Which dynamics make online child sexual abuse and cyberstalking more emotionally impactful: Perpetrator identity and images?

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ABSTRACT

Background: The migration of offenses against children to the online environment requires a revised understanding of how episode dynamics aggravate the harm.
Objective: To assess the contribution of various online offense episode elements to the overall negative emotional impact.
Participants and settings: The sample comprised 2639 IPSOS KnowledgePanel members aged 18 to 28, 1215 of whom reported episodes of online sexual abuse or cyberstalking that occurred prior to the age of 18. The analysis was based on 2056 episodes with detailed follow-up information.
Methods: Participants were recruited online and filled out online questionnaires about online sexual abuse and cyberstalking episodes, their characteristics, and the negative emotional impact (NEI) associated with each episode. NEI was derived from a factor analysis of 8 impact items.
Results: Higher negative emotional impact was associated with forms of sexual image misuse: non-consensual sharing, non-consensual taking and threatened sharing/sextortion. Peers made up a majority of offenders, and their impact was just as great as adult offenders. Known perpetrators, including intimate partners, also made up the largest proportion of offenders and their impact was just as great as online strangers or anonymous offenders.
Conclusion: Online safety awareness and prevention need a larger focus on peer and acquaintance offenses, particularly around the misuse of sexual images.

1. Introduction

Technology has been changing the dynamics of criminal offenses against children. Familiar offenses against children like sexual abuse, bullying, property crime, and stalking now have technological counterparts with labels like online sexual abuse, sextortion, cyberbullying, hacking, and cyberstalking (Davidson et al., 2021). Many of the technology offenses have relatively new dynamics, like sextortion, in which offenders acquire and use sexual images of juveniles to coercively obtain money, sexual favors or additional images (World Health Organization, 2022; Wolak et al., 2018).

These new offenses are requiring an update to our knowledge of the epidemiology of child victimization. In particular, there is a need for new concepts, new definitions, and new measurement tools for research and clinical screening. A growing body of research has been engaged in the task of building the empirical basis for this epidemiology through studies of cases appearing in police records

and surveys of victims' experiences (ECPAT and INTERPOL, 2021; ECPAT, INTERPOL, & UNICEF, 2022a–c; Finkelhor, Turner, & Colburn, 2022; Hamilton-Giachritsis et al., 2020; Henry et al., 2020; Joleby et al., 2020; Scott et al., 2022; Wachs et al., 2021). But the field is still at an early stage with little firm consensus about terminology, definitions, or instrumentation.

One of the as yet unaddressed questions central to the new epidemiology is what are the aggravating and exacerbating elements in online offenses? Which elements of the crimes trigger more fear, embarrassment, anger or isolation (Hanson, 2017). Such information can be crucial in prioritizing prevention and intervention initiatives.

For example, one important issue concerns perpetrator identity. Many of the narratives of Internet crimes against children have revolved around the online adult stranger abuser who lures children to harm them (Wolak et al., 2008). The narratives have posited that technology made it easier for unknown adults to prey on children, and that they are increasingly engaging in sexual conversations with youth, tricking them into providing sexual images, and stalking them online (Hong et al., 2020; Jakubiak, 2009; Sommers, 2008). The anonymity of these offenders, their unknown whereabouts and their hidden motives are often cited as particularly frightening elements. However, recent epidemiological research paints a more complicated picture of online crimes against children. It shows a considerable amount of online abuse occurring at the hands of acquaintances and peers (ECPAT and INTERPOL, 2021; ECPAT, INTERPOL, & UNICEF, 2022a–c; Ibrahim, 2022). This is similar to earlier findings about conventional sexual abuse, where the vast majority of abuse involves acquaintances, and a substantial portion involves peers (Gewirtz-Meydan & Finkelhor, 2020). But the acquaintance dynamics of online abuse have received less attention, perhaps because of the assumption that these are less serious and impactful than the stranger overtures.

Nonetheless, there are reasons why acquaintance and peer offenders might be substantially fearsome and impactful, too (Ullman, 2007). Acquaintances may have more regular and face-to-face access, may influence peer groups and status perceptions, and may have more accurate knowledge of victims that they can exploit. When acquaintances are current or previous intimate partners, there is often a large impact due to betrayal (Platt & Freyd, 2015), as is found in the cyberstalking literature (Fissel & Reyns, 2020). A more informed understanding of online crime requires knowledge of the relative impact of acquaintance vs stranger abuse, as well as the effects of other episode characteristics.

