Summary Report

Technology-Involved Harassment Victimization: Placement in a Broader Victimization Context

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ABSTRACT

Objectives: This project aims to improve current policy and practice on technology-involved harassment victimization by examining it within the context of other types of youth victimization, risk, and protective factors.

Methods: Data are from the *Technology Harassment Victimization* (THV) Study, funded by the National Institute of Justice – a national survey of a subset of 791 youth, ages 10-20, who took part in the Second National Survey of Children's Exposure to Violence (NatSCEV II) in 2011-2012.

Results: 34% of youth reported 311 harassment incidents in the past year: 54% of incidents involved no technology (in-person only), 15% involved only technology and 31% involved both technology and in-person harassment (mixed incidents). Findings from a parsimonious linear regression model found mixed incidents were more likely to result in overall negative emotional impact even after adjusting for other incident characteristics predictive of emotional harm. Across the 311 peer harassment incidents, 80% involved the presence of at least one bystander in addition to the respondent and the harassing youth. There were no differences in whether a bystander was present across in-person only harassment, technology-only harassment, or mixed harassment incidents. Youth who experienced mixed harassment reported the highest average number of different types of victimization two years prior (M = 8.4) and were also the most likely to be classified as poly-victims (34%). Prior poly-victims were over four times more likely than non-poly-victims to experienced mixed harassment victimization two years later compared to non-harassed youth in Wave 2. In addition to amount of victimization, the number of prior adverse life events is also predictive of mixed harassment. Youth experiencing mixed harassment were also more likely to be female, live in a higher socioeconomic -status household, and less likely to live with both biological parents.

Implications: This study is among the first to examine the complexity of technology involvement in peer harassment at the incident-level. Findings should help to quell concerns about possible inherently

harmful features of technology; indeed technology-only harassment incidents were among the least problematic and upsetting to youth. Youth reporting mixed technology and in-person harassment should be a priority for educators and prevention experts who are trying to identify the most serious and harmful experiences.

PURPOSE

There has been a great deal of public anxiety around technology-based harassment victimization recently; and schools, law enforcement and parents are scrambling to educate youth and establish policies with limited research to guide them. While the role of technology in youth victimization is the subject of increasing study, most research so far has studied it in isolation or within the confines of a specific area of victimization, such as bullying. This leaves a serious gap in our understanding of how technology-based harassment is similar to or different from "offline" peer harassment. Furthermore, little data is available on whether technology-based harassment victimization stems from the same or different sets of risk factors as other forms of youth harassment. Finally, there are critical and qualitative differences in the experiences that are currently defined as "technology-based harassment" with different emotional impacts for youth and important implications for education, prevention, and response. To address these gaps in the research, the current study provides nationally representative and detailed data on technology-based harassment victimization incidents, understanding these victimizations in the context of a broad range of previous and current youth victimization experiences.

Specifically, in the current study a nationally representative sample of youth were surveyed to: 1) define a typology of technology-involved harassment incidents and their relationship to adverse consequences for youth; 2) explore the role that incident-level characteristics of technology-involved harassment (e.g., duration, relationship with the perpetrator) have on its impact; and 3) assess the frequency and level of involvement of youth as bystanders of technology-involved harassment; 4) understand technology-involved harassment as it is occurring in the context of concurrent and prior victimization experiences, including whether poly-victimized youth are at particular risk; and 5) determine whether technology-involved harassment has similar risk and protective factors as other types of peer victimizations. The findings detailed below are from the Technology Harassment Victimization (THV) Study, funded by the National Institute of Justice – a national survey of a subset of

791 youth, ages 10-20, who took part in the Second National Survey of Children's Exposure to Violence (NatSCEV II) in 2011-2012.

PARTICIPANTS

The subset of NatSCEV II respondents eligible for the THV Study: 1) completed the NatSCEV II survey[i], 2) were eight years old or older during NatSCEV II, and 3) if age 10 or older, agreed after the NatSCEV II interview to be re-contacted for a follow-up study. The eligible sample pool consisted of 2,127 youths who were expected to be between the ages of 10 and 20 at the time of the THV data collection. Data was collected for the THV Study from December 2013 to March 2014; 791 interviews were completed. Of the NatSCEV II (Wave 1) respondents eligible for the THV Study (Wave 2), 36% completed a Wave 2 interview. Sample weights adjusted for differential attrition in Wave 2. These were calculated using age, race/ethnicity, household income, number of children in household, parent demographics, and child's victimization and delinquent behavior at Wave 1. More details about Wave 2 methodology, non-response analysis, and weight construction may be obtained from the final study methodology report: http://unh.edu/ccrc/pdf/THV%20Methodology%20Report_Final_140401.pdf.

Table 1 details the characteristics of the final THV sample. Caregivers provided demographic information, including the child's gender (49% male), age (Mean = 14.7, Linearized SE = 0.2, Range: 10 – 20), race/ethnicity (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 (highest) scores, which was then re-standardized. Family structure was categorized into children living with two biological or adoptive parents (53.1%), one biological parent plus a partner (8.6%), a single biological parent (34.1%), or other non-parent caregiver (e.g., grandparent, foster parent) (4.2%).

DESIGN AND METHODS

The THV Study began with an advance letter, reply form, and $5 cash mailed to the 2,127

sample households with an address on file. Interviewers contacted households who did not return forms by telephone. 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.

