# Poly-Victimization and Peer Harassment Involvement in a Technological World

**Kimberly J. Mitchell** [iD],[1] **Anna Segura,**[2]
**Lisa M. Jones,**[1] **and Heather A. Turner** [iD][1]

## Abstract

This article explores the ways poly-victimized youth (those experiencing multiple different types of victimization over the course of 1 year) use technology to interact with peers. Particular attention is given to the peer harassment victimization and perpetration experiences of poly-victimized youth compared with less victimized and non-victimized youth—both overall and through technology. Data were collected as part of the Technology Harassment Victimization (THV) study; a national survey of 791 youth, ages 10 to 20 across the United States. Study results document the heightened risks that poly-victimized youth experience when interacting with peers. Low and high poly-victimized youth were both at significantly greater risk of being dual victims and perpetrators of peer harassment when compared with non-victimized youth even after taking into account other potentially explanatory factors. This was not found to be the case for less victimized youth. This was true for high poly-victims and technology-involved harassment risk as well. There were indications that poly-victimized youth were interacting with peers in more intense and risky ways in general using new technology. The increase in attention to poly-victimization in recent years has importantly identified the detrimental role that experiencing different forms of

[1]University of New Hampshire, Durham, NH, USA
[2]Universitat de Barcelona, Spain

**Corresponding Author:**
Kimberly J. Mitchell, Crimes Against Children Research Center, University of New Hampshire, 10 West Edge Drive, Suite 106, Durham, NH 03824, USA.
Email: Kimberly.Mitchell@unh.edu

victimization have on youth. This study not only adds to that literature but suggests that there is an opportunity to interrupt additional victimization by understanding how poly-victimized youth interact with peers before and during adolescence. Although preliminary, the differences in technology use by poly-victimized youth versus others suggest that more information is needed to understand how they are relating to peers in both positive and risky ways in this environment.

**Keywords**
poly-victimization, peer harassment, technology, adolescents, perpetration

Until recently, research on child victimization has mainly focused on specific forms of victimization, which has limited our understanding of this problem given numerous studies have indicated the interconnection between different victimization experiences. To improve knowledge on the co-occurrence of victimization, Finkelhor and colleagues introduced the concept of poly-victimization (Finkelhor, Ormrod, & Turner, 2007a). Poly-victimization refers to the experience of multiple victimizations of *different kinds*, such as sexual victimization, physical abuse, peer victimization, witnessing family violence, and exposure to community violence, not just multiple episodes of the same kind of victimization. Thus, poly-victimized youth are those exposed to multiple types of violence, crime and abuse over the course of their development. Research has found that such children are at particularly high risk for negative psychological and physical symptoms (Finkelhor, Shattuck, Turner, Ormrod, & Hamby, 2011; Finkelhor, Turner, Hamby, & Ormrod, 2011) and are over-represented among youth exhibiting problems like school failure, delinquency, and substance abuse, or who become entangled in juvenile justice or child welfare systems (Cyr et al., 2012; Ford, Grasso, Hawke, & Chapman, 2013).

The risks for poly-victims have been shown to be more substantial than for youth experiencing any one particular type of victimization, even when serious and repeated (Finkelhor et al., 2007a). Distress and dysfunction, in fact, appear to be linearly related to the number of different types of victimizations (Turner, Finkelhor, & Ormrod, 2010), and as poly-victimization increases, risk for additional victimizations also increases (Dahlem, Zimet, & Walker, 1991). The strong negative impact of poly-victimization on well-being may result from the fact that the victimizations and threats to safety are experienced across a wide range of relationships and environments (Robinson, Mandleco, Frost Olsen, & Hart, 2001).

Finding a way to short-circuit this trajectory is crucial and reducing poly-victims' exposure could be one possible means to this end. The current article seeks to lay the groundwork for this line of inquiry by presenting data from a national survey of youth in the United States on relationships between poly-victimization and peer harassment involvement, a form of victimization understudied in the context of poly-victimization in comparison with child maltreatment. Furthermore, given the integral role technology plays for youth in communicating and socializing with peers (Lenhart, Smith, Anderson, Duggan, & Perrin, 2015), we will focus our analysis on understanding how poly-victimized youth use technology and how that may translate to increased risk of peer victimization.

## Poly-Victims and Technology

Friendship and technology are intertwined; video games, social media, and cell phones play an integral role in how teens meet and interact with friends (Lenhart et al., 2015). One study documented 57% of teens report having met a new friend online and text messaging is a key component of day-to-day friend interactions with 55% of teens spending time every day texting with friends (Lenhart et al., 2015). The Internet may allow youth to communicate and find social support that may be lacking in face-to-face relationships (McKenna & Bargh, 2000). This could be of particular value to at-risk youth, such as poly-victims, who may struggle with in-person friendships and peer groups. On the contrary, technology could also potentially increase negative effects for poly-victims by creating additional contexts in which victimization and perpetration occur. Indeed, given how much new technology has become central to youth communication with each other (Lenhart et al., 2011), it is likely that peer disagreements and harassment "spill-over" from in-person contexts to the online environment fairly fluidly. Indeed, research has found that victimization experienced through technology often overlaps with in-person peer victimizations (Cassidy, Jackson, & Brown, 2009; Mitchell, Finkelhor, Wolak, Ybarra, & Turner, 2011; Mitchell, Jones, Turner, Shattuck, & Wolak, 2016).

## Dual Peer Harassment Victimization and Perpetration

Just as it is too simplified to consider online harassment as fully separate from in-person harassment, it is also overly simplified to focus on victimization without considering that many youth are both victims and perpetrators of peer harassment (Mitchell et al., 2016; Perren & Hornung, 2005; Ybarra, Espelage, & Mitchell, 2007; Ybarra & Mitchell, 2004a; Ybarra, Mitchell, Wolak, &

Finkelhor, 2006). Indeed, in one national study of 10- to 15-year-olds, 14% of youth were both victims and perpetrators of Internet harassment during a 1 year time period (Ybarra, Espelage, & Mitchell, 2007). Furthermore, there is some indication that psychosocial problems may be heightened for dually involved youth. Online harassment victimization and perpetration involvement has been correlated with poor caregiver–child relationships (Ybarra & Mitchell, 2004a); problematic school indicators such as detention and suspension, skipping school, and carrying a weapon to school (Ybarra, Diener-West, & Leaf, 2007); higher rates of depressive symptomatology (Ybarra, 2004); substance use (Ybarra, Diener-West, & Leaf, 2007; Ybarra & Mitchell, 2004a, 2004b; Ybarra & Mitchell, 2007); and greater rates of suicidal ideation (Hinduja & Patchin, 2010; Patchin & Hinduja, 2010a). Perpetrators of online harassment are also more likely to report higher levels of anger, frustration, aggression, and rule-breaking behaviors (Patchin & Hinduja, 2010b; Ybarra & Mitchell, 2007); delinquency (Ybarra & Mitchell, 2004b); and violence (Mishna, Khoury-Kassabri, Gadalla, & Daciuk, 2012; Ybarra & Mitchell, 2004b). As has been found in research on traditional bullying (Cook, Williams, Guerra, Kim, & Sadek, 2010; Glew, Fan, Katon, Rivara, & Kernic, 2005; Stein, Dukes, & Warren, 2007), youth who are both perpetrators and victims of online harassment appear to represent a particularly high-risk group of youth (Mishna et al., 2012; Ybarra & Mitchell, 2004a). Taken together, it is likely that such dually involved youth are at heighted risk for being a poly-victim as well.

