Child sexual abuse images and youth produced images: The varieties of Image-based Sexual Exploitation and Abuse of Children

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ABSTRACT

Background and objective: This paper presents a categorization of sexual image crimes and abuse that occur against children, and it compares their frequency, dynamics, and emotional impact.
Participants: A national sample of 2639 respondents aged 18-to-28 disclosed 369 childhood episodes involving a variety of image abuse.
Methods: Online self-administered questionnaire.
Results: The analysis classified the cases into five incident types: 1) adult made images (child sexual abuse images), 2) images non-consensually made by other youth, 3) voluntarily provided self-made images that were non-consensually shared by other youth, 4) voluntarily provided self-made images non-consensually shared by adults, and 5) voluntarily provided self-made images to adults that entailed an illegal age difference or were part of a commercial transaction. We propose to refer to this aggregation of types as Image Based Sexual Exploitation and Abuse of Children (IBSEAC). Only 12 % of the image episodes qualified as adult produced, child sexual abuse images. Such adult produced image experiences were also not higher in negative emotional impact than the youth produced images. Only 10 % of the episodes involved images of children under age 13.
Conclusion: The study highlights the predominance of youth made sexual images among the image exploitation and abuse affecting youth according to self-report. It also highlights the difference between what victim surveys reveal about the problem and what is inferred from police record studies.

1. Introduction

A dramatic change has occurred in the dynamics of child sexual abuse and exploitation as a result of the technological revolution in how images can be made and shared. Since the marketing of cell phones, many people in parts of the world carry easily useable cameras and videos, which have made it trivially easy to create and share images directly, bypassing the need to have a third party

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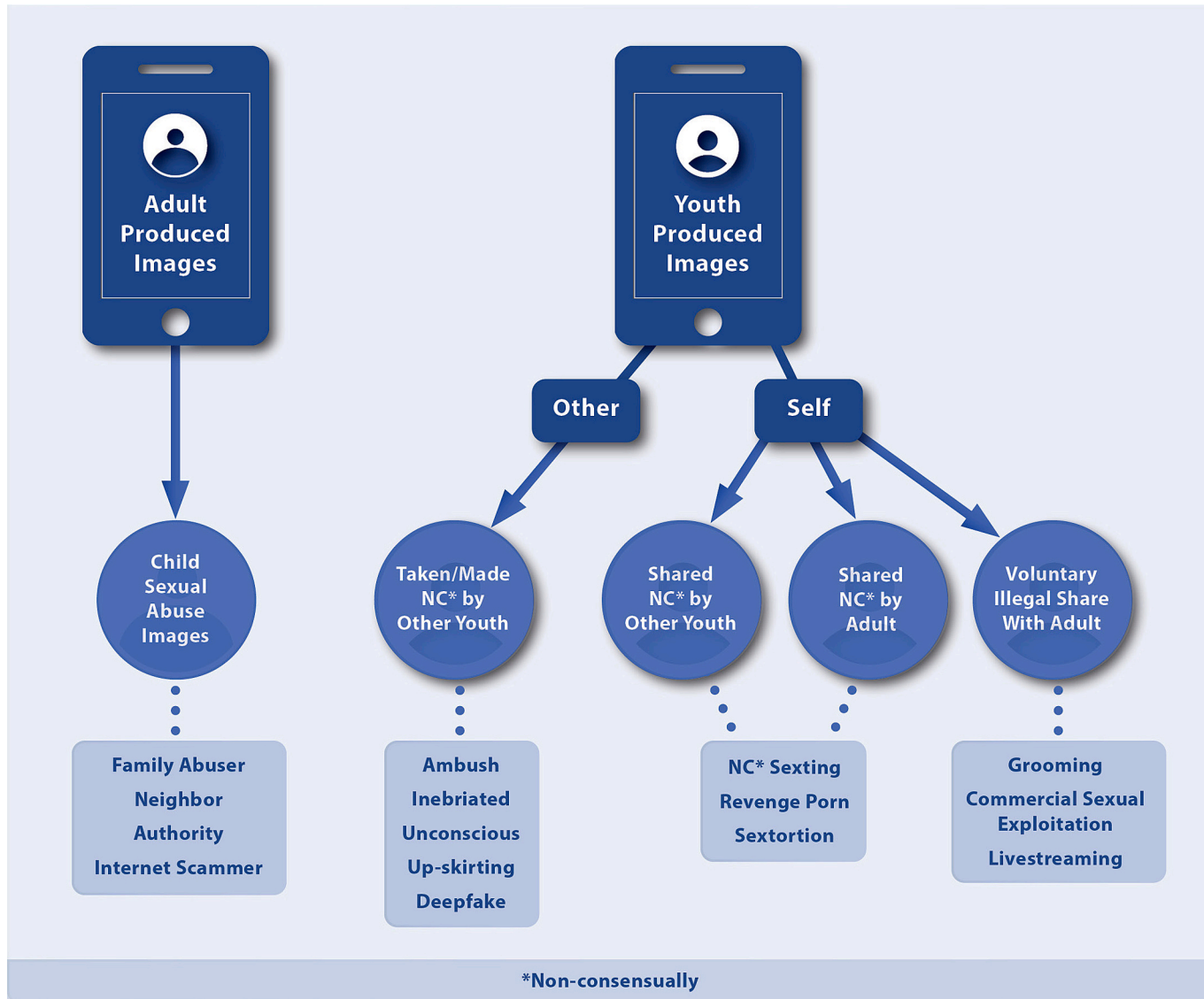*E-mail address:* David.finkelhor@unh.edu (D. Finkelhor).

