases. No problems were noted. Additionally, the model of Table 4 was run using a log-transformed version of the dependent

TABLE 1 Incident Characteristics by Type of Harassment Incident ($N = 311$ Incidents)

Percentage of incidents involving each characteristic by type of incident	Type of incident			
	Verbal only ($n = 48$)	Relational with or without verbal ($n = 163$)	Any type with a physical component ($n = 100$)	All incidents ($n = 311$)
At school or on school grounds	39.2	65.0	75.5	66.3 [†]
Technology involved	64.5	60.5	28.1	46.4*
Weapon involved	1.2	0.6	18.8	8.9***
Youth was injured	5.5	3.0	64.9	31.3***
Length of time of incident*				
1 day	64.8	31.5	42.2	40.8
More than a day, less than a month	31.6	49.5	27.3	37.1
1 month or longer	3.7	19.0	30.5	22.2
Multiple perpetrators	18.9	50.6	46.6	44.6 [†]
Perpetrator relationship [†]				
Dating or ex dating partner, friend or ex friend	28.6	43.9	22.7	32.3
Acquaintance, neighbor, or schoolmate	50.8	51.5	63.6	56.9
Stranger or other	20.6	4.6	13.6	10.8
Physical advantage (taller, stronger)	30.0	55.0	63.3	55.5
Social advantage (more popular, smarter, richer, knew embarrassing things)	42.1	74.9	71.1	68.9 [†]
Any power differential—physical or social	73.4	92.8	88.2	88.2
Any bias (religion, race/ethnicity, sexual orientation)	16.4	19.1	31.3	24.3
Incident was sexual in any way	—	8.1	22.5	13.5 [†]

Note. Weighted percentages. Adjustment made for nonindependence of incidents by specifying qkey as psu in Stata svyset command.

[†] $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

TABLE 2 Incident Impacts by Type of Harassment Incident ($N = 311$ Incidents)

	Type of incident			
	Verbal only	Relational with or without verbal	Any type with a physical component	All incidents
Percent of incidents involving each impact by type of incident	($n = 48$)	($n = 163$)	($n = 100$)	($n = 311$)
Youth was very or extremely:				
Upset	14.3	31.9	41.1	33.7
Afraid	5.9	11.1	37.1	22.2**
Embarrassed	9.8	24.7	16.3	18.8
Worried	4.2	24.0	29.2	23.8
Angry	19.3	51.6	49.0	46.2*
Sad	14.7	33.1	27.7	28.2
Lacking trust	7.4	27.1	27.7	24.8
Feeling unsafe	5.9	6.2	12.1	8.8
Any high emotional impact	25.8	72.5	77.4	68.6**
Any school-related impact ^a	13.3	42.5	47.4	40.9 [†]
Any physical health problems	18.1	49.6	56.7	48.6 [†]

Note. Weighted percentages. Adjustment made for nonindependence of incidents.

^aSchool-related impacts include losing friends, staying home from school, avoiding school activities, skipping classes, and getting worse grades or getting behind on school work.

[†] $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

variable, producing similar results. Since no differences were evident, we present our original models.

RESULTS

There was substantial overlap in the types of harassment experienced within a given incident. As a result, we categorized incidents into three groups that appeared to have a distinct set of attributes: incidents characterized by verbal aggression only (15%; $n = 48$), those characterized by relational aggression, whether or not verbal aggression was present (52%; $n = 163$; in the majority of relational aggression incidents verbal aggression also occurred) and any harassment incident that included a physical component (in the majority of such incidents verbal and/or relational aggression was also involved; 32%; $n = 100$). Youth exposed to these three types of incidents differed significantly by gender (analyses not shown). Almost 77% of female youth reported at least one relational aggression incident in the past year, while only 31% males report this type of peer victimization ($p < .001$). Conversely, almost 35% of male youth experienced peer harassment with a physical component, while only 5% of females experienced any physical assault or intimidation by peers

TABLE 3 Logistic Regressions of Incident Impacts on Incident Characteristics, Controlling for Child Demographics ($N = 311$ Incidents)