## Current Study

Given a lack of knowledge about the technology use patterns of poly-victims, we first explore technology use among groups of youth based on their poly-victimization status (non-victimized, less victimized, and poly-victimized [including low and high poly-victims]). Next, we explore whether those youth who report harassment victimization and/or perpetration are more likely to be poly-victims, and whether the intersection of victimization and perpetration poses increased risk for poly-victim status. We do so for any harassment involvement (across environments) and then focusing on harassment victimization and perpetration that involves technology specifically.

## Method

### Participants

The Technology Harassment Victimization Survey (THV), funded by the National Institute of Justice (NIJ), used telephone survey methodology,

drawing the sample from a subset of households that completed a previous survey, the Second National Survey of Children's Exposure to Violence (NatSCEV 2) 2 years prior, in 2011-2012 (Finkelhor, Turner, Shattuck, & Hamby, 2013). The overall response rate for the original NatSCEV 2 survey was 40%, acceptable for national random-digit dial surveys (Babbie, 2012; Keeter, Kennedy, Dimock, Best, & Craighill, 2006; Kohut, Keeter, Doherty, Dimock, & Christian, 2012), and for a methodology that involved interviewing youth. NatSCEV 2 households were contacted for the THV survey if (a) youth were at least 8 years old during the NatSCEV 2 survey and (b) caregivers agreed after the NatSCEV 2 interview to be re-contacted for a follow-up study. The eligible sample pool consisted of 2,127 youth between the ages of 10 and 20 at the time of the THV data collection. The THV survey data were collected from December 2013 to March 2014. A total of 791 youth interviews for the THV were completed (36% response rate). The average time for a completed survey was 58 min. Youth respondents who completed the survey were sent a US$25 check.

Based on our sampling procedures, sample weights adjust for differential attrition for the THV survey. These were calculated using age, race/ethnicity, household income, number of children in household, caregiver demographics, and child's victimization and delinquent behavior as measured by the NatSCEV 2 survey.

## Procedure

Interviewers used a computer-assisted telephone interviewing system. After a brief caregiver survey, interviewers obtained consent from the caregiver and assent from the focal child to proceed to the youth portion of the interview. If we reached a youth respondent who (a) was 18 years or older and (b) did not have contact with a caregiver *or* if that caregiver only spoke Spanish, the entire interview (including a modified caregiver portion) was conducted with the youth respondent. Respondents who disclosed serious threats or ongoing victimizations during the interview were re-contacted by a clinical member of the research team trained in telephone crisis counseling, who stayed in contact with the respondent until the situation was appropriately addressed locally. All procedures were authorized by the Institutional Review Board at the University of New Hampshire and complied with the confidentiality guidelines set forth by the U.S. Department of Justice. Due to page limitations, more details about the sampling methodology, participants, procedures, and weighting is freely available in our methodology report (Abt SRBI, 2014): http://unh.edu/ccrc/pdf/THV%20Methodology%20Report_Final_140401.pdf

## Measurement

*Poly-victimization.* The Juvenile Victimization Questionnaire (JVQ; Hamby, Finkelhor, Ormrod, & Turner, 2004) is a comprehensive inventory of childhood victimization. The JVQ includes 53 items that assess a broad range of victimization across five modules: conventional crime (e.g., having something stolen), child maltreatment (e.g., being physically abused), peer and sibling victimization (e.g., being hit by other kids), sexual victimization (e.g., being forced to do something sexual), and witnessing and indirect victimization. Each question refers to a specific victimization form (e.g., aggravated assault, dating violence). The specific items used to screen for these victimization types have been published elsewhere (Finkelhor et al., 2013). National norms exist for this instrument, as well as evidence of the questionnaire's construct validity and reliability (Finkelhor, Hamby, Ormrod, & Turner, 2005).

For the current study, a measure of past year poly-victimization was constructed for each child by summing the number of different types of victimizations that the child had been exposed to in the past year *minus any peer victimization items* for a total of 30 possible types. We excluded peer victimization as we were specifically interested in how peer victimization relates with the sum of other types of victimization. The average number of victimization types experienced in the past year was just under three, $M = 2.8$ (95% confidence interval [CI] = [2.3, 3.3]); $SE = 0.3$. Children who had been exposed to particularly large numbers of different kinds of victimizations were designated as poly-victims. Guided by the seminal study on poly-victimization in this field which distinguishes among levels of poly-victims (Finkelhor et al., 2007a), we classified youth into the following groups based on number of types of victimization experienced in the past year as youth who were non-victimized, less victimized (1-2 types), and poly-victimized, including low poly-victims (3-5 types) and high poly-victims (6 or more types).

*Peer harassment.* To measure peer harassment *victimization*, youth were asked whether they had any past year experience of harassment committed by a non-family peer that involved technology in some way. Subsequently they were 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 messages, email, or social networking sites and second on incidents that did not involve technology. If a youth 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. 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. For the purposes of the current analyses, we were interested in reports of any harassment victimization as well as any that involved technology.

Due to time constraints, we could not measure peer harassment *perpetration* in the same detail as victimization. Instead, youth were first asked to again think of mean things that some people do to others online, or through the Internet or cell phone in some way: "In the past year, how many times did you do any of the following to someone other than a family member? (a) called someone a mean name, made fun of someone, or teased them in a hurtful way; (b) excluded or ignored someone or got other people to turn against someone; (c) spread false rumors about someone or shared something about someone that was meant to be private (like something they wrote or a picture of them) as a way to make trouble for them; (d) hit, kicked, pushed, shoved, or threatened to hurt someone; and (e) post something online about yourself so that it looked like it was coming from another person who was bullying or harassing you." Youth were then asked the same questions (with the exception of posting something online) for things they might have done that did not involve the Internet or a cell phone in any way. Response options were never, 1 time, 2 times, 3 to 5 times, and 6 or more times. For the purposes of the current analyses, a positive response to any of the above question (either technology involved or not) was coded as an indicator of any harassment perpetration versus none. Any technology-involved perpetration was coded positively if the youth said they had done any of the five technology-involved perpetrations at least once in the past year.

The overlap between *harassment victimization and perpetration* was coded in the following way: no harassment involvement, victim only, perpetrator only, and both victim and perpetrator. We did this separately for any harassment involvement (across environments) and again for any harassment involvement that involved technology.

*Technology use.* Frequency of Internet use was assessed with one item: "How many days in a *usual week* do you use the Internet? Intensity of Internet use was assessed with one item: "How many total hours are you online

on a *usual day* when you use the Internet?" These items were coded to reflect one standard deviation (*SD*) above the mean versus less: frequent Internet use (7 days/week) and intense Internet use (2 or more hr per day). Youth were asked whether they " . . . had a cell phone—including an iPhone, Android, or other device that is also a cell phone?" If yes, questions were asked about whether they used the cell phone (a) for text messaging, (b) to send or receive photos, and (c) to connect to the Internet. Youth were asked "About how many text messages do you send and receive on a typical day" (if applicable). The open-ended responses were summed and coded at one *SD* above the mean or higher (equivalent to 100 or more text messages a day) to reflect high text messaging. Use of social networking sites like Facebook and Twitter was also queried with a follow-up question as to how often they check, or login: several times a day, about once a day, 3 to 5 times a week, 1 to 2 days a week, every few weeks, or less often than that.