Fig. 1. Categories of Image Based Sexual Exploitation and Abuse of Children (IBSEAC).

develop and view them.

Not surprisingly, child sexual abusers began to take images of their victims for personal gratification and to share with others for status and commercial gain (Casanova et al., 2000; Jenkins, 2001). Law enforcement in turn started to uncover troves of these images on the devices of abusers and on sharing websites (Wolak et al., 2011). As Internet surveillance technology developed and reporting requirements and enforcement efforts ramped up, the general sense among law enforcement has been that child sexual image availability was increasing exponentially (Bursztein et al., 2019; Ibrahim, 2022; WeProtect Global Alliance, 2022).

In their efforts to clearly distinguish this child image contraband from legal pornography, law enforcement and advocacy groups moved away from using the term "child pornography," the term encoded in many long-standing criminal statutes, preferring terms like "child sexual abuse images," (CSAI) or "child sexual abuse material" (CSAM) (Martellozzo, 2019). These terms were thought to better characterize what were deemed to be images made by adult sexual abusers of their crime victims.

Yet, dynamics have continued to evolve as photo sharing has become easier and more common. Youth began to use the technology to share sexual images of themselves, their friends, and their intimate partners across many contexts. These included courtship, intimate play, and humor, but also in contexts of bullying, aggression, and partner abuse (Gordon-Messer et al., 2013; Lenhart et al., 2010). Law enforcement has come to refer to these as "youth produced images" (Wolak et al., 2012). As social norms have changed, these youth produced images became as numerous as the adult made child images of original concern. Indeed, an inventory of the International Child Sexual Exploitation Image Database, a law enforcement investigation tool, found that from 2010 onward self-produced youth images comprised 40 % or more of all images in the archive (Quayle et al., 2018).

Youth produced images have created a variety of complexities. On the one hand, even if voluntarily self-produced without coercion, most images do qualify as criminal contraband under existing child pornography statutes, if they are images of juveniles engaged in sexual acts or with genitals exposed for purposes of arousal. But many juvenile justice advocates have been concerned about criminalizing young people for non-malicious sexual behavior occurring alone, or voluntarily with peers or intimate partners (Barroso et al., 2023; Ojeda et al., 2022; Strasburger et al., 2019). Laws have been proposed to exempt certain classes of these images (O'Connor et al., 2017).