	Youth experienced physical health problems	Youth experienced school-related impact
	OR [95% CI]	OR [95% CI]
Child demographic characteristics		
Male	0.82 [0.33–2.10]	0.48 [0.17–1.41]
Age (years)	0.78** [0.65–0.93]	0.96 [0.81–1.11]
Socioeconomic status	0.96 [0.58–1.58]	0.73 [0.47–1.15]
Family structure: ^a		
Parent and step/partner	3.36 [0.73–15.15]	2.00 [0.59–6.73]
Single parent	2.61 [0.71–9.63]	1.51 [0.54–4.25]
Other adult caregiver	3.47 [†] [0.83–14.50]	2.15 [0.5–9.21]
Race/ethnicity ^b		
Black, non-Hispanic	0.52 [0.12–2.27]	0.62 [0.21–1.82]
Other, race, non-Hispanic	3.29 [0.63–17.3]	0.36 [0.09–1.49]
Hispanic, any race	2.65 [0.62–11.30]	1.27 [0.36–4.48]
Harassment incident characteristics		
At school or on school grounds	2.34 [†] [0.88–6.24]	1.58 [0.63–3.98]
Technology involved	2.00 [0.84–4.76]	1.43 [0.51–3.98]
Weapon used	1.17 [0.19–7.10]	0.32 [0.02–5.13]
Youth was injured	1.56 [0.53–4.58]	2.77* [1.03–7.44]
Duration: ^c		
More than 1 day, less than month	1.97 [0.78–4.95]	3.04 [0.80–11.50]
1 month or longer	5.72** [1.98–16.51]	8.84*** [2.67–29.23]
Multiple perpetrators (2 or more)	3.50** [1.57–7.81]	1.33 [0.50–3.54]
Perpetrator relationship: ^d		
Dating partner or friend (current or former)	1.32 [0.47–3.69]	2.54* [1.00–6.49]
Stranger or other	0.68 [0.42–6.68]	1.74 [0.50–6.09]
Perpetrator had physical advantage	1.50 [0.70–3.22]	1.13 [0.50–2.55]
Perpetrator had social advantage	9.95*** [3.50–28.24]	2.82 [0.96–8.29]
Any bias involved (based on religion, sexual orientation or race/ethnicity)	0.51 [0.17–1.58]	2.90* [1.01–8.39]
Incident was sexual in any way	7.09** [1.96–25.64]	0.59 [0.13–2.62]

^aTwo-parent families. ^bWhite, non-Hispanic. ^cOne day. ^dAcquaintance, neighbor, or schoolmate.

[†] $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

($p < .001$). There were no significant differences in the type of peer victimization experienced across age, race, SES, or family structure.

Table 1 presents the incident characteristics associated with the three different peer victimization types. Technology (e.g., e-mail, social networking site, text messaging) was most likely to be involved in verbal aggression only (65%) and relational aggression incidents (60%) and least likely in incidents that included a physical component (28%; $p < .05$). As might be expected, both injury and weapon use were substantially more common in incidents with a physical component ($p < .001$), with 65% of physical assault/intimidation incidents leading to injury and 19% involving a weapon. There were also

TABLE 4 OLS Regression of Incident Characteristics on Total Emotional Impact Score ($N = 311$ Incidents)

Child demographic characteristics	Coefficient	SE
Male	-0.50	*** (0.13)
Age (years)	-0.01	(0.02)
Socioeconomic status	-0.02	(0.07)
Family structure: ^a		
Parent and step/partner	0.44	* (0.18)
Single parent	0.20	(0.16)
Other adult caregiver	0.34	(0.33)
Race/ethnicity ^b		
Black, non-Hispanic	-0.38	† (0.20)
Other, race, non-Hispanic	-0.41	* (0.19)
Hispanic, any race	-0.28	† (0.15)
Harassment incident characteristics		
At school or on school grounds	0.23	(0.14)
Technology involved	0.34	* (0.14)
Weapon used	-0.06	(0.22)
Youth was injured	0.61	*** (0.16)
Duration: ^c		
More than 1 day, less than month	-0.06	(0.11)
1 month or longer	0.16	(0.20)
Multiple perpetrators (two or more)	0.25	* (0.12)
Perpetrator relationship: ^d		
Dating partner or friend (current or former)	-0.04	(0.13)
Stranger or other	0.02	(0.18)
Perpetrator had physical advantage	0.46	*** (0.12)
Perpetrator had social advantage	0.25	† (0.14)
Any bias involved (based on religion, sexual orientation or race/ethnicity)	0.02	(0.15)
Incident was sexual in any way	0.13	(0.18)
R^2	0.44	

^aTwo-parent families. ^bWhite, non-Hispanic. ^cOne day. ^dAcquaintance, neighbor, or schoolmate.

† $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

significant differences in the duration of incidents across victimization type. For example, over twice as many verbal-only incidents as relational aggression incidents lasted only a day or less (65% vs. 32%). In contrast, almost 50% of relational aggression incidents were up to 1 month in duration. Over 30% of incidents with a physical component lasted over 1 month, while less than 4% of verbal aggression incidents were of a long duration.