*Youth factors.* *Trauma symptomatology* was assessed using the Depression, Anxiety, Anger, Dissociation, and Post-Traumatic Stress subscales of the Trauma Symptom Checklist (TSCC; for youth 10 and older). The instrument was designed to evaluate children's responses to unspecified traumatic events in different symptom domains. Youth were asked to indicate how often they have experienced each symptom within the last month. Response options ranged from 0 (*not at all*) to 4 (*very often*). For the current analyses, all item responses for the five scales together were summed to create an aggregate trauma symptom score. Youth were asked whether they drank *alcohol* in the past year. Response options were yes/no. The items used to measure the occurrence of *delinquent behavior* were originally developed by Loeber and Dishion (1983) and adapted by Cuevas, Finkelhor, Turner, and Ormrod (2007). Youth were asked whether they engaged in any of 15 delinquent behaviors in the past year. Response options are yes/no. For the purposes of the current analyses, items were summed (minus the question about alcohol use which is used separately) with higher scores reflecting more delinquent acts. Finally, youth were asked about their *grades* during the school year: "Across all subjects have you gotten mostly: A's, B's, C's, D's, or F's." Options were also available if their school did not give out grades, if there was no alphabetic grade equivalent, or if they were not in school in the past year. Responses were coded as mostly C's, D's, or F's versus all other.

Demographic information was obtained for all 791 youth in the initial parent interview, including the child's gender, race/ethnicity (coded into four groups: White non-Hispanic, Black non-Hispanic, other race non-Hispanic, and Hispanic any race), and socio-economic status (SES). SES was 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. For this study, the continuous SES measure was converted into a three category variable for *low SES* (1 *SD* or more below the mean—23% of sample), *medium SE*S (between 1 *SD* below and 1 *SD* above the mean—61% of sample), and *high SES* (1 or more *SD* above the mean—16% of sample). Family structure, defined by the composition of the house-hold, was categorized into four groups: children living with (a) two biological or adoptive parents, (b) one biological parent plus partner (spouse or non-spouse), (c) single biological parent, and (d) other non-parent caregiver.

### Statistical Analysis

First, we compare child demographic characteristics and experience (i.e., alco-hol use, delinquency, depressive symptomatology, and school performance) by past year poly-victim status—non-victimized, less victimized (1-2 types), and poly-victimized, including low poly-victim (3-5 types) and high poly-victim (6+ types), using design-based *F* statistics. Next, we report rates of different types of technology use by poly-victim status. The relative odds of being (a) less victim-ized (vs. non-victimized), (b) low poly-victimized (vs. non-victimized), and (c) high poly-victimized (vs. non-victimized) are provided using multinomial logis-tic regression adjusting for child demographic characteristics.

   Then, we look more closely at the association between poly-victimization and peer harassment victimization and perpetration. We first report unad-justed rates of any peer harassment victimization and perpetration, regardless of where it occurred by poly-victim status. Youth were then grouped accord-ing to their victimization and perpetration involvement as described earlier: none, victim only, perpetrator only, and both victim and perpetrator. Next, using multinomial logistic regression (with no peer harassment involvement as the comparison group), we examine the relationship between poly-victim status and harassment experience while adjusting for child demographic characteristics, technology use (a lot of friends on one's social networking site, intense Internet use, high texting), and youth experience (alcohol use, delinquency, trauma symptomatology, school performance). This was repeated for harassment involvement that involved technology.

## Results

### Poly-Victimization

As seen in Table 1, certain child characteristics varied by poly-victimiza-tion status. Older youth, ages 16 to 17 and 18 to 20 were more likely to be

**Table 1.** Child Characteristics Based on Past Year Poly-Victimization Status (%).

| Characteristic | All Youth (N = 791) | Non-Victimized (29%, n = 273) | Less Victimized (1-2 types) (34%, n = 268) | Poly-Victimized Youth | | Design-Based F |
| --- | --- | --- | --- | --- | --- | --- |
| | | | | Low (3-5 types) (21%, n = 158) | High (6+ types) (16%, n = 92) | |
| Child sex | | | | | | 1.7 |
| Male | 49 (397) | 39 | 51 | 52 | 61 | |
| Female | 51 (394) | 61 | 49 | 48 | 39 | |
| Child race/ethnicity | | | | | | 2.4* |
| White, non-Hispanic | 59 (594) | 67 | 66 | 52 | 37 | |
| Black, non-Hispanic | 13 (88) | 9 | 8 | 23 | 14 | |
| Other race, non-Hispanic | 8 (46) | 7 | 10 | 4 | 11 | |
| Hispanic, any race | 21 (63) | 16 | 16 | 21 | 38 | |
| Socio-economic status | | | | | | 1.7 |
| Low | 23 (127) | 15 | 21 | 27 | 37 | |
| Medium | 61 (485) | 67 | 61 | 61 | 52 | |
| High | 16 (179) | 18 | 18 | 12 | 11 | |
| Family structure | | | | | | 3.1** |
| Both biological parents | 53 (544) | 71 | 47 | 54 | 33 | |
| Single parent | 34.(148) | 18 | 46 | 27 | 47 | |
| Biological parent and stepparent | 9 (64) | 7 | 6 | 11 | 13 | |
| Other adult | 4 (35) | 4 | 1 | 8 | 7 | |

(continued)

**Table 1. (continued)**

| Characteristic | All Youth (N = 791) | Non-Victimized (29%, n = 273) | Less Victimized (1-2 types) (34%, n = 268) | Poly-Victimized Youth | | Design-Based F |
| | | | | Low (3-5 types) (21%, n = 158) | High (6+ types) (16%, n = 92) | |
|---|---|---|---|---|---|---|
| Child age (years) | | | | | | |
| 10-12 | 30 (158) | 35 | 34 | 21 | 22 | 2.3* |
| 13-15 | 25 (220) | 25 | 27 | 31 | 12 | |
| 16-17 | 24 (209) | 18 | 17 | 27 | 47 | |
| 18-20 | 22 (204) | 22 | 23 | 21 | 20 | |
| Ever drank alcohol | 27 | 13 | 25 | 27 | 57 | 10.2*** |
| Delinquency count[a] | 1.0 (0.10) | 0.3 (0.04) | 0.7 (0.09) | 1.2 (0.16) | 2.8 (0.37) | 27.2*** |
| Trauma score[a] | 0.1 (0.07) | -0.5 (0.06) | -0.1 (0.05) | 0.2 (0.16) | 1.1 (0.20) | 25.1*** |
| Mostly C's or worse in school | 13 | 5 | 7 | 17 | 33 | 7.2*** |

Note. Weighted percentages.
[a]Means and standard errors; F statistic.
*p ≤ .05. **p ≤ .01. ***p ≤ .001.

poly-victims; youth ages 16 to 17 made up almost half (47%) of the high poly-victim group. Almost half of high poly-victims (47%) lived in single-parent homes. Over one third (38%) of high poly-victims were Hispanic ethnicity. No demographic differences were noted between the victim groups based on child sex or SES. Poly-victims in general (both low and high) had the highest rates of delinquency, trauma symptomatology, and getting lower grades in school. High poly-victims were the most likely to have these challenges as well as the highest rates (57%) of ever drinking alcohol.

## How Poly-Victims Use Technology

Both similarities and differences exist in the ways youth use technology based on their poly-victim status (see Table 2). Although all youth were similarly likely to use the Internet frequently (7 days per week), high poly-victims were almost 5 times more likely than non-victims to use the Internet intensely (5 or more hr per day; $RR_{adj} = 4.7$, 95% CI = [1.9, 12.0]; $p \leq .001$). Using a cell phone to send or receive photos was more common among low ($RR_{adj} = 2.3$, 95% CI = [1.1, 4.6]; $p \leq .05$) and high ($RR_{adj} = 3.2$, 95% CI = [1.4, 7.2]; $p \leq .01$) poly-victims compared with non-victims. High poly-victims were also more likely to send and receive a high number of text messages (100 or more) in a given day ($RR_{adj} = 3.6$, 95% CI = [1.5, 8.6]; $p \leq .01$).