At the same time, some of these youth produced images are abusive and harmful for reasons beyond the mere sexual depiction of a juvenile. Which types of youth produced images are considered sexual abuse or exploitation (Madigan et al., 2018; Walker & Sleath, 2017)? As would be the case with adult abuser produced images, several malicious contexts qualify as abusive even though not all are images of a sex crime (Krieger, 2017; Strasburger et al., 2019). For example, some youth take sexual images non-consensually of their peers — sleeping, intoxicated, or surreptitiously. Sometimes youth take images with the intent to intimidate, humiliate, shock or extort other youth (Harper et al., 2021). These are non-consensual episodes that have similarities to CSAI, although the offenders are juveniles (Wolak et al., 2012).

In a different malicious youth produced scenario, youth make and share voluntarily images of themselves with friends or intimate partners, but then later find these images passed on to others or posted without their consent. This type of episode has been labeled with terms like aggravated or non-consensual sexting (Strasburger et al., 2019) or revenge pornography.

Yet another scenario involves youth producing sexual images of themselves and willingly sharing them under prohibited conditions. In some cases, the images are produced voluntarily but are exchanged for money or other valuables – a form of prohibited commercial sex. In other scenarios, the sharing is with adults either voluntarily or as a result of manipulation, both reflecting an abusive context of unequal power. This is parallel to the element of conventional sexual abuse called statutory sex offenses which are crimes even with voluntary victim participation when juveniles of a certain age participate in relationships with adults.

There is arguably some dissonance in using the term "child sexual abuse images" (CSAI) to apply to all these contexts involving youth self-made images. CSAI has strong conceptual roots in the scenarios of adult-produced images made to record conventional child sexual abuse episodes. It is potentially misleading to use the term CSAI when the image was originally produced by youth in affection or romance, but later misused.

Some scholars, in light of these changing dynamics, have proposed the term "image-based sexual abuse" (IBSA) to cover the broader spectrum of image abuse beyond CSAI. The IBSA term has been defined to encompass three categories, the non-consensual taking and making of images, the non-consensual distribution of images and threatened image distribution (Gámez-Guadix et al., 2022; Powell et al., 2022).

This IBSA conceptualization does encompass conventional CSAI, since CSAI are non-consensually made by adults as part of their sexual abuse. IBSA covers images non-consensually made by peers as well. It also includes voluntarily shared images that were then misused or distributed non-consensually by peers or adults.

However, one set of circumstances that the literature on IBSA does not explicitly include is youth-produced images that are voluntarily shared with adults or in commercial exchanges (Pedersen et al., 2022). Some youth are engaged in relationships with adults whom they see as romantic partners. Other youth are using applications like OnlyFans to earn money for sexual images. But if we consider this sharing with adults or in commerce as *lacking in consent* because of the power differential with the recipients, then these too can be considered nonconsensual sharing within the IBSA definition, even though there may have been no explicit coercion or pressure.

Thus, a somewhat expanded conceptualization of IBSA, which we would call Image Based Sexual Exploitation and Abuse of Children (IBSEAC) can encompass both the conventional adult produced scenarios of CSAI and the new youth produced scenarios with peers and adults as well (Henry et al., 2020; Mandau, 2020; Scott et al., 2022; Van Ouytsel et al., 2021).

Fig. 1 suggests a conceptual model and applicable terminology. The CSAI term is applied to the adult non-consensually produced images of children and youth. This can involve youth abused and imaged by family members, other adult acquaintances, or adults who use technology to spy and take stealth images.

The youth produced images fall into four other groups. In the first, a youth produced image can be taken non-consensually by another youth. These include taking stealth images of an intimate partner and also up-skirting and other ambush situations. It can also include so called Deepfakes, which involve photo-shopping a youth's head on the body of another person.

Two other youth-produced categories involve self (victim)-made sexual images with non-consensual subsequent sharing. In one case the youth makes a self- image and shares it consensually with a partner of interest but then the partner misuses the image, sharing it with others without permission, using it to retaliate or denigrate the sharer, or using it to extort additional images, money or other sexual favors. The perpetrators in these voluntarily-shared-but-then-misused images can be other youth but also adults (Ringrose et al., 2022). These episodes are sometimes characterized as sextortion, revenge porn or non-consensual sexting.