There is also speculation in the literature that forms of online abuse involving non-consensually made and distributed sexual images are particularly harmful (Gewirtz-Meydan et al., 2018). It is posited that images add an ongoing threat of exposure and humiliation (Hanson, 2017; Martin, 2015). In these dynamics, victims fear that many people now and in the future will have access to the images of their shame. But studies have not been available that compare technology-facilitated victimizations that involve images with those that do not. This study uses survey data from a large sample of victims of online childhood offenses of different sorts to assess which elements are associated with more negative emotional impact in victims.

2. Methods

The study was conducted using the nationally representative Ipsos online KnowledgePanel (KP). KP is a sample that the survey firm Ipsos has recruited via address-based sampling, from mail addresses gleaned from national universal address data bases. After the mail recruitment, participants agreed to participate in regular online surveys. Digital devices were provided to any recruited sample members who lacked devices to participate. The KP panelists who were 18-to-28 years old (13,884) were solicited for the current survey. In total, 2639 panel members participated in the survey by the end of data collection, with an overall participation rate of 20 %. The study was approved and overseen by the Human Subjects Review Board of the University of New Hampshire.

Of the 2639 completed surveys, 1215 endorsed one or more of the screening questions about possible online victimizations. For those with multiple victimizations, the survey gathered follow up information on two, prioritizing for episodes that were of less frequent occurrence in the sample overall, as determined by a survey pretest. The final participating sample was slightly older and more female compared to the US population of 18- to 28-year-olds. Weights were developed for the sample to compensate for the age and gender disproportions and also adjust for non-response and the prioritization of lower base-rate incidents among those with multiple exposures.

2.1. Measures

The study operationalized several distinct victimizations that occur as online offenses (additional details available, (Finkelhor, Turner, & Colburn, 2022)). Outlined below are the screening questions used. Although the questions are about lifetime exposure, subsequent questions about age of occurrence allowed us to select only episodes before the age of 18.

2.1.1. Non-consensual sexual image sharing

"Has someone ever shared with other people a sexual picture or video of you without your permission?" This was meant to include episodes where someone may have consensually obtained an image, but then shared it with others for whom it was not intended. This could also include the sharing of an image that was not initially obtained consensually.

2.1.2. Non-consensual sexual image taking

"Has someone ever taken or made a sexual picture or video of you without your permission?" This was meant to include images of the child or youth being abused or when the victim was unconscious, intoxicated, distracted or unable to consent. It could include so-called "deepfake" images where a victim's head or likeness was imposed on a sexual image of someone else.

2.1.3. Threatened image sharing/sextortion

"Has someone ever threatened to share a sexual picture or video of you to get you to do something — like take or send other sexual pictures of yourself, have a sexual relationship with them, pay them money, or something else?" This included episodes when a perpetrator claimed to be in possession of sexual images and was threatening to misuse them unless the victim did something for them.

2.1.4. Forced image recruitment

"Has someone ever threatened, tried to force you, or strongly pressured you to provide sexual pictures or videos online or through a cell phone?" This was meant to include episodes of someone trying to coerce images when the victim was unwilling or reluctant. It could include a boyfriend who pressured or badgered a victim about providing an image. An image need not to have been provided.

2.1.5. Cyberstalking

"Has someone ever repeatedly contacted you online, on the phone, or in person when you did not want it, in a way that made you very afraid, anxious, or angry?" This was designed to include episodes of intentionally repeated contact by an online stranger or someone the victim knew in person, such as a current or former intimate partner.

2.1.6. Unwanted online sexual contact and solicitations: this included endorsement of any of 3 items

"Did anyone ever use the Internet or a cell phone to try to get you to talk about sex when you did not want to?" This could include very brief or casual inquiries.

"Did anyone ever use the Internet or a cell phone to ask you for sexual information about yourself when you did not want to answer those questions? This means very personal questions, like what your body looks like or sexual things you have done?" As above, this could include very brief or casual inquiries.