Interviewers used a computer-assisted telephone interviewing system. After a brief parent/caretaker survey, they obtained consent from the parent and assent from the focal child to proceed to the child portion of the interview. Most Wave 1 parental interviews (96%) were completed with the same parent or guardian as in Wave 2. 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 of the University of New Hampshire and complied with the confidentiality guidelines set forth by the U.S. Department of Justice.

Our key measure for the study was *peer harassment*. Youth were asked whether they had any past year experience of harassment committed by any non-family youth that involved technology in some way. Specific types of harassment that the youth were prompted to think about included:

- Someone calling them mean names, making fun of them, or teasing them in a hurtful way;
- Someone excluding or ignoring them or getting others to turn against them;
- 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
- Someone hitting, kicking, pushing, shoving, or threatening to hurt them.

Interviewers asked the youth to focus first only on harassment incidents that "involved the internet or a cell phone in some way" through such applications as text messaging, email, or social networking sites.[ii] When a youth had experienced any such harassment in the past year, the interviewer followed a protocol to have the youth identify *up to two unique incidents* for detailed follow-up questioning. The following hierarchy for selecting incidents was used:

- If at least two unrelated technology-involved harassment events were reported details were gathered about both (most recent time and then "worst or most serious" time);

- If one technology-involved harassment event and one non-technology involved harassment event was reported: details were gathered on both;
- If no technology-involved events but one or more unrelated harassment events that did not involve technology were reported: details were gathered on up to two of those events (most recent time and then "worst or most serious" time).

Through a series of detailed incident follow-up questions, interviewers asked youth about the perpetrator of the harassment (e.g., number of perpetrators, age, gender, relationship to respondent), duration and location of the event, type of harassment (i.e., verbal, exclusion, rumors, physical), aggravating features (e.g., sexual aspect, weapon use, physical injury, power differential, bias content, mutual harassment), bystander involvement, and disclosure. Youth were also asked a series of questions aimed at assessing the emotional impact "as a result of what happened." Specifically, youth were asked 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 items were on a scale from 1 (not at all) to 5 (extremely). Dummy variables were constructed for each item and coded '1' if the youth rated the impact at '4' or '5' on the scale. We also created a *total emotional impact score,* which summed scale responses on each of the eight items for each incident (M = 19.8, 95% CI: 17.8-21.7; Linearized standard error = 1.0, Range = 8 to 40, Cronbach's alpha = .89). Details of all other variables used in the analyses can be found as footnotes to the tables in which they are mentioned.

DATA ANALYSIS

Data analysis was conducted using Stata 13. Because youth could report up to two incidents, adjustment was made for non-independence of incidents experienced by the same child by using "svyset" and "svy" commands. Incidents were clustered on respondent ID number. *Goals 1 and 2* involved incident-level analysis of the Wave 2 cross-sectional data; using data from both screener and follow-up questions we identified three distinct types of harassment incidents, those that: a) only occurred through technology, b) only occurred in-person, and c) involved both technology and in-person components. Rates for each type of harassment incident were calculated using post-stratification

weight (which included weighting for non-response). Details of how the weights were calculated are presented in the final methodology report at the link provided above. Incident-level characteristics (e.g., perpetrator characteristics, impact) for these three types of harassment incidents were compared using weighted chi-square cross-tabulations. A final parsimonious logistic regression detailed the specific incident characteristics most likely to predict emotional distress as a result of what happened.

Goal 3 was to assess the frequency and level of involvement of youth as bystanders of technology-involved harassment victimization at the incident level. Cross-sectional Wave 2 data was used to compare the involvement of bystanders across the three types of harassment incidents. Also analyzed were features of what the bystander did – supportive behaviors, negative behaviors.

Goals 4 and *5* involved longitudinal data at the child level of analysis to first: 1) understand technology-involved harassment as it is occurring in the context of concurrent and prior victimization experiences, including whether poly-victimized youth (i.e., 12+ types of victimizations in lifetime) are at particular risk; and 2) determine whether technology-involved harassment has similar risk and protective factors as other types of peer victimizations. For Goal 4 we report the unadjusted percentages and the adjusted relative odds (controlling for youth demographic characteristics) of experiencing each of the three types of harassment incidents at Wave 2 based on Wave 1 victimization exposures (e.g., any maltreatment, any school incident, mean number of victimization types experienced, poly-victim status). For Goal 5 three logistic regression models were conducted, each with all other youth as the reference group. We examined whether there were any child demographic characteristics as well as any Wave 1 child experiences that were predictive of later harassment across types, including life adversity, delinquency, and trauma.

FINDINGS

Analyses related to *Goal 1* examined the role of technology in peer harassment incidents. Of the 791 respondents, 230 (34%) reported 311 unique harassment incidents in the

past year.[2] Of youth reporting incidents, 45% were ages 10-12 at the time of the Wave 2 interview; 23% were 13-15; 22% were 16-17; and 10% were 18-20 (see Table 2). Sixty-one percent of harassment victims were boys and 60% were White, non-Hispanic. Over half (64%) of such youth lived in an average SES household; 45% lived with both biological parents and 35% with a single parent.

Seventeen percent (*n* = 137) of all respondents (46% of victims) reported at least one technology-involved harassment incident, amounting to 175 unique incidents.[2] We divided the harassment incidents into three mutually exclusive groups: a) 54% of incidents involved no technology (i.e., in-person only – no technology involvement, n = 136)), b) 15% involved only technology (no in-person elements, n = 58), and c) 31% involved mixed harassment (i.e., both in-person and technology elements, *n* = 117). Before asking youth a series of specific details about the incident itself, we first asked them to briefly describe what happened. Below are some examples of what youth said:

What youth said about *in-person only harassment incidents*:

> **Male, 12:** "We were eating lunch and one of the kids sitting nearby me called me something. Some of the kids that heard it joined in and kept rubbing it in and making it worse."
> **Male, 12:** "I'll be walking in the hallways with a bunch of my buddies and I just get pushed from other people, and I don't really know why."
> **Female, 11:** "Someone said something that was not true and spread it around the school, and then people started looking at me in a funny way."