The other youth self-made category is when youth voluntarily share self-made images with adults, either within a relationship, to initiate a relationship or to make money or something else of monetary value. In these cases, the adults do not necessarily betray the intent of the sharer by misusing it in a way that was not anticipated. But nonetheless, because this is a relationship between a juvenile and an adult or it involves commercial exchange, this is inherently an illegal and abusive context.

A difficult question is what to do with teens above the age of consent (typically 16 and 17 depending on the jurisdiction) who voluntarily share images with adults (frequently in their 20s). It could be argued that if a sexual relationship is itself legal, then the consensual sharing of sexual images should not be considered abuse (Laird et al., 2022; Mathews & Collin-Vézina, 2017). Obviously, though, there are conditions that could vitiate this presumed consent like adult authority figures, large age differences, or impaired capacity of the older teen.

A category that is often separately designated in international discussions about image abuse is "livestreaming," which involves real time transmitted performances of children engaging in sexual acts and behaviors (De La Salle University - Social Dev & Research Ctr, Dept of Social Welfare & Development - Inter-Agency council against child pornography, & UNICEF Philippines, 2021; Greijer & Doek, 2016; Varrella, 2017). These abuses fit into the present categorization depending on whether they are organized and orchestrated by an adult (adult produced images) or independently by youth themselves (voluntary illegal share with adults).

In addition, there are almost certainly episodes whose dynamics might fall into more than one category or be hard to clearly classify within this conceptual framework. But this framework may be useful in bridging the conversations between those who have primarily worked within the CSAI framework, and those wanting to recognize the new forms of abuse that have been proliferating.

The term Image Based Sexual Exploitation and Abuse of Children (IBSEAC) has several virtues to recommend it. As a new term, it signals the shifting character of the image harms that children are encountering. It reaches beyond the adult-made child pornography implications of CSAI. Although it has been suggested that the term "exploitation" as in child sexual exploitation materials (CSEM) can be seen broadly to include youth and self-made images, the term sexual exploitation is almost exclusively used in the literature to apply to adult offenders and adult-made images (Shelton et al., 2016).

The new term expands the definition of IBSA, adding the term exploitation to include the voluntary older partner sharing and the commercial episodes that were omitted by the original IBSA definition (Powell et al., 2022). It also includes the term "children" that differentiates this category from the original IBSA, which was crafted to apply to both adult and child victims.

This paper explores the dimensions of this conceptual framework using a large nationally representative sample of victims of technology facilitated abuse including image abuse, which is the focus of this paper (Finkelhor et al., 2022, 2023). One goal is to chart the relative frequency of the types. Another is to assess the age and relationship contexts in which they occur. Given the growth in youth produced images, our expectation is that peer and acquaintance type victimization should be widespread. Finally, the paper addresses the degree of negative emotional impact of the various types. These topics are of interest to practitioners and policy makers and can address some of the evident issues they confront in trying to prioritize among the various offense dynamics they encounter.

2. Methods

The study was conducted using the nationally representative KnowledgePanel (KP). KP is a sample that the survey firm Ipsos has recruited via address-based sampling, from mail addresses obtained from national universal address data bases. After the mail recruitment, panel 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 in the age range 18-to-28 years old ($n = 13,884$) were invited to participate in 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 episode types 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 to 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 forms of online exploitation and abuse in which an image might be involved (additional details available, (Finkelhor et al., 2022)). Although the questions were about lifetime experiences, subsequent questions about age of occurrence allowed us to select only episodes before the age of 18.

Non-consensual sexual image sharing: "Has someone ever **shared with other people** a sexual picture or video of you <u>without your permission</u>?"

Non-consensual sexual image taking: "Has someone ever **taken or made** a sexual picture or video of you <u>without your permission</u>?" 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.

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.

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. For the current study, only episodes were included if an actual image was shared.

Older adult 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. Episodes were only included in the episode sample if the sharer was under 16, the typical age of consent and only if the sharing involved providing images or videos.

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. Episodes were only included in the episode sample if an image, video, or live online performance was shared.

Information collected about victims included their gender and age at victimization. Follow-up questions about perpetrators concerned their gender and relationship to the victim. Adult perpetrators were defined as those suspected or known to be over the age of 18.