"Did anyone ever use the Internet or a cell phone to ask you to *do* something sexual that you did not want to do?" As above, this could include very brief or casual inquiries.

2.1.7. Older partner voluntary

"Did you have intimate sexual conversations or share sexual pictures or videos (online or through a cell phone), even if you wanted to, with a person who was 5 or more years older than you?" This was meant to capture voluntary sexual interactions with an older partner, although not necessarily an adult.

2.1.8. Commercial sex online

"Have you done any of the following things over the Internet or a cell phone (including texting) in exchange for money, drugs, or other valuable items? Sexual talk; Making, sending, or posting sexual pictures or videos of yourself; Any other sexual activity." This included youth who used technology to earn money or get valuables by providing sexual services.

To assess the emotional impact of different online victimization types, an episode-level file was created where each victimization incident was recoded as a separate observation. The follow up sample consisted of 2056 episodes respondents said occurred before the age of 18. The largest proportion of incidents belonged to the unwanted sexual contact/solicitation category (33 %). This was followed by stalking (20 %), forced image recruitment (16 %), older partner voluntary (13 %), non-consensual sexual image sharing (8 %), and threatened sexual image sharing (6 %). Non-consensual sexual image taking and commercial sexual activity each comprised 3 % of the total number of episodes.

2.1.8.1. Perpetrator and dynamics.
Follow-up questions about perpetrators concerned their number, gender, age, and relationship to victim. Adult perpetrators were defined as those suspected or known to be over the age of 18. Incident dynamics included whether the episode entailed sexually explicit images (showing genitals, masturbation or sex acts), whether the episode included any threats and whether threats were carried out.

2.1.8.2. Negative Emotional Impact (NEI).
Respondents were asked to rate how much they felt at the time of victimization each of the following on a scale of "Not at all" to "Extremely": 1) "Angry", 2) "Afraid", 3) "Sad", 4) "Embarrassed", 5) "Anxious or Worried", 6) "Like you couldn't trust people?", 7) "Like you were alone?", and 8) "Ashamed". The NEI items were strongly interrelated. In a principal component factor analysis, all items loaded in the 0.79–0.82 range on a single factor except for anger that loaded 0.68. The factor scores were used in the assessment of NEI.

2.1.8.3. Offline victimization before age 13.
An early victimization measure for each participant was created using 15 items from the Juvenile Victimization Questionnaire (Finkelhor et al., 2005). The items concerned: physical abuse, emotional abuse, neglect, witnessing parental physical abuse, witnessing an attack with a weapon, witnessing bombings, armed robbery, being attached with a weapon, bias attack, dating violence, sexual harassment, sexual abuse by an adult or peer, and bullying or harassment by a sibling or peer. The variable consisted of a count of the number of victimizations that occurred prior to age 13. Age 13 was used because these items were being treated as possible risks for later online victimization, and we wanted to ensure that they were temporally prior to most of the online abuse.

2.1.8.4. Non-victimization adversities before age 13.
This study used 10 items in the survey to measure non-victimization adversities

Table 1
Victim and perpetrator characteristics by incident type.

	Non-consensual sharing (n = 131)	Non-consensual taking (n = 62)	Threatened sharing (n = 81)	Forced image recruitment (n = 353)	Stalking (n = 393)	Unwanted contact (n = 700)	Older partner consensual (n = 278)	Commercial any (n = 58)	Across all incidents (n = 2056)
	Weighted %								
Screener % of all episodes	8	3	6	16	20	33	13	3	100
Victim gender									
Male (n = 249)	32	20	22	14*	27	22	28	30	23
Female (n = 1705)	65	74	77	83*	71	74	67	62	73
Other (n = 102)	3	6	2	4*	3	4	4	8	4
Perpetrator gender									
Male (n = 701)	74*	91	75	98***	74*	86	78	81	82
Female (n = 81)	27*	10	25	2***	26*	14	21	7	18
Other/don't know (n = 4)	0*	0	0	0***	0*	0	0	12	1
Victim/perpetrator gender pairing									
Female victim/male perp (n = 648)	72	74**	74	95***	64	79	70	89	76
Male victim/male perp (n = 34)	1	16**	1	2***	10	7	8	3	6
Male victim/female perp (n = 54)	22	1**	22	1***	24	13	19	8	16
Female victim/ female perp (n = 26)	5	9**	3	1***	3	1	2	0	3
Perpetrator age									
Not adult (n = 1674)	78	58***	72*	89*	88*	91***	69***	74	84
Adult 18–25 (n = 289)	16	19***	25*	9*	8*	7***	22***	16	12
Adult 26+ (n = 93)	6	23***	3*	2*	5*	2***	9***	10	4
Perp relationship									
Intimate partner (n = 453)	45*	43	46*	29	28	25*	36	25	31
Friend/relative (n = 263)	14	28**	7	11	10	12	12	10	12
Other acquaintance (n = 502)	18	21	15	29	30	29	22*	43	26
Online (n = 164)	4	3	16	11	13	11	16	7	11
Don't know/not sure (n = 261)	20	6*	17	20	20	23	14*	16	19