Although all youth were equally likely to use social networking sites, their experiences differed in some notable ways. High poly-victims were almost 6 times more likely than non-victims to have many online friends (more than 500; $RR_{adj} = 5.7$, 95% CI = [2.3, 14.4]; $p \leq .001$). Both low and high poly-victims were more likely than non-victims to have taken steps to improve problematic experiences on social networking sites such as deleting people from their friends list; they also were more likely to report posting content they later regretted.

## Poly-Victims and Their Experiences With Peer Harassment Victimization and Perpetration

Both low and high poly-victims had elevated rates of peer harassment victimization and perpetration (not shown in table). Sixty-four percent of high poly-victims reported any harassment victimization in the past year; this was true for 44% of low poly-victims, 28% of less victimized youth, and 16% of non-victimized youth (design-based $F = 9.0$, $p \leq .001$). Harassment perpetration was also common for all youth and for poly-victims in particular. More than eight in 10 high poly-victims (84%) had perpetrated harassment

**Table 2.** Prevalence of Technology Use and Interactions Among Poly-Victims.

| Characteristic | % | | | | Adjusted Relative Risk Ratio a (95% CI)x | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| | Non-Victimized (29%, n = 273) | Less Victimized (1-2 types) (34%, n = 268) | Low Poly-Victim (3-5 types) (21%, n = 158) | High Poly-Victim (6+ types) (16%, n = 92) | Less Victimized vs. None | Low Poly-Victim vs. None | High Poly-Victim vs. None |
| Frequent Internet use (7 days/week) | 52 | 67 | 65 | 63 | 2.0 [1.0, 4.0]* | 1.7 [0.8, 3.3] | 1.5 [0.6, 3.5] |
| Intense Internet use (5+ hr/day) | 8 | 9 | 15 | 33 | 1.3 [0.7, 2.5] | 1.9 [0.8, 4.3] | 4.7 [1.9, 12.0]*** |
| Has a cell phone | 72 | 75 | 87 | 79 | 1.1 [0.5, 2.7] | 2.3 [1.0, 5.2]* | 1.5 [0.6, 3.9] |
| Uses for text messaging | 66 | 67 | 84 | 79 | 1.1 [0.5, 2.6] | 2.7 [1.3, 5.9]** | 2.1 [0.8, 5.3] |
| To send and receive photos | 47 | 51 | 68 | 73 | 1.3 [0.7, 2.5] | 2.3 [1.1, 4.6]* | 3.2 [1.4, 7.2]** |
| To connect to Internet | 54 | 57 | 69 | 59 | 1.1 [0.6, 2.1] | 1.5 [0.6, 3.5] | 0.9 [0.4, 2.1] |
| High number of texts | 19 | 18 | 35 | 47 | 0.8 [0.4, 1.7] | 1.8 [0.8, 4.0] | 3.6 [1.5, 8.6]** |
| Any social networking site (SNS) use | 76 | 74 | 83 | 82 | 0.9 [0.4, 2.2] | 1.2 [0.4, 3.2] | 1.4 [0.5, 4.1] |
| Checks SNS several times a day | 37 | 34 | 50 | 51 | 0.9 [0.5, 1.5] | 1.4 [0.7, 2.7] | 1.6 [0.7, 3.8] |
| Things done on any SNS | | | | | | | |
| Deleted people from friends list | 39 | 39 | 61 | 73 | 1.1 [0.6, 1.9] | 2.8 [1.3, 5.8]** | 7.5 [3.4, 16.5]*** |
| Removed name from tagged photos | 14 | 17 | 35 | 35 | 1.5 [0.8, 2.8] | 4.3 [2.2, 8.5]*** | 4.4 [1.7, 11.1]** |
| Deleted comments others have made | 19 | 22 | 39 | 46 | 1.2 [0.6, 2.2] | 2.7 [1.3, 5.4]** | 3.9 [1.5, 9.9]** |
| Posted content later regretted | 4 | 8 | 10 | 10 | 2.3 [1.0, 5.6] | 2.5 [1.0, 6.2]* | 3.1 [1.0, 9.5]* |
| On most used SNS | | | | | | | |
| Many friends (500+) | 11 | 13 | 27 | 45 | 1.3 [0.6, 2.9] | 2.4 [1.0, 6.0] | 5.7 [2.3, 14.4]*** |

Note. All results are weighted. CI = confidence interval; SNS = social networking sites; SES = socio-economic status.
aRelative risk ratios are adjusted for youth gender, age, race and ethnicity, SES, and family structure.
*p ≤ .05. **p ≤ .01. ***p ≤ .001.

toward a peer in the past year; this was true for 66% of low poly-victims, 47% of less victimized youth, and 35% of non-victimized youth (design-based $F = 9.1$, $p \leq .001$). As seen in Table 3, there were significant differences between the type of peer harassment involvement and poly-victim status (design-based $F = 6.3$, $p \leq .001$). In particular, approximately half of high poly-victims (52%) reported harassment involvement as both a victim and a perpetrator, compared with 34% of low poly-victims, 13% of less victimized youth, and 9% of non-victimized youth.

A similar pattern was noted for harassment victimization and perpetration that involved technology (not shown in table). Thirty-six percent of high poly-victims reported past year technology-involved harassment victimization; this was true for 26% of low poly-victims, 9% of less victimized youth, and 8% of less victimized youth (design-based $F = 8.3$, $p \leq .001$). Sixty-seven percent of high poly-victims said they harassed someone else through technology in the past year, compared with 49% of low poly-victims, 38% of less victimized youth, and 27% of non-victimized youth (design-based $F = 5.5$, $p \leq .001$). Significant differences between the type of technology-involved harassment involvement and poly-victim status were also noted (design-based $F = 4.4$, $p \leq .001$). Specifically, almost one in three high poly-victims (32%) identified as both a victim and perpetrator in the technology realm, compared with 18% of low poly-victims, 5% of less victimized youth, and 5% of non-victimized youth.

### Is Poly-Victim Status Related to Increased Risk for Peer Harassment Involvement?

As seen in Table 4, results of the multinomial logistic regression indicate that being either a low or high poly-victim increased risk for any peer harassment involvement; either as a victim only, perpetrator only, or both compared with youth with no past year victimization history. Low and high poly-victims appear to be at particular risk for dual harassment victimization and perpetration involvement, although risk was apparent for only harassment victimization and only harassment perpetration as well. Trauma symptoms were also related to increase odds of peer harassment involvement—for being a victim only, perpetrator only, and a victim and perpetrator. Delinquency was only associated with elevated risk for perpetration only.

In terms of peer harassment that involves technology, poly-victim status was only related to peer harassment involvement for youth who were dual victims and perpetrators (Table 5). Low poly-victims were 5.6 times more likely than non-victims to report both harassment victimization and perpetration through technology; high poly-victims were 12.4 times more likely than

**Table 3.** Rates (percent, n) of Any and Technology Harassment Involvement by Poly-Victim Status.

| | Non-Victimized (29%, n = 273) | Less Victimized (1-2 types) (34%, n = 268) | Low Poly-Victim (3-5 types) (21%, n = 158) | High Poly-Victim (6+ types) (16%, n = 92) | Design-Based F |
|---|---|---|---|---|---|
| Harassment involvement (any) | | | | | 6.3*** |
| None | 58 (168) | 37 (109) | 24 (27) | 4 (7) | |
| Victim only | 7 (19) | 15 (24) | 10 (20) | 12 (7) | |
| Perpetrator only | 26 (66) | 34 (95) | 32 (60) | 32 (29) | |
| Victim and perpetrator | 9 (20) | 13 (40) | 34 (51) | 52 (49) | |
| Harassment involvement (tech-based) | | | | | 4.4*** |
| None | 70 (201) | 58 (155) | 44 (67) | 28 (20) | |
| Victim only | 4 (8) | 4 (17) | 7 (15) | 5 (7) | |
| Perpetrator only | 22 (54) | 33 (79) | 30 (49) | 36 (29) | |
| Victim and perpetrator | 5 (10) | 5 (17) | 18 (27) | 32 (36) | |

*Note.* Weighted percentages and unweighted *ns*.
***p ≤ .001.