An episode-level file was created in which each victimization incident was recoded as a separate observation. This episode sample consisted of 3127 incidents, with 2056 episodes occurring before the age of 18. Of these, only 1975 episodes had complete follow-up information and were used in analyses.

Episodes were recoded based on the screener and follow up variables to fit categories of the IBSEAC typology.

Adult made or taken non-consensually. Episodes from the non-consensual taking or forced image recruitment screeners in which the perpetrator was an adult.

Youth made or taken non-consensually. Episodes from the non-consensual taking or forced image recruitment screeners in which the

Table 1

Demographic and incident characteristics of IBSEAC[1] episodes and negative emotional impact score for each IBSEAC subtype (*n* = 1975).

	IBSEAC[1] categories					
	All IBSEAC[1] (n = 369)	Adult produced/ CSAI[1] (*n* = 55)	Other youth NC[1] produced (*n* = 69)	NC[1] shared with other youth (*n* = 87)	NC[1] shared with adult (*n* = 111)	Voluntary with adult (*n* = 47)
	Weighted % (SE)[2]					
Percent of all IBSEAC incidents	100.0	11.8 (2.2)	14.6 (2.9)	26.2 (3.9)	37.1 (4.2)	10.3 (2.4)
	Weighted % (SE) of each IBSEAC category					
Victim gender						
Male	23.0 (4.1)	22.4 (8.7)	8.3 (4.4)*	28.4 (9.3)	24.3 (6.5)	26.2 (15.7)
Female	74.4 (4.1)	73.6 (8.8)	90.0 (4.6)*	70.0 (9.3)	72.5 (6.6)	71.4 (15.4)
Other	2.6 (0.8)	4.0 (2.9)	1.7 (1.3)	1.5 (1.0)	3.2 (1.7)	2.4 (2.2)
Age at victimization						
12 or under	9.8 (2.2)	10.8 (5.6)	23.4 (9.5)*	3.4 (1.7)*	8.5 (3.2)	9.7 (4.9)
13–15	51.3 (4.2)	38.3 (8.6)	55.4 (10.4)	65.8 (7.3)*	32.9 (7.3)**	90.3 (4.9)***
16–17	38.9 (4.0)	51.0 (9.4)	21.3 (6.4)*	30.8 (7.0)	58.6 (7.3)***	n/a
Relationship to perpetrator						
Intimate partner	35.2 (4.0)	27.9 (9.4)	35.4 (9.3)	48.4 (8.8)	32.7 (6.8)	20.6 (8.3)
Friend or relative	9.3 (1.9)	12.5 (6.0)	20.0 (8.4)*	10.7 (3.8)	5.2 (1.9)	1.0 (0.8)***
Acquaintance	15.3 (2.6)	20.5 (7.3)	20.5 (8.0)	14.7 (5.5)	11.6 (3.8)	16.6 (6.1)
Online only	7.6 (2.6)	7.3 (3.3)	1.3 (1.3)*	18.1 (8.4)**	1.4 (0.8)***	12.8 (5.8)
Don't know/not sure	32.6 (4.2)	31.7 (8.6)	22.8 (11.5)	8.1 (3.4)***	49.6 (7.2)**	49.0 (12.4)
	Mean Negative Emotional Impact (SE)[3]					
Mean Emotional Impact Score	0.59 (0.05)	0.62 (0.16)	0.54 (0.10)	0.88 (0.09) ***	0.69 (0.09)	−0.50 (0.12)***

[1] IBSEAC: Image-Based Sexual Exploitation and Abuse; CSAI: Child Sexual Abuse Images; NC: Non-Consensual.

[2] Comparisons between column category vs. all other IBSEAC incidents, *$p < 0.05$ **$p < 0.01$ ***$p < 0.001$.

[3] Comparisons between NEI score for each IBSEAC subtype vs. all other IBSEAC incidents, ***$p < 0.001$.

perpetrator was a juvenile.

Youth non-consensually shared. Episodes from the non-consensual sharing or threatened image sharing/sextortion screeners that involved a juvenile as the non-consensual sharer.