* $p < 0.05$.
** $p < 0.01$.
*** $p < 0.001$.

that occurred before the age of 13. Adversities included having a very bad accident or illness, witnessing someone close to you have a very bad accident or illness, experiencing family homelessness, parental incarceration, being removed from your family, parental unemployment, parental substance use, witnessing parental conflict, someone close to you attempting suicide, and someone close to you being away at war. A continuous, composite non-victimization adversity measure was created by combining these 10 items.

2.1.8.5. Participant demographics. Demographics were gathered from panel data provided earlier and some additional questions in the survey, including sexual orientation and gender.

2.2. Analysis

Data were analyzed in Stata/SE version 17.0. Survey weights were applied in all analyses. We first conducted Chi-square (χ^2) tests to observe differences between elements of incident dynamics for each screener type (Table 1). Next, we conducted analysis of variance (ANOVA) tests to examine differences in the proportion of responses to each of the 8 NEI items for each screener to that of the average of all other incidents (Table 2). To examine the bivariate relationship between mean NEI score and incident characteristics, we again used one-way ANOVA in Table 3. Last, we used regression analysis to examine the multivariate relationship between demographic, perpetrator, and incident dynamics with NEI.

3. Results

Table 1 shows the 8 types of online offenses we screened for, their proportions among all episodes, and key elements of dynamics. Girls were more frequent victims for all types of episodes (73 %). Males were the most common perpetrators (82 %). Male perpetrators with female victims made up 76 % of episodes. Importantly, adults were a minority of offenders (12 %). The adult proportion of perpetrators was highest for non-consensual sexual image taking (19 %), for threatened sexual image sharing (25 %) and for the screener cases defined by sexual interaction with an older person (22 %). Even in older partner episodes, adults were not the majority.

The perpetrator relationship variable also showed that 69 % of the episodes involved known perpetrators. Intimate partners were the largest of the known offender group. Intimate partners were particularly frequent in the image abuse cases – nonconsensual sharing, nonconsensual taking and threatening/sextortion. People met online were offenders in only 11 % of the episodes. Additionally, in 19 % of episodes the victims weren't sure or did not know the identity of the perpetrator. These unknown offenders could have been strangers or also possibly known persons hiding their identities. Even combined, the online and unknown perpetrators made up only 30 %.

Table 2 shows the percent of participants who said they were "not at all" negatively affected to each of the 8 NEI items. Although

Table 2
Negative Emotional Impact (NEI) by incident type (n = 2056).

	Non-Consensual Image Sharing (n=131)	Non-Consensual Image Taking (n=62)	Threatened Image Sharing (n=81)	Forced Image Recruitment (n=353)	Cyber Stalking (n=393)	Unwanted Sex Contact (Any) (n=700)	Older Partner Voluntary (n=278)	Commercial (Any) (n=58)	Across all Incidents (n=2,056)
	Mean Score (Green = low, Red = high)								
NEI Score	0.71***	0.83***	0.84***	-0.05	-0.25**	-0.46***	-0.49***	0.09	-0.05
	Weighted % Reporting *Not at all* (Red = below average, Green = above average)								
Angry?	8***	17*	2***	18***	24*	39***	64***	46*	30
Afraid?	17***	12**	8***	23*	18***	46***	49***	24	34
Sad?	13***	11***	13***	31	41	54***	50***	39	38
Embarrassed?	7***	3***	8***	21	32**	32***	32**	19	24
Anxious or Worried?	10**	8*	8**	13*	12**	27***	35***	23	19
Like you couldn't trust people?	7***	10**	0***	18*	30	35***	48***	27	26
Like you were alone?	25***	13***	4***	38	44	54***	51***	26*	40
Ashamed?	12***	8***	12***	27	39***	38***	34	26	30
Not at all to all categories	3	1	0*	2*	3	4	13***	3	4
* p<0.05 ** p<0.01 *** p<0.001									

* *p* < 0.05.
** *p* < 0.01.
*** *p* < 0.001.