**Table 4.** Multinomial Logistic Regression Reporting the RRadj of the Links Between Past Year Victimization and Any Harassment Involvement Compared With Non-Involved Youth.

| | Peer Harassment Involvement Across Mode | | |
| --- | --- | --- | --- |
| | Victim Only | Perpetrator Only | Victim and Perpetrator |
| | $RR_{adj}$ (95% CI) | $RR_{adj}$ (95% CI) | $RR_{adj}$ (95% CI) |
| Past year victimization | | | |
| Non-victimized (ref)[a] | 1.0 | 1.0 | 1.0 |
| Less victimized | 2.1 [0.8, 5.7] | 1.5 [0.7, 3.2] | 1.8 [0.6, 5.0] |
| Low poly-victim | 2.4 [0.8, 7.1] | 2.2 [1.0, 5.1]* | 8.3 [2.7, 25.5]*** |
| High poly-victim | 7.1 [1.1, 45.8]* | 4.8 [1.1, 20.9]* | 42.4 [7.2, 249.3]*** |
| Youth experience | | | |
| Ever drank alcohol | 0.9 [0.3, 2.9] | 0.6 [0.3, 1.5] | 0.8 [0.3, 2.2] |
| Trauma score | 3.1 [1.9, 5.0]*** | 2.5 [1.7, 3.7]*** | 2.9 [1.8, 4.7]*** |
| Delinquency count | 1.2 [0.9, 1.7] | 1.4 [1.1, 1.9]** | 1.1 [0.8, 1.5] |
| Mostly C's or worse in school | 1.6 [0.5, 5.6] | 0.6 [0.2, 1.8] | 2.1 [0.7, 6.2] |

*Note.* All analyses also adjust for youth age, gender, race and ethnicity, SES, and family structure, and technology use. All results are weighted. $RR_{adj}$ = adjusted relative risk; CI = confidence interval; SES = socio-economic status.
[a]Categorical variable with each group compared with the (ref)erence group (no victimization).
*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

non-victims. Trauma symptoms were related to increase risk for any type of peer harassment involvement; delinquency was related to elevated risk for both perpetration only as well as victim and perpetration.

## Discussion

Findings from the national THV study add to the growing body of literature on poly-victimization by providing insight into patterns of technology use and the peer harassment victimization and perpetration experiences of poly-victims. Study results document the heightened risks that poly-victimized youth experience when interacting with peers. Low and high poly-victimized youth were both at significantly greater risk of being dual victims and perpetrators of peer harassment when compared with non-victimized youth. This finding held for technology-involved harassment as well. There were indications that poly-victimized youth were interacting with peers in more intense

**Table 5.** Multinomial Logistic Regression Reporting the $RR_{adj}$ of the Links Between Past Year Technology-Involved Victimization and Harassment Perpetration Compared With Non-Involved Youth.

|  | Peer Harassment Involvement With Technology | | |
|---|---|---|---|
|  | Victim Only | Perpetrator Only | Victim and Perpetrator |
|  | $RR_{adj}$ (95% CI) | $RR_{adj}$ (95% CI) | $RR_{adj}$ (95% CI) |
| Past year victimization |  |  |  |
|   Non-victimized (ref)[a] | 1.0 | 1.0 | 1.0 |
|   Less victimized | 1.1 [0.3, 3.9] | 1.5 [0.7, 3.3] | 1.2 [0.4, 3.9] |
|   Low poly-victim | 2.0 [0.6, 7.0] | 1.4 [0.7, 3.1] | 5.6 [1.4, 21.9]** |
|   High poly-victim | 0.8 [0.1, 5.3] | 1.2 [0.4, 3.6] | 12.4 [2.4, 64.1]** |
| Youth experience |  |  |  |
|   Ever drank alcohol | 0.7 [0.2, 2.1] | 0.6 [0.3, 1.3] | 1.0 [0.4, 2.5] |
|   Trauma score | 1.7 [1.1, 2.7]** | 1.6 [1.3, 2.1]*** | 1.5 [1.0, 2.3]* |
|   Delinquency count | 1.6 [1.1, 2.3] | 1.4 [1.1, 1.8]** | 1.3 [1.0, 1.6]* |
|   Mostly C's or worse in school | 0.8 [0.3, 2.6] | 0.6 [0.2, 1.5] | 1.8 [0.5, 6.7] |

*Note.* All analyses also adjust for youth age, gender, race and ethnicity, SES, and family structure, and technology use. All results are weighted. $RR_{adj}$ = adjusted relative risk; CI = confidence interval; SES = socio-economic status.
[a]Categorical variable with each group compared with the (ref)erence group (no victimization).
*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

and risky ways in general using technology; a finding that future research should explore in greater detail, along with research on how poly-victims relate to peers in general, to inform prevention and intervention programs for these high-risk youth.

## *Poly-Victimization and Peer Harassment Victimization and Perpetration*

Poly-victimized youth showed increased risk for involvement in peer harassment and high poly-victims were at particular risk, with more than 50% reporting harassment victimization and more than 80% reporting harassment perpetration. Over half of high poly-victims fell into both of these categories reporting that in the previous year they had perpetrated as well as been the victim of peer harassment. This is consistent with previous research which has found "bully-victims" to be at particular risk for negative outcomes

(Cook et al., 2010; Glew et al., 2005; Stein et al., 2007). Although risk was lower for low poly-victims, involvement in peer harassment as dual victims and perpetrators was still significantly higher for these youth than for less victimized and non-victimized youth.

Risk for peer harassment involvement appears to have a roughly linear relationship to the number of different types of other, non-peer, victimizations experienced, supporting previous research finding similar linear patterns of victimizations (Turner et al., 2010). Specifically, the current study finds that with each type of victimization youth experience, risk for peer harassment victimization and perpetration increases. These findings emphasize the importance of identifying ways to interrupt the negative trajectories for poly-victimized youth. As poly-victimized youth enter school and move into adolescence, it is important to identify ways to reduce peer harassment exposure and perpetration and improve the social skills and peer support for these youth at a critical developmental period.

## The Role of Technology in the Peer Harassment Experiences of Poly-Victims

For poly-victims, victimization risk and behavior extends to online environments as well. Compared with otherwise similar youth, low and high poly-victims were more likely to report significantly greater rates of dual peer harassment victimization and perpetration involving technology. Interestingly, there were notable differences in how poly-victims were using technology to interact with peers in general, compared with less victimized and non-victimized youth. For example, poly-victims reported much larger online social networks than non- or less victimized youth with high poly-victims being almost 6 times more likely than non-victims to have large (500 or more) numbers of friends on their social networking sites. They also reported much higher use of text message communication, used the Internet more intensely (5+ hr per day), and were more likely to exchange photos digitally. High poly-victim's increased risk for technology-involved peer harassment could be due, in part, to their poly-victim status, suggesting their risk of victimization could extend to the online environment. Alternately, the online behaviors of high poly-victims identified in this study could contribute to increased risk for peer harassment involvement. More research is warranted.