Some marginally significant differences ($p < .10$) are also noteworthy. Incidents involving a physical component were most likely to take place at school (76%) while verbal only incidents were least likely to happen at school (39%). A greater proportion of relational aggression incidents involved a current or former friend or dating partner (44%) than did either verbal only (29%) or physical (23%) victimizations, while a substantially higher percentage of verbal-only incidents were perpetrated by strangers (21%) than were relational aggression incidents (5%). Multiple perpetrator involvement was least

common in verbal-only incidents. Finally, relational aggression incidents were most likely to be characterized by social power advantage (75%) while verbal-only incidents were least likely to have this quality (42%), and a greater percentage physical aggression incidents involved a sexual component (22%) than did the other peer victimization types.

Table 2 presents differences in outcomes associated with these same peer victimization types. Victimization with a physical component were substantially more likely to cause the victim to be very or extremely afraid, while both relational and physical victimization were more likely to create high levels of anger, than were verbal-only incidents. Physical victimization (77%) and relational aggression incidents (73%) were significantly more likely to have high emotional impact, when considering all the emotional variables together, than verbal-only incidents (26%). Also, a smaller percentage of verbal-only incidents were associated with school-related impacts and physical health problems, relative to the other two peer victimization types.

The primary objective of this study was to identify incident characteristics that increase the damaging effects of peer harassment. Although there appears to be some variation across peer harassment types in how frequently certain incident characteristics occur and the outcomes experienced, individual incidents are very often characterized by multiple qualities. In order to assess the relative impact of particular aggravating characteristics, we sought to examine the independent effect of each characteristic, controlling for all other characteristics as well as child demographic factors. We note first that in multivariate analyses (not shown) that considered the effects of individual harassment types (physical, relational, verbal) on different outcomes did not show any significant associations with any of the outcomes when specific incident characteristics were taken into account. In other words, any effects of type of harassment appear to be due to variations in incident characteristics. The following analyses focus on these characteristics. Table 3 presents results with respect to physical health problems and school-related outcomes. Duration had a substantial effect on both outcomes. Incidents that lasted a month or longer were nearly six times more likely to be associated with ongoing physical health problems (e.g., headaches, stomach aches, sleeping problems) than incidents that lasted only a day or less ($OR = 5.72; p < .01$), while long duration was associated with nearly 9 times the odds of school related problem (e.g., missing classes, avoiding school activities, grades dropping; $OR = 8.84; p < .01$) compared to short duration incidents. Incidents with current or former dating partner or friend perpetrators were more likely to have negative school-related outcomes than incidents where the perpetrator was an acquaintance, neighbor, or schoolmate ($OR = 2.54; p < .05$), and those with multiple perpetrators increased the odds of physical health problems more than three-fold ($OR = 3.50; p < .01$). When the perpetrator had a social power advantage, incidents were nearly 10 times more likely to result in a physical health problem ($OR = 9.95; p < .001$) and sexual content increased

the odds of physical health problems seven-fold ($OR = 7.09$; $p < .01$). Finally, when a peer victimization incident had a perceived bias motivation—that is, happened because of the victim's race, ethnicity, religion, or sexual orientation—it was almost 3 times more likely to be associated with negative school outcomes. Additional analyses (not shown) indicated that harassment directed at sexual orientation; that is, when the perpetrator “called you names, teased or said mean things about your sexual orientation, like you being gay or queer,” had the strongest impact on school-related outcomes and accounted for most of the overall bias effects.

Table 4 presents the same analyses predicting the summary measure of total emotional impact of the victimization. Injury was strongly associated with negative emotional impact ($p < .001$) as was perpetrator physical power advantage ($p < .001$). Technology involvement and multiple perpetrators also significantly increased total emotional impact ($p < .05$). Perpetrator social power advantage was marginally significant ($p < .10$). Males reported significantly less emotional impact than females ($p < .001$) and youth living in stepparent or parent-partner households reported greater impact than those living with two biological parents ($p < .05$), with all incident characteristics controlled. White youth reported marginally greater impact than all other race/ethnicities ($p < .10$). The model explains 44% of the variance in emotional impact of peer victimization.