What youth said about *technology only harassment incidents*:

> **Female, 12:** "This girl got very jealous of me and she didn't like me having other friends and she started calling me all these names and I just blocked her from facebook and other things and this happened two times; she got on her grandma's facebook and was messaging me she wasn't friends with me but she was messaging me."
> **Male, 18:** "ex-girlfriend's new boyfriend sent a text message threatening to beat me up"
> **Female, 14:** "It was on Instagram. There were two girls and the girls were being rude and they were calling names and said were ugly; I blocked them"

What youth said about *mixed harassment incidents*:

> **Female, 15:** "I got in a fight last year and people keep posting it on facebook. The comments made on there are ridiculously rude. I get cut down and called fat, told fat people should not fight a skinny person, that I should be ashamed of myself"
> **Female, 19:** "I had two girls who were at one point friends. They started talking about my boyfriend with things that weren't true. They were prank calling me and my boyfriend for a few years, were saying I was pregnant. Made an Instagram page calling me names. Said I made the page, was kind of fake and making it look like I made the fake page"
> **Female, 16:** "I have a stalker ex-boyfriend and he likes to bother my whole family. he is a hacker so he can hack into all my friends accounts and pretends to be my friend and I can tell"

Analyses related to *Goal 2* identified specific harassment incident characteristics that were most likely to result in negative emotional harm as a result of what happened. The average total emotional impact score was lowest for technology-only incidents (M = 15.3, SE = 0.9) and highest for mixed incidents (M = 23.1, SE = 1.2) (Table 3). Compared to in-person only incidents, emotional impact scores were significantly lower for technology-only incidents ($p \leq .05$) and significantly higher in mixed incidents ($p \leq .05$). Emotional impact scores were also higher for youth in mixed incidents compared to technology-only incidents ($p \leq .001$).[2]

Findings from a parsimonious linear regression model depicted in Table 4 found mixed incidents were more likely to result in overall negative emotional impact even after adjusting for other incident characteristics predictive of emotional harm. Other features that increased the likelihood of emotional harm included injury, the perpetrator known to be on alcohol or drugs, a social power differential between the victim and perpetrator, and the perpetrator being a schoolmate or acquaintance. Youth were more likely to report elevated levels of emotional harm if the harassment involved being excluded or had a physical component. Being able to stop what was happening was inversely related to emotional impact. Girls and White, non-Hispanic youth were more likely to report negative impact.

Analyses related to *Goal 3* assessed the frequency and level of involvement of youth as bystanders of technology-based harassment. Across the 311 peer harassment incidents, 80% involved the presence of at least one bystander in addition to the respondent and the harassing youth (Table 5).

Of these, the most common situation was the involvement of 1-10 bystanders (65%), with fewer incidents involving 11-25 (24%) or more than 25 bystanders (12%). There were no differences in whether a bystander was present across in-person only harassment, technology-only harassment, or mixed harassment incidents. Overall type of bystander behavior was similar across type of harassment incident with a few exceptions: Two supportive behaviors, talking to other kids to get them to help and telling the victim they were sorry it happened were most common in the mixed episodes. Coming closer or staying to see what happened was also most common in mixed episodes.

Outcomes related to *Goal 4,* depicted in Table 6, highlight the different types of victimizations experienced in Wave 1 that are most predictive of later harassment victimization, including total number of victimization types experienced and poly-victim status. Youth who experienced mixed harassment in Wave 2 reported the highest average number of different types of prior victimization types (M = 8.4) and were also most likely to be lifetime poly-victims (34%) at Wave 1. Prior poly-victims were over four times more likely than non-poly-victims to experienced mixed harassment victimization two years later compared to non-harassed youth in Wave 2. Specific types of victimization were more predictive of later mixed harassment than others as well – prior internet victimization, physical assault, property crime, peer-sibling victimization, sexual victimization, and exposure to community violence.

Finally, findings related to *Goal 5* are depicted in Table 7 and further support the impact of prior victimization on later mixed harassment victimization. The number of prior life adversity events is also predictive of mixed harassment in Wave 2. Youth experiencing mixed harassment were also more likely to be female, live in a higher socio-economic status household, and less likely to live with both biological parents.

IMPLICATIONS

Findings from the national THV study have both reassuring and concerning elements. On the reassuring side, technology involvement in peer harassment is not inherently harmful to youth. Indeed,

episodes that only occurred through technology were the least distressing, least likely to involve many of the features often assumed to be inherently part of the online environment and thus cause youth greater harm, [3-6] they were easier to stop than those that occurred solely in-person, and were less likely to involve other harassment characteristics that research has shown are related to greater distress such as multiple perpetrators and power imbalances.[7] The picture becomes more complex, however, when considering the impact of mixed harassment incidents. Mixed harassment incidents (i.e., those that have both in-person and technology elements) were the most distressing, they shared many features with in-person only harassment such as similar rates of repeated harassment over time, and they were more likely to involve perpetrators with deeper relationships. These findings do not say that technology only incidents cannot be serious, but overall, when both environments are involved the chance of seriousness is increased.