The more extensive online social networks and interactions of high poly-victims are contrary to the notion that poly-victims are alienated or isolated (Finkelhor, Ormrod, & Turner, 2007b; Lätsch, Nett, & Hümbelin, 2017). If isolation from peers occurs, it does not seem to extend to the online world of today's youth. Interestingly, in the social networking literature, number of

social networking site friends is one of the widely studied indicators of psychological outcomes, yet has inconsistent results. For example, one study identified a negative curvilinear relationship between the number of social networking friends and perceived social support among college students; the number of friends was positively associated with perceived social support but only up to a certain threshold (Kim & Lee, 2011). Researchers have also noted the distinction of "actual" friends within the online social network—consisting of approximately 25% of their friend list (Ellison, Steinfield, & Lampe, 2011), suggesting such networks include persons of varying degrees of perceived closeness.

In the current study, we found that poly-victims were more likely than non-victimized youth to have had to take steps on their social networking site to reduce problematic experiences, such as deleting people, removing their name from tags, and deleting comments others have made. Together with the existing social networking literature noted above, such findings raise the question of the quality of some of the online social connections poly-victims are making. As with any social network, there is a range of types of people one may interact with—from supporting and helpful to opposing and harmful. Perhaps some of the most salient online social interactions are with peers they know well from school—both supportive or not. Indeed, research has documented that the online networks of youth predominately consist of known peers (Madden et al., 2013). Perhaps poly-victims shift their socialization patterns for safety reasons—to help avoid the in-person victimization they are experiencing. More research focusing on the social networks of poly-victims is an important next step in our understanding of the patterns of peer interactions among poly-victims.

## Research Implications

Examining the nature of peer relationships among poly-victims is an important area of study given that some research suggests poly-victimized youth have difficulty getting along with peers. For example, research based on a nationally representative sample of youth in the United States found that having fewer good friends was associated with poly-victim persistence over time (Finkelhor et al., 2007b). Researchers in Central Europe found that poly-victimization was a strong indicator of problems with emotional and social functioning (Lätsch et al., 2017). There are a number of ways in which poly-victimization could serve as a factor in more problematic peer relationships. For example, trauma induced hyper-arousal and fear could interfere with appropriate peer interactions and accurate social information processing (Shields & Cicchetti, 2001; Shields, Ryan, & Cicchetti, 2001), leading to

increased peer group exclusion and vulnerability to peer victimization (Finkelhor, Ormrod, Turner, & Holt, 2009). Given the findings of the current study, moving forward, research that focuses on youth victimization needs to include a thorough evaluation of online-based interactions. Research also needs to consider diverse populations of youth to determine whether racial and ethnic minority youth or sexual minority youth differentially experience technology and technology-involved victimization in the context of poly-victimization. Longitudinal studies are also important if we are to stay current with the rapidly changing technology world, including the evolving nature of youth and their online social interactions.

More research is also needed to better understand the complexities of youth peer interactions and how they present in poly-victimized youth as a potential form of protection. For example, a number of prevention initiatives focus on the role of bystanders as a means of preventing peer victimization from happening as well as helping to support victims in the aftermath of an incident. Indeed, research suggests that the majority, as high as 88%, of peer victimization instances among youth happen in the presence of other youth (Craig, Pepler, & Atlas, 2000; Lynn Hawkins, Pepler, & Craig, 2001; Salmivalli, 2014). Furthermore, 80% of youth, when presented with the opportunity to intervene in online peer harassment, respond in a way that is aimed at making things better (Crimes against Children Research Center, 2014). Developing a better understanding of the role of online bystanders and their support for poly-victims may prove to be an important step in helping poly-victims.

## Clinical Implications

One of the most important goals for professionals working with peer harassment victims and perpetrators is to better identify youth who need the greatest amount of support. Although cyber-bullying and technology-involved harassment has been given a great deal of attention by the media, understanding risk for youth requires a broader and more contextual understanding of these incidents. The current study found that youth with significant victimization histories outside the peer realm were at highest risk for peer harassment victimization and perpetration across environments. Findings suggest that technology-involved peer harassment is indeed associated with a broader collective of victimization exposures.

These features highlight the importance of comprehensive screening and interviewing protocols when considering traumatic stress and victimization experiences with youth. When parents, schools, and health professionals are working with multiply-traumatized youth, it is important to screen for possible peer victimization and perpetration experiences. Similarly, for those

working with youth victims of complex peer harassment incidents with aggravating features such as dual roles of victim and perpetrator, or both in-person and technology components, it is important to screen for other types of prior and current victimization experiences that could be contributing to or exacerbating negative impact. Indeed, recent evidence suggests that peer harassment occurs across a variety of contexts: in-person only, through technology only, and episodes that involve both in-person and technology components (Mitchell et al., 2016). Such "mixed" incidents, or those that involve both technology and in-person elements, appear to result in the highest rates of negative emotional impact. How poly-victimization contributes to the distressing nature of these episodes should be considered.

### Implications for Prevention and Intervention

Potential opportunities for intervening with poly-victims are also indicated. This is particularly noteworthy given the obstacles advocates face in working with very high–risk populations of youth: trying to help youth who are mobile; who have multiple health, mental health, and safety concerns; and who come into contact with the system in hard-to-predict patterns. The Internet seems to be where many youth poly-victims are, suggesting that this is an important place for intervention services and support for these youth to be. Given that poly-victimized youth may have less access to social support (Turner, Shattuck, Finkelhor, & Hamby, 2017), technology and its broad social networks could provide a crucial form of social support for poly-victimized youth. In general, adults who report challenges with in-person social situations and relationships report the Internet as a valuable resource for social support that may be lacking in face-to-face relationships (McKenna & Bargh, 2000). Whether this extends to young poly-victims is unclear.

Technology is already being used to enhance contact with high-risk populations in potentially applicable ways. For example, the National Safe Place program, an outreach and prevention program for runaway and homeless youth, launched a text messaging campaign to connect youth with a safe and trained adult in their community at any time and in multiple locations (Walsh & Donaldson, 2010). Agencies working with teen sexual assault and dating violence victims have begun experimenting with web-based, anonymous online chat and text messaging services to provide assistance to victims (Finn & Hughes, 2008). Interventions such as these may hold promise for increasing assistance and outreach to poly-victimized youth also.

In addition, many forms of mental health interventions are available on the Internet (Mandrusiak et al., 2006). The Internet may increasingly serve as an important supplemental source of mental health information and care for

those youth and their families that encounter barriers through more traditional routes. These supports may include online symptom screening tools, online support groups, online individual therapy, online group therapy, and self-directed therapy. In a study of adolescent Internet-based help-seeking behaviors, one fifth had sought help online for mental health problems, a rate similar to those that sought help from mental health professionals in person (Gould, Munfakh, Lubell, Kleinman, & Parker, 2002). Online interventions may serve as an important source for poly-victims as well, particularly given their increased risk for psychological and physical symptoms (Finkelhor, Shattuck, et al., 2011; Finkelhor, Turner, et al., 2011).

Another possible direction is to increase the integration of online harassment prevention into existing evidence-based peer victimization and bullying programs directed at all youth. Evidence has shown that social and emotional learning programs in early elementary can improve behavior and reduce aggression down the road (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011): Interventions such as these are likely to continue decreasing trends in offline bullying and reverse the trend in online harassment as well.