Table 3

Negative emotional impact score for several demographic, perpetrator, and incident characteristics with ANOVA.

	Mean negative emotional impact score (weighted)
Screener type***	
Non-consensual image sharing (n = 131)	0.71
Non-consensual image taking (n = 62)	0.83
Threatened image sharing (n = 81)	0.84
Forced image recruitment (n = 353)	−0.05
Cyber stalking (n = 393)	−0.25
Unwanted sex-related contact (n = 700)	−0.46
Older partner voluntary (n = 278)	−0.49
Commercial any (n = 58)	0.01
Age at incident	
12 or under (n = 206)	0.01
13–17 (n = 1850)	−0.06
Sexual orientation***	
Heterosexual (n = 1214)	−0.16
Not heterosexual (n = 827)	0.17
Early non-victimization adversity***	
10th percentile score (0) (n = 638)	−0.30
Median score (1) (n = 463)	−0.08
90th percentile score (4) (n = 118)	0.40
Early victimization***	
10th percentile score (0) (n = 604)	−0.43
Median score (2) (n = 271)	0.21
90th percentile score (7) (n = 91)	0.93
Victim/perpetrator gender pairs**	
Female victim/male perp (n = 648)	0.09
Male victim/male perp (n = 34)	−0.31
Male victim/female perp (n = 54)	0.00
Female victim/female perp (n = 26)	0.68
Adult perpetrator	
No (n = 1674)	−0.06
18–25 (n = 289)	−0.08
26+ (n = 93)	−0.16
Relationship to perpetrator***	
Intimate partner (n = 453)	0.09
Friend/relative (n = 263)	−0.03
Other acquaintance (n = 502)	0.02
Online (n = 164)	0.19
Unknown (n = 261)	−0.32
Perpetrator count***	
One (n = 631)	0.01
Two (n = 86)	0.23
Three or more (n = 102)	0.46
Don't know/missing (n = 1237)	−0.32
Explicit pictures?***	
No (n = 1925)	−0.15
Yes (n = 131)	0.68
Any threat?***	
No (n = 1575)	−0.17
Yes (n = 481)	0.30
Threat carried out?***	
No (n = 2005)	−0.07
Yes (n = 51)	0.57

** $p < 0.01$.
*** $p < 0.001$.

some respondents reported "not at all" to specific NEI variables, the proportion saying they were not-at-all impacted by any of the variables was low (4 %). The highest not-at-all group was the 13 % of the episodes comprising voluntary interactions with older partners. It is notable that even among these voluntary relationships 87 % were associated with some negative impact.

The combined 8 negative emotional impact (NEI) variables were represented by a factor score (Table 3). The episodes with the highest impact were three of the image abuse episodes – nonconsensual sexual image sharing, nonconsensual sexual image taking and threatening/sextortion with images. The lowest impact was the unwanted sex-related contact (solicitation) and the older partner voluntary episodes.

Table 3 shows bivariate association between NEI and various episode characteristics. Younger and older victims reported no difference. Impacts were higher for non-heterosexuals (gay/lesbian, bisexual/pansexual, something else/not listed, prefer not to say), those with high childhood adversities and pre-age 13 childhood victimization. Impact was higher for female perpetrators with female victims and lower for male perpetrators with male victims, both relatively small groups.

NEI was similar for both adult and juvenile perpetrators. It was higher for perpetrators met online, but it was substantially lower for persons whose online identity the victim did not know. There was a stronger impact when there were two or especially three or more perpetrators. Explicit pictures added to the NEI as did threats and realized threats.