Why are mixed harassment incidents so upsetting to youth? Youth who had these experiences were the least likely to say they could get away or remove themselves from the situation quickly and this could be related to the fact that they were being victimized across multiple environments -- at school, home and via technology. The perpetrators were more intimately connected to victims as current or past friends and romantic partners, and they were more likely to know embarrassing things about victims. Texting was the predominant type of technology used in mixed incidents,[2] suggesting that these interactions were more direct and private than communications through websites or social network pages. However, it is interesting that even after controlling for a wide-range of possible aggravating factors, mixed harassment incidents remained significantly more distressing than either in-person or technology only harassment. It is possible that when mixed incidents happen across multiple contexts, the perpetrators may have had more animosity towards victims and as a result, the harassment may have been more personal or meaningful in ways that we were not able to measure. It is perhaps telling that the most significant types of emotional impact for the victims of these incidents were anger,

sadness and lack of trust.[2] Overall, these incidents were marked by more intense, personal, and complex negative interactions that have high emotional salience for those involved.

Bystanders play an active role in most harassment incidents - offering help or support to the victim, watching what happens, leaving the scene, and to a lesser extent extending or joining in the harassment. There were no clear differences in how bystanders reacted in terms of technology involvement per se. Findings suggest that bystander focus is promising but prevention strategies need to incorporate the complexity of youth bystander behavior, and the wide range in type and severity of harassment incidents.

Youth experiencing mixed harassment episodes are the most likely to be prior poly-victims. These findings emphasize the complex variety of needs these youth face. Not only are they experiencing these mixed harassment experiences that have quite an emotional impact, they are experiencing victimization across multiple areas of their lives. These youth also have elevated rates of delinquency, trauma, and past year life adversity. Harassment that involves technology in addition to in-person components is part of the generalized pattern of vulnerability for poly-victims. Youth reporting harassment only through technology are no different from non-harassed youth in terms of poly-victim status providing further support for the often less serious nature of these episodes.

This study is among the first to examine the complexity of technology involvement in peer harassment at the incident-level. Findings should help to quell concerns about possible inherently harmful features of technology; indeed technology-only harassment incidents are among the least problematic and upsetting to youth. Youth reporting mixed technology and in-person harassment should be a priority for educators and prevention experts who are trying to identify the most serious and harmful experiences.

Table 1

Youth and Household Characteristics for Wave 1 & Wave 2 (N=791)

Youth and Household Characteristics	**Wave 1 % (n)**	**Wave 2 % (n)**
Sex		
Girl	51 (394)	51 (394)
Boy	49 (397)	49 (397)
Age		
8 to 9 years old	22 (94)	0
10 to 12 years old	25 (219)	30 (158)
13 to 15 years old	34 (298)	25 (220)
16 to 17 years old	19 (180)	24 (209)
18 to 20 years old	0	22 (204)
Race / ethnicity		
White, non-Hispanic	59 (594)	59 (594)
Black, non-Hispanic	13 (88)	13 (88)
Other race, non-Hispanic	8 (46)	8 (46)
Hispanic or Latino, any Race	21 (63)	21 (63)
Family structure		
Two biological or adoptive parents	56 (568)	53 (544)
Parent and step-parent/partner	8 (48)	9 (64)
Single parent	32 (143)	34 (148)
Other adult caregiver	3 (32)	4 (35)
Socioeconomic status		
Low SES	17 (97)	23 (127)
Middle SES	64 (491)	61 (485)
High SES	19 (203)	16 (179)

Note. Unweighted n's and weighted percentages.

Table 2

Characteristics of youth reporting harassment incidents in the past year by type of harassment incident

	Child level	Incident level			
Youth Victim Characteristics	**All Youth with harassment incidents (n=230) % (n)**	**In-person only incidents (n=136) % (n)**	**Technology-only incidents (n=58) % (n)**	**Mixed incidents (n=117) % (n)**	**Design-based F**
Age					
10-12 years olds	45 (104)	61 (54)	22 (14)	27 (36)	4.9***
13-15 years old	23 (90)	17 (38)	25 (20)	30 (32)	
16-17 year olds	22 (90)	19 (36)	20 (15)	29 (39)	
18-20 years old	10 (27)	2 (8)	32 (9)	14 (10)	
Gender					
Boy	61 (159)	77 (85)	53 (31)	38 (43)	8.0***
Girl	39 (152)	23 (51)	47 (27)	62 (74)	
Race					
White, non-Hispanic	60 (228)	53 (97)	83 (52)	60 (81)	2.0
Black, non-Hispanic	9 (33)	10 (14)	6 (2)	9 (17)	
Other race, non-Hispanic	11 (22)	8 (11)	0	20 (11)	
Hispanic or Latino, any Race	20 (26)	29 (14)	10 (4)	10 (8)	
Family structure					
Two biological or adoptive parents	45 (191)	47 (92)	48 (40)	39 (59)	0.5
Parent and step-parent/partner	16 (40)	15 (12)	4 (4)	23 (24)	
Single parent	35 (64)	34 (24)	44 (13)	32 (27)	
Other adult caregiver	4 (16)	3 (8)	4 (1)	6 (7)	
Socioeconomic status					
Low SES	21 (58)	13 (22)	31 (8)	29 (28)	1.4
Middle SES	64 (187)	70 (83)	54 (35)	59 (69)	
High SES	15 (66)	17 (31)	15 (15)	11 (20)	

Note. Unweighted n's and weighted percentages.
*** $p \leq .001$.