## Study Limitations

There are limitations to this research that need to be kept in mind when interpreting the findings. The main focus of the study was on describing technology-involved harassment so such incidents are slightly over-represented. Youth responses may have been influenced by social desirability, recall bias, and response sets. Some findings may be influenced by unmeasured dimensions, such as a greater willingness among some respondents to disclose personal experiences. Finally, peer harassment perpetration could not be measured in the same way as victimization which may influence the findings related to endorsement of perpetration.

## Conclusion

The increase in attention to poly-victimization in recent years has importantly identified the detrimental role that experiencing different forms of victimization have on youth. This study not only adds to that literature, but suggests that there may be an opportunity to interrupt additional victimization by understanding how poly-victimized youth interact with peers before and during adolescence. Although preliminary, the differences in technology use by poly-victimized youth suggest that more information is needed to understand how they are relating to peers in both positive and risky ways in this environment.

## Authors' Note

## Declaration of Conflicting Interests

## Funding

## ORCID iDs

Kimberly J. Mitchell https://orcid.org/0000-0003-1974-1637
Heather A. Turner https://orcid.org/0000-0002-2900-2419

## References

Abt SRBI. (2014). *Technology-based harassment victimization survey: Methodology report*. Durham, NH: Crimes Against Children Research Center.

Babbie, E. (2012). *The practice of social research* (13th edition). Belmont, CA: Wadsworth Publishing.

Cassidy, W., Jackson, M., & Brown, K. N. (2009). Sticks and stones can break my bones, but how can pixels hurt me? Students' experiences with cyber-bullying. *School Psychology International*, *30*, 383-402.

Cook, C. R., Williams, K. R., Guerra, N. G., Kim, T. E., & Sadek, S. (2010). Predictors of bullying and victimization in childhood and adolescence: A meta-analytic investigation. *School Psychology Quarterly*, *25*, 65-83.

Craig, W. M., Pepler, D., & Atlas, R. (2000). Observations of bullying in the playground and in the classroom. *School Psychology International*, *21*, 22-36.

Crimes against Children Research Center. (2014). TechnologyHarassment Victimization Study [Data file and code book]. University of New Hampshire, Durham, NH. Unpublished data.

Cuevas, C. A., Finkelhor, D., Turner, H. A., & Ormrod, R. K. (2007). Juvenile delinquency and victimization: A theoretical typology. *Journal of Interpersonal Violence*, *22*, 1581-1602.

Cyr, K., Chamberland, C., Lessard, G., Clément, M.-È., Wemmers, J.-A., Collin-Vézina, D., . . . Damant, D. (2012). Polyvictimization in a child welfare sample of children and youths. *Psychology of Violence*, *2*(4), 385-400.

Dahlem, N. W., Zimet, G. D., & Walker, R. R. (1991). The Multidimensional Scale of Perceived Social Support: A confirmation study. *Journal of Clinical Psychology*, *47*, 756-761.

Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development*, *82*, 405-432.

Ellison, N. B., Steinfield, C., & Lampe, C. (2011). Connection strategies: Social capital implications of Facebook-enabled communication practices. *New Media & Society*, *13*(6), 813-892.

Finkelhor, D., Hamby, S. L., Ormrod, R., & Turner, H. (2005). The Juvenile Victimization Questionnaire: Reliability, validity, and national norms. *Child Abuse & Neglect*, *29*, 383-412.

Finkelhor, D., Ormrod, R., Turner, H., & Holt, M. (2009). Pathways to poly-victimization. *Child Maltreatment*, *14*, 316-329.

Finkelhor, D., Ormrod, R. K., & Turner, H. A. (2007a). Poly-victimization: A neglected component in child victimization. *Child Abuse & Neglect*, *31*, 7-26.

Finkelhor, D., Ormrod, R. K., & Turner, H. A. (2007b). Re-victimization patterns in a national longitudinal sample of children and youth. *Child Abuse & Neglect*, *31*, 479-502.

Finkelhor, D., Shattuck, A., Turner, H. A., Ormrod, R., & Hamby, S. L. (2011). Polyvictimization in developmental context. *Journal of Child & Adolescent Trauma*, *4*, 291-300.

Finkelhor, D., Turner, H. A., Hamby, S. L., & Ormrod, R. (2011). *Polyvictimization: Children's exposure to multiple types of violence, crime, and abuse*. U.S. Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention. Washington, DC: US Government Printing Office.

Finkelhor, D., Turner, H. A., Shattuck, A., & Hamby, S. L. (2013). Violence, crime, and abuse exposure in a national sample of children and youth. *JAMA Pediatrics*, *167*(7), 614-621. doi:10.1001/jamapediatrics.2013.42.

Finn, J., & Hughes, P. (2008). Evaluation of the RAINN National Sexual Assault Online Hotline. *Journal of Technology in Human Services*, *26*(2-4), 203-222. doi:10.1080/15228830802094783

Ford, J. D., Grasso, D. J., Hawke, J., & Chapman, J. F. (2013). Poly-victimization among juvenile justice-involved youths. *Child Abuse & Neglect*, *37*(10), 788-800.

Glew, G. M., Fan, M.-Y., Katon, W., Rivara, F. P., & Kernic, M. A. (2005). Bullying, psychosocial adjustment, and academic performance in elementary school. *Archives of Pediatrics and Adolescent Medicine*, *159*, 1026-1031.

Gould, M. S., Munfakh, J. L. H., Lubell, K., Kleinman, M., & Parker, S. (2002). Seeking help from the Internet during adolescence. *Journal of the American Academy of Child & Adolescent Psychiatry*, *41*, 1182-1189.

Hamby, S. L., Finkelhor, D., Ormrod, R. K., & Turner, H. A. (2004). *The Juvenile Victimization Questionnaire (JVQ): Administration & scoring manual*. Durham, NH: Crimes Against Children Research Center.

Hinduja, S., & Patchin, J. (2010). Bullying, cyberbullying, and suicide. *Archives of Suicide Research*, *14*, 206-221.

Keeter, S., Kennedy, C., Dimock, M., Best, J., & Craighill, P. (2006). Gauging the impact of growing nonresponse on estimates from a national RDD telephone survey. *Public Opinion Quarterly*, *70*, 759-779.

Kim, J., & Lee, J.-E. R. (2011). The Facebook paths to happiness: Effects of the number of Facebook friends and self-presentation on subjective well-being. *CyberPsychology, Behavior, and Social Networking*, *14*, 359-364.

Kohut, A., Keeter, S., Doherty, C., Dimock, M., & Christian, L. (2012). *Assessing the representativeness of public opinion surveys*. Washington, DC: Pew Research Center for the People & the Press.

Lätsch, D. C., Nett, J. C., & Hümbelin, O. (2017). Poly-victimization and its relationship with emotional and social adjustment in adolescence: Evidence from a national survey in Switzerland. *Psychology of Violence*, *7*(1), 1-11.

Lenhart, A., Madden, M., Smith, A., Purcell, K., Zickuhr, K., & Rainie, L. (2011). *Teens, kindness and cruelty on social networking sites*. Washington, DC: Pew Internet & American Life Project.

Lenhart, A., Smith, A., Anderson, M., Duggan, M., & Perrin, A. (2015). *Teens, technology and friendships*. Retrieved from http://www.pewinternet.org/files/2015/08/Teens-and-Friendships-FINAL2.pdf

Loeber, R., & Dishion, T. J. (1983). Early predictors of male delinquency: A review. *Psychological Bulletin*, *94*, 68-94.