The multivariate analysis of impact (Table 4) showed that the screener types themselves had the largest independent impact. The three screeners concerned with the non-consensual use of images all had strong independent contributions. Several other variables made contributions. Victims with previous victimizations were more impacted. Males victimized by males were less impacted. Multiple perpetrators were more impactful. Very notably adult perpetrators were not more negative in impact than juvenile perpetrators. There was also no significant difference between already known perpetrators and perpetrators met online or otherwise unknown.

4. Discussion

There are several findings that this study contributes to the ongoing discussions about the characteristics and impact of online offenses against children.

First, the study confirms that online offenses occur in a wide variety of ways – unwanted sexual solicitation, nonconsensual sexual image taking and sharing, online stalking, and statutorily illegal, even if voluntary, sexual interactions with older partners and adults.

Another aspect to the diversity is that offenses occur at the hands of a variety of offenders, including peers and acquaintances, intimate partners as well as people met online. The narratives of online risk often emphasize strangers met online, but these are not the majority of offenders. This has very important implications for prevention, as discussed below.

The study also confirms a diversity of impact. Most episodes were associated with some negative emotions. There were few non-impactful events. But some were more impactful than others. Unwanted solicitation, the largest category, comprised episodes that were less impactful.

Table 4
Regression analysis of Negative Emotional Impact score on victim, perpetrator, and incident dynamics predictors.

	Model 1 ($n = 747$)
	β
Screener type (ref = forced images)	
Non-consensual image sharing	1.1**
Non-consensual image taking	1.1**
Threatened image sharing	1.0***
Stalking	0.2
Unwanted sex-related contact any	0.1
Older partner voluntary	−0.3
Commercial any	0.4
Age at incident (ref = 13 and older)	
12 or under	0.1
Sexual orientation (ref = heterosexual)	
Non heterosexual	0.0
Early non-victimization adversity	0.0
Early victimization	0.1**
Victim/perp gender pairing (ref = female/male)	
Male/male	−0.4*
Male/female	−0.1
Female/female	0.3
Adult perp (ref = no)	
18–25	−0.0
26+	0.2
Relationship to perp (ref = other acquaintance)	
Intimate partner	−0.1
Friend/relative	−0.2
Online	0.2
Unknown	−0.3
Perpetrator count (ref = one)	
Two or more	0.3*
Don't know/missing	0.0
Sexually explicit pictures? (ref = no)	
Yes	0.1
Any threat? (ref = no)	
Yes	0.4
Threat carried out? (ref = no)	
Yes	0.1

$R^2 = 0.4$, $F(24, 723) = 18.88$, Prob > F = 0.0000, Design df = 746.
* $p < 0.05$.
** $p < 0.01$.
*** $p < 0.001$.

A key finding from the study was that episodes involving the misuse of sexual images were forms of abuse that had particularly negative valence for child victims. This confirms observations made by some clinicians and researchers that image misuse adds an aggravating element to sexual abuse or harassment (Gewirtz-Meydan et al., 2018; Gewirtz-Meydan et al., 2019). It may be that the permanence or durability of the shame make these image offenses more impactful. Interestingly, the results did not show that more explicit sexual images were associated with more negative impact. This may be because the loss of control over the image or the sense of betrayal might have been more salient than what was depicted (Freyd et al., 2005; Tang & Freyd, 2012). Assumptions about more impactful forms of sexual abuse have often been unconfirmed (Bal et al., 2004). But another possibility is that study questions were not sensitive enough about what the images showed. For example, depictions of sexual acts counted as explicit may not actually have shown genitalia.

On another matter, the study specifically undercut the presumption that offenses at the hands of acquaintances or peers would be less impactful than adults or anonymous strangers or people met online. Adult offenders were not more impactful than peer offenders. This has been found in other abuse contexts (Lereya et al., 2015). In addition, the differences between acquaintances, anonymous or online contacts were not significant when other factors were taken into account. The online adult offenses were in many cases upsetting, but so were offenses at the hands of peers and acquaintances.

Assumptions about a greater impact of adult stranger incidents may be misguided for a number of reasons. For example, peer and acquaintance episodes may be impactful because of feared social consequences involving youths' perceptions of social standing and reputation (Schoeler et al., 2018). Acquaintance episodes may also be more likely to entail ongoing threats because social contact with perpetrators persist (Turner et al., 2015). Moreover, the offenses by known individuals, especially friends and intimate partners, may represent more of a betrayal or are hurtful because they involve trusted relationships. The importance of this betrayal trauma is a strong theme with evidence in the literature on the impact of sexual abuse (Freyd et al., 2005; Tang & Freyd, 2012).