Table 3
Incident and perpetrator characteristics of harassment by type

	Weighted percentages				
	All harassment incidents (*n* = 311)	In-person only incidents (*n* = 136)	Technology-only incidents (*n* = 58)	Mixed incidents (*n* = 117)	Design-based F
	% (n)	% (n)	% (n)	% (n)	
Type of harassment					
Verbal	74 (249)	64 (99)	88 (48) [a]	85 (102)	2.8
Exclusion	48 (175)	32 (64)	52 (25)	75 (86) [a,b]	8.4***
Rumors	39 (153)	29 (53)	36 (21)	58 (79) [a]	3.9*
Physical violence / threats of violence	45 (100)	61 (59)	22 (9) [a]	30 (32) [a]	5.1**
Physical location of incident					
School on our school grounds	66 (191)	89 (114)	11 (8) [a]	55 (69) [a,b]	28.0***
Home	26 (105)	4 (9)	74 (43) [a]	41 (53) [a,b]	35.6***
Friend's home	12 (54)	8 (16)	12 (9)	18 (29)	2.0
Perpetrator characteristics					
Number of perpetrators [†]					
One	55 (175)	53 (73)	69 (41)	54 (61)	0.5
2 – 3	21 (65)	22 (28)	20 (10)	20 (27)	
4 – 6	17 (51)	16 (23)	11 (6)	19 (22)	
7 or more	7 (18)	9 (10)	1 (1)	6 (7)	
Multiple perpetrators (2+)	45 (136)	48 (63)	31 (17)	46 (56)	0.7
Perpetrator was female	35 (133)	33 (52)	33 (23)	39 (58)	0.3
Perpetrator age					
Younger than 18 years	65 (230)	66 (105)	49 (33)	71 (92) [b]	1.1
18 or older	15 (52)	5 (17)	35 (13) [a]	21 (22) [a]	10.5***
Not sure	20 (29)	29 (14)	16 (12)	7 (3)	2.4
Victim relation to perpetrator					
Stranger or someone met online	11 (39)	5 (13)	38 (18)	7 (8)	12.5***
Friend or dating partner (or ex-)	32 (140)	20 (44)	23 (16) [a]	58 (80) [b]	8.8***
Schoolmate or acquaintance	57 (132)	75 (79)	39 (24) [a]	35 (29) [b]	8.9***
Incident characteristics					

	Weighted percentages				
	All harassment incidents (*n* = 311)	In-person only incidents (*n* = 136)	Technology-only incidents (*n* = 58)	Mixed incidents (*n* = 117)	Design-based F
Any power differential	88 (266)	86 (110)	85 (46)	94 (110)	0.9
Physical power differential	69 (196)	74 (84)	63 (34)	64 (78)	0.7
Social power differential	54 (167)	66 (78)	38 (24) [a]	41 (65) [a]	3.7*
Knew embarrassing things	20 (94)	10 (23)	10 (10)	44 (61) [a, b]	13.6***
Happened series of times	41 (124)	46 (59)	13 (12) [a]	46 (53) [b]	3.6*
Duration					
1 day	41 (108)	41 (54)	61 (31)	31 (23)	1.2
> 1 day - < 1 month	37 (129)	35 (45)	31 (24)	44 (60)	
1 month or longer	22 (72)	24 (35)	8 (3)	25 (34) [b]	
Physically injured (any)	31 (53)	43 (30)	2 (2) [a]	25 (21) [b]	6.4**
Bias component	24 (81)	24 (30)	19 (18)	27 (33)	0.1
Was "sexual in any way" [††]	13 (34)	8 (5)	18 (5)	21 (24)	1.3
Victim harassed perpetrator also	53 (155)	48 (61)	59 (30)	59 (64)	0.5
Started out as joking around and became more serious	40 (130)	39 (61)	23 (15)	49 (54) [b]	2.0
Harasser on alcohol or drugs during incident (known)	6 (25)	3 (6)	2 (2)	14 (17) [a]	12.4***
Potential harm-amplifying features					
Many witnesses (51+)	6 (25)	1 (3)	13 (9) [a]	10 (13) [a]	6.9***
When this happened did you feel you could…					
Stop what was happening	51 (155)	41 (61)	69 (38) [a]	60 (56)	2.6
Get away or remove yourself from situation quickly	59 (184)	60 (84)	81 (43)	49 (57) [b]	2.0
Impact					
Mean total emotional impact score (SE)	19.8 (1.0)	19.1 (1.7)	15.3 (0.9) [a]	23.1 (1.2) [a, b]	12.7***

Note. Unweighted n's and weighted percentages.

*** p ≤ .001. ** p ≤ .01. * p ≤ .05.

[†] If more than one person was involved then specific questions asked about the one who was most responsible for what happened.

[††] 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.

[a] Significantly different from 'in-person only" group at $p \leq .05$ or better ; [b] significantly different from 'technology only' group $p \leq .05$ or better.