SUMMARY AND DISCUSSION

Three types of peer harassment were assessed in this study: verbal aggression, relational aggression, and physical assault/intimidation. Consistent with past research (Archer, 2004; Smith, Rose, & Schwartz-Mette, 2010; Underwood, 2003) males were more likely to experience physical forms of peer harassment, whereas girls were more often exposed to relational aggression. Although verbal aggression often accompanied incidents of relational and physical aggression, incidents characterized by verbal aggression only were shorter in duration, less likely to involve multiple perpetrators, least likely to have a perpetrator with more social power, but most likely to involve technology. In contrast, physical assault (with or without other verbal or relational aggression) tended to be longer in duration, least likely to involve technology, and more often associated with injury and weapon use. Alarming, a very high percentage (65%) of all victimization episodes with a physical component lead to an injury. Relational aggression (with or without verbal aggression) was also longer in duration, characterized by the greatest social power differences, and more likely to involve a perpetrator who was a friend or dating partner. Associations between the three types of incidents and impact factors showed more fear associated with physical assault/intimidation, and more overall school, physical health, and emotional impact associated with

both relational and physical incidents, relative to verbal only incidents. Overall these bivariate findings suggest that verbal aggression, when perpetrated on its own, tends to be relatively minor in its consequences compared to relational and physical forms of harassment.

The primary aim of this research was to identify the specific characteristics of peer victimization incidents that, across types, are most strongly associated with negative consequences. Although characteristics with the greatest impact differed somewhat across the type of outcome considered, a few attributes stood out. Peer victimization incidents that resulted in injury were substantially more likely to result in school-related problems, such as missing classes and avoiding school related activities, and most strongly associated with total emotional impact of the victimization, independent of all other incident characteristics and child demographics. This is entirely consistent with a recent study by Turner et al. (in press) who found that, controlling for other characteristics, injury during the episode was the strongest predictor of fear and missing school, increasing the odds of being “very afraid” by over four times and increasing the odds of missing school five-fold. Clearly, experiencing bodily harm at the hands of peers represents a crucial factor increasing the negative consequences of peer victimization. The involvement of multiple perpetrators also increased the negative effect of peer harassment with respect to both physical health and total emotional impact. It seems likely that multiple perpetrators could heighten the level of threat experienced by the victim, either because it increases the threat of physical harm and/or because it increases the perceived breadth of the social consequences of the harassment.

Duration also appears to represent a particularly important incident characteristic. Indeed, our findings on duration have substantial implications for the legitimacy of using “a repeated pattern of aggression” as a criterion for bullying. Additional analyses (not shown) that compared the effect of incident duration with harassment that “happened a series of times” showed duration to have a substantially stronger effect. That is, although “happened a series of times” and “duration” were strongly correlated ($r = .49$), they were not equivalent and the perception of long duration was more predictive of negative outcomes. This suggests that while one might tend to think of peer harassment episodes as discrete occurrences, they may be better conceived of as social processes, the most damaging of which can reflect chronic conditions that last a month or longer. Such incidents may represent a repeated pattern of behavior or they may be more insidious in nature with more ambiguous beginning and end points. It appears to be perceptions of ongoing harassment for a month or longer that is most impactful. Long duration peer victimization episodes were associated with more than a six-fold increase in the odds of reporting ongoing physical health difficulties, such as stomachaches, headaches, and sleeping problems and increased the odds of experiencing negative school-related effects over 9 times that of 1-day episodes. Although this gives some credence to the bullying criterion that specifies the need for “a repeated pattern of aggression” to define

bullying, our findings suggest that that long duration harassment experiences may not always be perceived as repeated discrete events and that duration may better represent the intended condition of bullying. Future research should attempt to unpack in more detail the nature of long duration incidents, whether they are perceived as continuing versus repeated events, and the mechanisms that explain their damaging effects.

There is also some support in these findings for the significance of power imbalance between victim and perpetrator. Prior research addressing effects of power imbalance has not been able to clearly document whether an existing power imbalance was present before the bullying or harassment and thus a significant contributor. It is possible that a report of a power imbalance could be influenced by the victimization itself due to intimidation or other features of the experience (Finkelhor et al., 2012). To our knowledge, this is the first study to specifically ask about pre-existing power imbalance adding to the legitimacy of these findings. The current study was also unique in its ability to distinguish between physical power advantage and social power advantage of the perpetrator. Findings indicate that social power advantage had substantial effects on ongoing physical health problems, increasing the odds of this outcome by over nine times, relative to incidents where no social power imbalance existed. Physical power advantage, however, was more strongly associated with total emotional impact.

It is important to note that, although power imbalance and duration (traditional criteria for defining bullying) do appear to exacerbate the negative impact of peer victimization for some outcomes, several other incident characteristics have substantial effects with or without the presence of these criteria. The importance of injury has already been noted. Also, harassment incidents that were characterized by any type of sexual content were over 7 times more likely to be associated physical health problems relative to nonsexual incidents. Although most sexual victimization research has not included physical health outcomes, several past studies found sexual assault to have a greater impact on psychopathology than other types of traumatic events (Frans, Rimmö, Åberg, & Fredrikson, 2005; Tolin & Foa, 2008; Valentiner, Telch, Petruzzi, & Bolte, 1996) and Turner et al. (in press) found that sexual content more strongly predicted trauma symptoms than any other peer victimization incident characteristic. The current study suggests that its damaging effects also extend to physical well-being. This may be due to such factors as greater self-blame and avoidant coping (Boeschen, Koss, Figueredo, & Coan, 2001), emotional responses such as disgust (Feldner, Frala, Badour, Leen-Feldner, & Olatunji, 2010) and difficulties in mobilizing social support in sexual victimizations.