This speaks to a core issue for prevention and awareness raising. Media and educational programs often typify online offenses as adult stranger predation scenarios (World Health Organization, 2022). The prevention messages warn children about talking to unknown persons or giving out personal information like their name or address (World Health Organization, 2022). "Don't meet face-to-face with someone you only know from online" is another message that uses a stranger perpetrator typification. Some of this typification may stem from the assumption that these are the truly worst kinds of online offenses.

This framing and these messages may fail in their protective intent if they do not give a complete account of the nature of the problem. Young people and their guardians may not be sensitized to the risks if exclusively alerted to strangers and adults. As a result, they may not discuss the true dynamics of victimization and may not be alerted to the warning signs. Prevention education should educate about behaviors that are inappropriate from any source, rather than focusing on certain categories of people (World Health Organization, 2022). A new focus on acquaintance and peer perpetrators should be facilitated by the knowledge that they are equally impactful.

A similar reconceptualization may be warranted about the typification of image abuse. Much of the media coverage of image abuse has focused on the negative effects on children of images labeled child sexual abuse materials, previously referenced as child pornography (French, 2022; Keller and Dance, 2019). The implied dynamic in this offense scenario is typically adult molesters who create images of their victims and share or sell them on the web. But this survey identified a large quantity of youth victimized by peers and intimate partners, who had non-consensually taken or shared sexual images causing serious distress to their victims. This non-consensual sharing and image misuse by friends and intimate partners is equally harmful as the adult abuser cases. This echoes findings in the literature showing the equivalent impact from dating violence and peer abuse to child maltreatment by adults (Exner-Cortens et al., 2013; Lereya et al., 2015). It may be important for narratives about online abuse of children to give equal emphasis to peer and dating partner abuse situations.

There were additional factors that made significant contributions to the impact of online abuse. Having a history of other offline victimizations prior to age 13 increased online abuse impact, a finding consistent with the poly-victimization and childhood trauma literature (Turner et al., 2010). Early victimization and trauma have been found to affect the regulation of emotional response, which lead to stronger negative reactions to subsequent and similar threats (Shonkoff et al., 2012).

In addition, multiple perpetrators increased impact, a finding consistent with the victimization literature (Casey & Nurius, 2005; Turner et al., 2010; Turner et al., 2015). Finally, male-on-male offenses were reported as less impactful. Although the small sample size of this group suggests the need for caution in interpreting this finding, it may be that male-on-male episodes are more likely to be perceived as pranks among friends or have fewer social repercussions than those involving other gender dyads.

4.1. Limitations

This study captured a victim impact perspective on a larger number and greater variety of online abuse episodes occurring to children than has previously been available. But it has some notable limitations.

First, although large, diverse and national, it is not strictly a representative sample of episodes. There was a selection for less frequently occurring forms of abuse because of time constraints. There was also a considerable portion of the recruited sample that chose not to participate and whose experiences are missing.

Second, the reports on the episodes were retrospective, in some cases about experiences that occurred more than ten years in the past. At that distance, some experiences may have been forgotten, and the features and impact of others may have been distorted by time. The dynamics of these historically distant episodes also may not also be generalizable to a current generation of children, whose experience with the digital environment may be considerably different.

Third, it is important to bear in mind that some of the prominent literature about internet abuse impact is based on the experiences

of clinical samples and victims recruited from law enforcement cases. The dynamics and impacts of those experiences may be very different from those recruited from a general population survey. This study cannot be generalized to those other groups.

5. Conclusion

This study supports the idea that the technological environment is adding new dimensions to the problem of sexual abuse that need additional discussion and research. Assumptions are being made about dynamics and harm that may not be supported by the evidence. As we strive to prevent sexual abuse and help its survivors, it is important that education and programs be based on the reality and not just assumptions based on anecdotes or speculation. We need to use the tools we have to accurately document the experiences of children in a rapidly changing world.

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Data availability

Data will be made available on request.

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