Adult non-consensually shared. Episodes from the non-consensual sharing or threatened image sharing/sextortion screeners that involved an adult non-consensual sharer.

Voluntarily provided to adult w/o non-consensual sharing. Episodes from the older adult voluntary or commercial sex online screeners. We combined these two because in both categories voluntary behavior is being defined as exploitative because of an age difference. In order to exclude teens over the age of consent who were sharing within a legal relationship with an older partner, episodes were excluded if they involved an adult with the youth 16 or 17 years old. While images made by older teens are illegal, we believe it makes sense to try to align image abuse with the age of consent standards used to define offline sexual abuse. Although age of consent varies in different jurisdictions, the most frequent standard is age 16 (Glosser et al., 2004).

Negative Emotional Impact (NEI). Respondents were asked in another portion of the questionnaire to rate how much they felt at the time of victimization each of the following reactions 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 using available episodes, all items loaded in the 0.79–0.82 range on a single factor except for anger which loaded 0.68. The factor scores were used in the assessment of NEI.

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 the various IBSEAC types (Table 1). Next, to examine the bivariate relationship between mean NEI score and IBSEAC types, we used one-way ANOVA, comparing the mean score of each IBSEA sub-type to the average of all IBSEAC incidents.

3. Results

There were 55 episodes in which respondents reported that adults non-consensually produced images of respondents when they were minors (Table 1, column 3). This contrasts with 314 episodes that would be qualified as youth produced mages that nonetheless constituted exploitation or abuse (columns 4–7). The youth produced images included 69 where another youth non-consensually took the images of the respondent victim (column 4). Among the 267 episodes with self-produced images that youth shared voluntarily (column 5–7), 87 were provided voluntarily to another youth who shared them non-consensually, 111 were provided voluntarily to an adult who shared them non-consensually and 47 were provided to an adult voluntarily without any non-consensual sharing, except for the fact that the relationship involved an impermissible and illegal age difference or a commercial exchange.

These episodes are aggregated in the second column of Table 1 ($n = 369$) as the total number of image-based sexual exploitation and abuse (IBSEAC) episodes. The adult produced portion was 11.8 % (95 % CI: [9.6, 14.0]) and the youth produced portion was 88.2 % (95 % CI: [83.2, 91.8]). An adult was involved in some capacity, as producer, recipient, or nonconsensual sharer, in 59.2 % (95 % CI: [50.7, 67.1]). The voluntarily youth self-made images comprised 73.5 % (95 % CI: [66.2, 79.8]). The youth self-made category included 37.1 % (95 % CI: [29.3, 45.6]) which were non-consensually shared by an adult, 26.2 % (95 % CI: [19.3, 34.5]) which were non-consensually shared by another youth, and 10.3 % (95 % CI: [6.4, 16.0]) which were shared voluntarily with an adult but deemed exploitative because of an age difference or commercial exploitation. This last category includes $n = 10$ episodes, or 2.0 % (95 % CI: [0.9, 4.5]), where there was a commercial exchange for the images.

Females were victims in 74.4 % (95 % CI: [65.6, 81.6]) of the IBSEAC episodes. The female victim proportions were particularly high and males particularly low in the category involving non-consensually produced images by other youth.

Children under age 13 were victims in only 9.8 % (95 % CI: [6.3, 14.9]) of the episodes. The under 13 proportion was only 11 % (95 % CI: [3.7, 27.5]) even among the adult taken images or CSAI. This is a very important finding because images of pre-pubescent children are much easier to classify by content monitors and law enforcement as categorically illegal by physical appearance alone when there is no additional information about the person portrayed. Such young victims were significantly more common in the other youth produced images, and low in the self-made, non-consensually shared by youth category.