Table 4

Multivariate linear regression models identifying the characteristics of harassment incidents and youth demographic characteristics associated with negative emotional impact (*n* = 311 incidents)

	Saturated Model [a]			Parsimonious Model [b]		
Characteristic	**β**	**SE**	**P value**	**β**	**SE**	**P value**
Mixed technology and in-person (versus other)	***5.0***	***1.2***	***< .001***	***5.2***	***1.0***	***< .001***
Child characteristics						
Youth age	-0.2	0.2	.39			
Girl	2.9	1.0	.003	3.1	1.0	.002
White, non-Hispanic	2.3	1.0	.02	2.1	1.0	.04
Perpetrator characteristics						
Adult (age 18 or older)	0.1	1.2	.93			
Friend or dating partner (or –ex)	-0.6	1.3	.64			
Schoolmate or acquaintance	2.5	1.3	.06	2.7	1.0	.01
Type of harassment						
Exclusion	2.3	1.0	.02	2.3	0.9	.01
Rumors	0.6	1.1	.60			
Physical	2.5	1.0	.01	2.7	1.1	.01
Location						
Home	0.9	1.2	.45			
At school or on school grounds	.07	1.2	.53			
Potentially aggravating elements						
Social power differential	1.8	0.9	.06	2.3	1.0	.02
Knew embarrassing things about victim	0.4	1.3	.73			
Happened a series of times	1.0	0.9	.27			
Perpetrator known to be on drugs or alcohol	4.1	1.5	.01	3.9	1.4	.01
Injury	2.9	1.3	.02	3.0	1.3	.02
Potential harm-amplifying features						
Many witnesses (51+)	0.7	1.5	.62			
When this happened did you feel you could…						

Stop what was happening	-5.1	1.0	< .001	-5.5	1.0	< .001
Get away or remove yourself from situation quickly	0.5	1.0	.66			

[a] Variables identified for inclusion based on significance of design based F in bivariate analyses plus significant differences between mixed group and either in-person only or technology only.

[b] The parsimonious model represents those characteristics that, together, are most influential in explaining the negative emotional impact associated with harassment victimization.

Table 5

Harassment incident bystander involvement by type

Bystander involvement	All harassment incidents (n=311) weighted %	In-person only incident (n=136) weighted % (n)	Tech-only incident (n=58) weighted % (n)	Mixed in-person and technology based (n = 117) weighted % (n)	Design-based F
Any bystander	***80 (n=234)***	***77 (n=98)***	***87 (n=43)***	***81 (n=93)***	***0.8***
Number of bystanders					
1-10	65 (145)	68 (68)	64 (25)	60 (52)	
11-25	24 (42)	29 (21)	16 (7)	19 (14)	
26 or more	12 (43)	3 (6)	20 (10)	21 (27)	2.4
Supportive bystander behaviors					
Told the harasser to stop	53 (119)	47 (46)	52 (22)	62 (51)	0.5
Tried to make victim feel better	70 (155)	70 (59)	58 (27)	76 (69)	0.6
Talked to other kids to get them to help	26 (56)	21 (16)	11 (7)	43 (33)	3.4*
Told victim they were sorry it happened	55 (128)	46 (45)	41 (24)	75 (59)	4.3**
Negative bystander behaviors					
Joined in or made it worse	24 (62)	16 (20)	19 (8)	40 (34)	2.7
Laughed at victim	23 (59)	24 (21)	11 (5)	29 (33)	0.9
Other bystander behaviors					
Came closer or stayed to see it happen	51 (119)	44 (48)	34 (20)	70 (51)	4.1*
Left the situation	43 (109)	42 (39)	39 (23)	46 (47)	0.1
Ignored or avoided person being mean	58 (127)	63 (52)	37 (23)	61 (52)	1.5
Threatened the person being mean	27 (46)	23 (10)	30 (13)	32 (23)	0.2

* $p \leq .05$.

Table 6

Rates of prior victimization among youth, ages 10 through 20

	Wave 2 harassment victimization %				Relative risk ratios [a]		
Wave 1 lifetime victimization	**No harassment**	**In-person only harassment victimization**	**Technology only harassment victimization**	**Mixed harassment victimization**	**In-person vs none**	**Tech only vs none**	**Mixed vs none**
Mean number of victimization types	4.8	7.0	6.6	8.4	1.15**	1.06	1.12**
Lifetime poly-victim	9	23	6	34	4.53**	0.53	4.85***
Any internet episode	11	8	47	33	1.33	5.37**	3.47**
Any internet harassment	8	7	47	30	1.48	7.18***	3.97**
Any physical assault	35	54	45	57	2.32*	1.66	2.58**
Any property crime	38	40	52	59	1.47	1.64	2.18*
Any maltreatment	27	38	42	44	2.05	1.77	1.68
Any peer-sibling victimization	64	80	84	85	2.39*	2.66	2.91**
Any sexual victimization	11	30	28	41	6.91***	2.78	5.37***
Any sexual assault	5	11	17	12	3.63*	3.46	2.00
Any witness family violence	17	27	24	26	2.61*	1.21	1.23
Any exposure to community violence	51	60	79	75	1.97	3.54*	2.93*
Any school incident	35	30	33	46	1.28	0.65	1.22

*** $p \leq .001$. ** $p \leq .01$. * $p \leq .05$.

[a] Odds ratios adjust for youth age, sex, race, SES, and living arrangements (i.e., with both biological parents) at wave 2.