Lynn Hawkins, D., Pepler, D. J., & Craig, W. M. (2001). Naturalistic observations of peer interventions in bullying. *Social Development*, *10*, 512-527.

Madden, M., Lenhart, A., Cortesi, S., Gasser, U., Duggan, M., Smith, A., & Beaton, M. (2013). *Teens, social media, and privacy*. Pew Internet & American Life Project. Retrieved from http://www.pewinternet.org/Reports/2013/Teens-Social-Media-And-Privacy.aspx

Mandrusiak, M., Rudd, M. D., Joiner, T. E., Jr., Berman, A. L., Van Orden, K. A., & Witte, T. (2006). Warning signs for suicide on the Internet: A descriptive study. *Suicide and Life-Threatening Behavior*, *36*, 263-271.

McKenna, K. Y. A., & Bargh, J. A. (2000). Plan 9 from cyberspace: The implications of the Internet for personality and social psychology. *Personality and Social Psychology Review*, *4*, 57-75.

Mishna, F., Khoury-Kassabri, M., Gadalla, T., & Daciuk, J. (2012). Risk factors for involvement in cyber bullying: Victims, bullies and bully–victims. *Children and Youth Services Review*, *34*, 63-70. doi:10.1016/j.childyouth.2011.08.032

Mitchell, K. J., Finkelhor, D., Wolak, J., Ybarra, M. L., & Turner, H. (2011). Youth Internet victimization in a broader victimization context. *The Journal of Adolescent Health: Official Publication of the Society for Adolescent Medicine*, *48*, 128-134.

Mitchell, K. J., Jones, L. M., Turner, H. A., Shattuck, A., & Wolak, J. (2016). The role of technology in peer harassment: Does it amplify harm for youth? *Psychology of Violence*, *6*, 193-204. doi:10.1037/a0039317

Patchin, J. W., & Hinduja, S. (2010a). Cyberbullying and self-esteem. *Journal of School Health*, *80*(12), 614-621.

Patchin, J. W., & Hinduja, S. (2010b). Traditional and nontraditional bullying among youth: A test of general strain theory. *Youth & Society*, *43*(2), 727-751.

Perren, S., & Hornung, R. (2005). Bullying and delinquency in adolescence: Victims' and perpetrators' family and peer relations. *Swiss Journal of Psychology*, *64*, 51-64.

Robinson, C. C., Mandleco, B., Frost Olsen, S., & Hart, C. H. (2001). The Parenting Styles and Dimensions Questionnaire (PSDQ). In B. F. Perlmutter, J. Touliatos, & G. W. Holden (Eds.), *Handbook of family measurement techniques: Instruments and index* (Vol. 2, pp. 190). Thousand Oaks, CA: SAGE.

Salmivalli, C. (2014). Participant roles in bullying: How can peer bystanders be utilized in interventions? *Theory Into Practice*, *53*, 286-292.

Shields, A., & Cicchetti, D. (2001). Parental maltreatment and emotion dysregulation as risk factors for bullying and victimization in middle childhood. *Journal of Clinical Child Psychology*, *30*, 349-363.

Shields, A., Ryan, R. M., & Cicchetti, D. (2001). Narrative representations of caregivers and emotion dysregulation as predictors of maltreated children's rejection by peers. *Developmental Psychology*, *37*, 321-337.

Stein, J. A., Dukes, R. L., & Warren, J. I. (2007). Adolescent male bullies, victims, and bully-victims: A comparison of psychosocial and behavioral characteristics. *Journal of Pediatric Psychology*, *32*, 273-282.

Turner, H. A., Finkelhor, D., & Ormrod, R. (2010). Poly-victimization in a national sample of children and youth. *American Journal of Preventive Medicine*, *38*, 323-330.

Turner, H. A., Shattuck, A., Finkelhor, D., & Hamby, S. (2017). Effects of poly-victimization on adolescent social support, self-concept, and psychological distress. *Journal of Interpersonal Violence*, *32*(5), 755-780.

Walsh, S. M., & Donaldson, R. E. (2010). National safe place: Meeting the immediate needs of runaway and homeless youth. *Journal of Youth and Adolescence*, *39*, 437-445.

Ybarra, M. L. (2004). Linkages between depressive symptomatology and Internet harassment among young regular Internet users. *CyberPsychology & Behavior*, *7*, 247-257. doi:10.1089/109493104323024500

Ybarra, M. L., Diener-West, M., & Leaf, P. J. (2007). Examining the overlap in Internet harassment and school bullying: Implications for school intervention. *Journal of Adolescent Health*, *41*(6, Suppl.), S42-S50.

Ybarra, M. L., Espelage, D., & Mitchell, K. (2007). The co-occurrence of Internet harassment and unwanted sexual solicitation victimization and perpetration: Associations with psychosocial indicators. *Journal of Adolescent Health*, *41*(6, Suppl.), S31-S41. doi:10.1016/j.jadohealth.2007.09.010

Ybarra, M. L., & Mitchell, K. J. (2004a). Online aggressor/targets, aggressors, and targets: A comparison of associated youth characteristics. *Journal of Child Psychology and Psychiatry*, *45*, 1308-1316. doi:10.1111/j.1469-7610.2004.00328.x

Ybarra, M. L., & Mitchell, K. J. (2004b). Youth engaging in online harassment: Associations with caregiver–child relationships, Internet use, and personal characteristics. *Journal of Adolescence*, *27*, 319-336. doi:10.1016/j.adolescence.2004.03.007

Ybarra, M. L., & Mitchell, K. J. (2007). Prevalence and frequency of Internet harassment instigation: Implications for adolescent health. *Journal of Adolescent Health*, *41*, 189-195.

Ybarra, M. L., Mitchell, K. J., Wolak, J., & Finkelhor, D. (2006). Examining characteristics and associated distress related to Internet harassment: Findings from the Second Youth Internet Safety Survey. *Pediatrics*, *118*, e1169-e1177. doi:10.1542/peds.2006-0815

## Author Biographies

**Kimberly J. Mitchell**, PhD, is a research associate professor of Psychology at the Crimes against Children Research Center. Dr. Mitchell has specific expertise in research methodology and children's exposure to violence. In her 18 years of experience she has conducted numerous national youth surveys on topics such as victimization online and in-person and the health impact of such experiences. Her work has resulted in over 100 peer-reviewed publications which have made significant contributions to policy and practice.

**Anna Segura**, PhD, is an associate professor of Psychology at the Universitat de Vic-Universitat Central de Catalunya. Dr. Segura areas of research include the effects of victimization on at-risk children and adolescents, resilience and risk and protective factors. She is a member of the Research Group on Child and Adolescent Victimization (GReVIA) at the University of Barcelona. She is the author of several scientific papers in the field of child victimization and psychopathology in Spanish samples.

**Lisa M. Jones**, PhD, is a research associate professor of Psychology at the Crimes against Children Research Center. Dr. Jones has 18 years of experience conducting research on child victimization, including epidemiological studies, measurement development, and evaluations of prevention and intervention efforts. She has published and presented extensively on child victimization. She served as a Co-Investigator on the Technology-based Harassment Victimization Study, and is currently Principal Investigator on a study of youth bias victimization.

**Heather A. Turner**, PhD, is a Professor of Sociology at the University of New Hampshire. Dr. Turner's research has concentrated on the effects of violence, victimization, and other forms of adversity on the mental health of children and adolescents. Dr. Turner has 20 years of research experience on childhood exposure to violence, has conducted numerous national surveys, and has published around 100 articles. She was a Principal Investigator for the National Surveys of Children's Exposure to Violence and served as a Co-Investigator on the Technology-based Harassment Victimization Study.