Peer harassment incidents involving bias or discrimination are also particularly damaging. When youth perceive that peer harassment incidents are motivated by hate bias, their ability to function in school is impaired. Although the analyses presented collapsed all bias incidents associated with race, ethnicity, religion or sexual orientation, additional analyses indicated that harassment directed at sexual

orientation had the strongest impact on school-related outcomes. This is consistent with research documenting significantly greater victimization in and outside of school among sexual minority youth (Coalition for Education, 2005; DuRant, Krowchuk, & Sinal, 1998; Garofalo, Wolf, Kessel, Palfrey, & DuRant, 1998; Kosciw & Diaz, 2006). Accordingly, lesbian, gay and bisexual (LGB) youth were significantly more likely than non-LGB youth to report missing school because they feel unsafe (Coalition for Education, 2005; Garofalo et al., 1998). Finally, although harassment incidents that occurred at school were, for the most part, not significantly more impactful than those occurring outside of school contexts, it is important to note that a substantial majority of all incidents occurred at school, including those with particularly serious aggravating characteristics.

Limitations

We acknowledge some limitations of these data. First, because a core objective of the larger study was an assessment of the role of technology in peer harassment, incidents that involved technology were prioritized for obtaining detailed follow-up information. As a result, the prevalence and distribution of harassment types and characteristics are not necessarily representative of the all incidents of peer harassment in the population. Second, although an important and unique advantage of this research is the detailed information available at the incident level, there are still forms of peer victimization that were not assessed, such as peer property victimization, which has been found in other research to have significant negative consequences for youth (Turner et al., in press). Also, since children under the age of 10 are not included in this study, we have no information on the peer harassment experiences of younger school-age children. Finally, we did not address whether the effects of harassment differ by attributes of the victim. Future research might consider, for example, whether certain peer harassment types or incident characteristics are more or less damaging for girls relative to boys.

Implications

Our findings have several implications for research and intervention with the problems of bullying and peer harassment. First, the findings do suggest the need for researchers and educators to differentiate among peer victimizations, given that they are widespread and vary significantly in their seriousness and severity. However, this differentiation concerning which incidents are most “actionable” by school officials, parents, or law enforcement, needs to be informed by research, and not made on the basis of assumptions, stereotypes, untested legal notions, or popular conceptions. We did find support for the significance of both power imbalance and duration of the peer victimization episode (a more predictive substitute for repeated events) in heightening negative impact, providing some support for traditional bullying criteria. We

also added to the ongoing commentary about power imbalance by distinguishing between imbalances involving social versus physical power. The findings strongly suggest that actionable forms of peer victimization should also include those with sexual content, injury to the victim, multiple perpetrators, and harassment that has a discriminatory or bias component, whether or not they entail power imbalance or have a long duration.

For school personnel, there are several practical implications. They should continue, as many do, to try to intervene in a broad range of threats to children's safety and well-being. The current study provides some justification that peer harassment, in general, affects school performance, generates strong negative emotions, and creates physical health problems. In addition, programs to prevent peer victimization should not put exclusive emphasis on teaching the power imbalance criterion in their training, but rather outline the many forms that peer victimization can take and indicate how power imbalance can be one of several elements that aggravate the effects. Identifying aggravating features of peer harassment can help increase our understanding of why and how exposure has such damaging effects, as well as provide a basis for prioritizing victimization experiences that may be in greatest need of intervention efforts. The current research points to the importance of power imbalance and duration, as well as injury, sexual content, multiple perpetrators, and bias components as features likely to exacerbate the detrimental impact of peer harassment. Finally, in addition to the importance of trying to identify the youth who have the most negative emotional reaction to peer victimization, we need to broaden our reach to also assess for academic and physical health effects. Such outcomes may be more readily apparent than emotional distress in some situations and thus allow for earlier intervention.

COMPETING INTERESTS

None.

ACKNOWLEDGMENTS

Points of view or opinions in this presentation are those of the authors and do not necessarily represent the official position or policies of the U.S. Department of Justice.

FUNDING

This project was supported by Grant 2012-IJ-CX-0024 awarded by the National Institute of Justice.

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