Note. Items are from the Juvenile Victimization Questionnaire; [8-10] 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 (e.g., witnessing domestic violence). Each question refers to a specific victimization form (e.g., aggravated assault, dating violence). Lifetime poly-victimization is defined as those youth with 12 or more different types of victimization. The specific items used to screen for these victimization types have been published elsewhere. [1]

Table 7

Three logistic regression analyses predicting different types of Wave 2 harassment victimization based on degree of technology involvement compared to all other youth from Wave 1 experience

	In-person only harassment OR (95% CI)	**Technology only harassment OR (95% CI)**	**Mixed harassment OR (95% CI)**
Demographic characteristics (W2)			
Age	0.8 (0.7 – 0.9)***	1.2 (0.9 – 1.5)	0.9 (0.7 – 1.1)
Female	0.2 (0.1 – 0.5)***	2.6 (1.0 – 6.8)*	2.2 (1.0 – 4.9)*
White race	0.8 (0.3 – 1.9)	3.0 (0.9 – 10.4)	2.2 (0.9 – 5.4)
Socioeconomic status	1.0 (0.6 – 1.9)	0.8 (0.4 – 1.5)	1.6 (1.1 – 2.3)*
Lives with both biological prnts	1.1 (.04 – 3.1)	1.3 (0.3 – 5.3)	0.3 (0.1 – 0.9)*
Experience (W1)			
Number of lifetime victimizations	1.1 (1.0 – 1.2)	1.0 (0.9 – 1.1)	1.1 (1.0 – 1.2)*
Number of adversities [a]	0.8 (0.6 – 1.1)	1.0 (0.7 – 1.4)	1.4 (1.1 – 1.9)*
Number of delinquent acts [b]	0.9 (0.7 – 1.1)	1.0 (0.8 – 1.3)	0.9 (0.8 – 1.1)
Trauma score [c]	1.5 (0.9 – 2.3)	0.8 (0.5 – 1.4)	1.2 (0.9 – 1.7)

OR=odds ratio; CI=confidence interval

* $p \leq .05$. *** $p \leq .001$.

[a] *Adversity due to non-violent traumatic events and chronic stressors* was measured at *Wave 1* using 15 items, 13 of which were taken from a scale developed by Turner and colleagues [11,12] and two of which were newly constructed for the NatSCEV II. Non-violent traumatic events include serious illnesses, accidents, and parental imprisonment; and chronic stressors include substance abuse by family members and homelessness. Youth were asked if each adversity happened in their lifetime. The average score across items was used in the current analyses with higher scores reflecting more adversity (overall M = .92, SE = .08).

[b] The items being used to measure the occurrence of *delinquent behavior* were originally developed by Loeber and Dishion. [13] 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 the average score was taken across items for each respondent with higher scores reflecting more delinquency (overall M = 1.1, SE = .15).

[c] *Trauma* is defined as depression, anxiety, anger, and dissociation *and* assessed at Wave 1 using the Trauma Symptom Checklist (TSCC). The instrument was designed to evaluate children's responses to unspecified traumatic events in different symptom domains. For the purpose of this study the instrument was shortened for a total of 28 items in the TSCC. Youth were asked to indicate how often they have experienced each symptom within the last month. Response options are on a 4-point scale from 0 (not at all) to 4 (very often).

APPENDIX A
LIST OF SCHOLARLY PRODUCTS

Peer-reviewed manuscripts

Mitchell, K.J., Jones, L.M., Turner, H.A, Shattuck, A., & Wolak, J. (2015, June 1). The role of technology in peer harassment: Does it amplify harm for youth? *Psychology of Violence*. Advance online publication. http://dx.doi.org/10.1037/a0039317

Turner, H.A, Mitchell, K.J., Jones, L.M., & Shattuck, A. (in press). Harassment by peers: Incident characteristics and outcomes in a national sample of youth. *Journal of School Violence*.

Jones, L.M., Mitchell, K.J., & turner, H.A. (under review). Bystander reactions to in-person and online peer harassment: A national survey of adolescents. *Journal of Adolescence.*

*Mitchell, K.J., Turner, H.A., & Jones, L.M. (in progress). Persistence, desistance and new harassment victimization: Findings from a national longitudinal study of youth in the United States.

*Mitchell, K.J., Turner, H.A., & Jones, L.M. (in progress). Risk factors associated with different types of victimization. Do they differ?

*Turner, H.A., Mitchell, K.J., & Jones, L.M. (in progress). Online peer harassment and poly-victimization: Which victims of cyber-bullying experience the greatest harm?

Mitchell, K.J., Jones, L.M., & Turner, H. (in progress). What is the best way to measure power imbalance in peer victimization episodes?

*Jones, L.M., Mitchell, K.J., & Turner, H.A. (in progress). Can conventional prevention programs help reduce likelihood of technology-involved harassment victimization?

*Mitchell, K.J., Jones, L.M., & Turner, H.A. (in progress). Peer harassment and suicide, is there a link?

Wells, M., Mitchell, K.J., & Turner, H.A. (in progress). Youth with disabilities: Patterns of in-person and technology related harassment victimization

Mitchell, K.J., Jones, L.M., & Turner, H.A. What is the best way to ask youth about technology involvement in peer victimization episodes?

Turner, H.A., Wells, M. & Mitchell, K.J. Multiple forms of peer harassment at school and online: mental health effects in a national sample of youth.

*Dixon, K. (2015). Exposure to Family Violence and Later Victimization and Perpetration Patterns: An Examination of Predictors and Explanatory Mechanisms [Dissertation].

*** Uses longitudinal dataset.**

Presentations

Mitchell, K.J., Jones, L.M. & Turner, H.A. (January, 2016). Peer victimization and trauma: Strategies for prevention and intervention. Panel submitted to the San Diego International Conference on Child and Family Maltreatment, San Diego, CA.

Mitchell, K.J. (November, 2015). Examining assumptions about new technology and bullying: Findings from the Technology Harassment Victimization (THV) Study. Paper submitted as part of a panel to the American Society of Criminology Annual Meeting, Washington, DC.

Jones, L.M. & Mitchell, K.J. (July, 2015). Examining assumptions about new technology and bullying: Findings from the Technology Harassment Victimization (THV) Study. Paper accepted for presentation at the American Professional Society on the Abuse of Children, Boston, MA.

Mitchell, K.J., Jones, L.M., & Turner, H. (January, 2015). Technology-based harassment (aka cyberbullying). Panel presented at the San Diego International Conference on Child and Family Maltreatment, San Diego, CA.

Mitchell, K.J., Jones, L.M., & Turner, H. (July, 2014). Online harassment and cyberbullying victimization. Panel presented at the International Family Violence and Child Victimization Research Conference, Portsmouth, NH.

Mitchell, K.J. (November, 2014). Technology-Based Harassment in the Context of a Broader Victimization History. Presented at the American Society of Criminology Annual Meeting, San Francisco, CA.

REFERENCES

1. Finkelhor D, Turner HA, Shattuck A, Hamby SL. Violence, crime, and abuse exposure in a National sample of children and youth. *JAMA Pediatrics.* 2013;Published online May 13, 2013; doi: 10.1001/jamapediatrics.2013.42.
2. Mitchell KJ, Jones LM, Turner HA, Shattuck A, Wolak J. The Role of Technology in Peer Harassment: Does It Amplify Harm for Youth? 2015.
3. Dempsey AG, Sulkowski ML, Nichols R, Storch EA. Differences between peer victimization in cyber and physical settings and associated psychosocial adjustment in early adolescence. *Psychology in the Schools.* 2009;46(10):962-972.
4. Fredstrom BK, Adams RE, Gilman R. Electronic and School-Based Victimization: Unique Contexts for Adjustment Difficulties During Adolescence. *Journal of Youth & Adolescence.* 2011;40(4):405-415.
5. Kowalski RM, Limber SP. Electronic bullying among middle school students. *Journal of Adolescent Health.* 2007;41(6,Suppl):S22-S30.
6. Sticca F, Perren S. Is cyberbullying worse than traditional bullying? Examining the differential roles of medium, publicity, and anonymity for the perceived severity of bullying. *Journal of youth and adolescence.* 2013;42(5):739-750.
7. Turner HA, Mitchell KJ, Jones LM. Assessing the impact of harassment by peers: Incident characteristics and outcomes in a national sample of youth. *Journal of School Violence.* under review.
8. Hamby SL, Finkelhor D, Ormrod RK, Turner HA. *The Juvenile Victimization Questionnaire (JVQ): Caregiver Version.* Durham, NH: Crimes Against Children Research Center; 2004.
9. Hamby SL, Finkelhor D, Ormrod RK, Turner HA. *The Juvenile Victimization Questionnaire (JVQ): Child Self-Report Version.* Durham, N.H.: Crimes against Children Research Center; 2004.
10. Hamby SL, Finkelhor D, Ormrod RK, Turner HA. *The Juvenile Victimization Questionnaire (JVQ): Administration & Scoring Manual.* Durham, N.H.: Crimes against Children Research Center; 2004.
11. Turner HA, Finkelhor D, Ormrod R. The effect of lifetime victimization on the mental health of children and adolescents. *Social Science & Medicine.* 2006;62(1):13-27.
12. Turner HA, Butler MJ. Direct and indirect effects of childhood adversity on depressive symptoms in young adults. *Journal of Youth and Adolescence.* 2003;32(2):89-103.
13. Loeber R, Dishion TJ. Early predictors of male delinquency: A review. *Psychological Bulletin.* 1983;94(1):68-94.

[i] NatSCEV II 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 included a national sample of 4,503 youth ages one month to 17 years in 2011. Employees of an experienced survey research firm conducted telephone interviews with youth ages 10 to 17 (n = 2,312), after acquiring youth assent and parental consent, and with parents when children were younger than 10 (n = 2,191). The NatSCEV II national sample was drawn primarily by random digit dialing (RDD), supplemented by a sample of RDD drawn cell phone numbers (n = 31), and an Address-Based Sample (ABS) (n = 750). Approximately one-half of the eligible households obtained through ABS were cell-phone-only households. Detailed information about NatSCEV II sampling methods and procedures can be found elsewhere: 1.Finkelhor D, Turner HA, Shattuck A, Hamby SL. Violence, crime, and abuse exposure in a National sample of children and youth. *JAMA Pediatrics.* 2013;Published online May 13, 2013; doi: 10.1001/jamapediatrics.2013.42.

[ii] *Confirming technology involvement.* A detailed series of follow-up questions were asked about each specific harassment incident. All questions were designed specifically for the current study. Follow-up questions confirmed the involvement of technology and if so, what types. Specifically, youth were asked whether "this happened while you were…" a) at school or on school grounds, b) on the way to or from school like on the bus or walking, c) at home, d) at work, e) at a friend's home, f) in a public place like a mall or movie theater, g) in a car, and h) online or texting. Multiple responses were possible. As further confirmation youth were then asked "Were any of the following kinds of technology involved in what happened?" with multiple responses possible: a) e-mail, b) cell phone, c) text messages, d) instant messages, e) social networking sites like Facebook, f) twitter, g) gaming website, h) some other type of technology. Finally, if youth endorsed the involvement of any of the above specific types of technology they were asked "Which one of the following statements best describes when any kind of technology became involved in what happened?" Response options were a) It started online and stayed only online, b) It started online before it moved offline to other places like school or work, c) It started offline at someplace like school or work before it moved online, and d) It started online and offline at about the same time." Any discrepancy between responses to the technology and non-technology harassment screener items described above with these follow-up questions were reconciled with incidents recoded from non-technology to technology involved (and vice versa) if necessary.