The perpetrators of image exploitation and abuse were most frequently intimate partners (35.2 % (95 % CI: [27.7, 43.5])). Adding acquaintances and friends to intimate partners, the known perpetrator total was 59.8 % (95 % CI: [51.0, 67.9]) of all IBSEAC. The online acquaintance category was relatively small, comprising 7.6 % (95 % CI: [3.9, 14.4]) of all episodes. Online acquaintances were somewhat higher in the non-consensually shared by youth category. There was a sizeable proportion, 32.6 % (95 % CI: [24.9, 41.4]), of the total episodes for which the victims were not sure who the perpetrator was. It may be that these unknowns/not sures were disproportionately strangers, but some could also be acquaintances who were acting incognito. This may be an important question for offender studies.

The emotional impact scores for the episodes were compared (Table 1) among the different categories, with a higher score indicating more negative impact. The highest impact was not for the adult produced images, the CSAI category, but for the youth non-consensually shared category. The lowest impact score was for the category of voluntarily shared with adults, where the episodes involved an age difference or commercial transaction.

4. Discussion

This study presents a victim-oriented perspective on the epidemiology of image abuse in childhood. Much of the previous literature on image abuse has come from the perspective of law enforcement based on their cases of reported illegal images. But the perspective from a representative victim survey paints a very different portrait of the nature of the problem.

From the youth victim point of view, the large majority (88 %) of the image abuse involved youth produced images. This is double the percentage cited from recent reviews of law enforcement images (Quayle et al., 2018). In addition, 91 % of the victims were 12-to-17-year-olds. This contrasts with police case samples in which young child victims predominate (Quayle et al., 2018), which may reflect the greater ease of reporting and substantiation when images portray pre-pubescent children. Unfortunately, knowing that there are lots of illegal and abusive teen images in circulation does not solve the dilemma for police of being able to confirm that they depict minors for purposes of legal action (Kloess et al., 2019).

The largest category of perpetrators was intimate partners (35 %) and the total of intimate partner, friend and acquaintance perpetrators numbered 60 %, a clear majority of all offenders. This also contrasts with typical law enforcement characterization of the problem (Babchishin et al., 2018; Brown & Bricknell, 2018; McManus et al., 2015; Shelton et al., 2016).

This victim portrait of a problem driven by teen produced and misused images of other teen victims warrants new thinking about a problem that no longer can be characterized in a way that harkens back to the child pornography narrative that triggered original legislation and law enforcement mobilization. It also cannot be well characterized as simply a subset of youth "sexting," both because sexting suggests a more benign dynamic and because of the substantial involvement of adults in various roles (Ringrose et al., 2022). We think that a new over-arching term – IBSEAC – is a good basis for this comprehensive reorientation, emphasizing image misuse and abuse as a core element and adding exploitation to capture the self-produced commercial and statutorily impermissible relationships with adults.

The police perspective nonetheless has its own virtues, in that its epidemiology highlights portions of the problem that may be most amenable to prosecution, when adults make and participate in the exploitation particularly of younger children. But even when thinking exclusively about adult involvement, the police perspective may miss the considerable role of youth-produced images and their varied dynamics.

However, in a crucially important finding from this study, the most negatively impactful categories of image exploitation were not those associated with adults. The most impactful was the category of self-made images being non-consensually misused by other youth, suggesting a strong element of betrayal trauma and peer group social humiliation (Freyd et al., 2005; Tang & Freyd, 2012). The least impactful category was the one comprising the images voluntarily shared by youth with adults and in commercial exchanges. This suggests that from a victim perspective a primary focus on adult involved episodes does not fully recognize the relative level of threat and harm. A victim-oriented focus must encompass youth betrayed by other youth.

The implications are not necessarily that more investigations and prosecutions are needed of youth producers and non-consensual sharers (Quayle & Cariola, 2019). Rather, it is that in policy planning equal attention should be placed on this youth non-consensually-shared portion of the image harm problem. That attention might focus on prevention education for teenagers and better mechanisms for the blocking and recovery of misused images. Research, for example, has found that sexuality education and healthy relationship programs are capable of reducing violence and sexual harassment among teens (Lee & Wong, 2022; Schneider & Hirsch, 2020). The expansion of these programs to include content on image abuse might be effective in this new domain. Educational programs are being developed specifically to address non-consensual and abusive image behavior (Ojeda et al., 2022; Patchin & Hinduja, 2020; Prevent Child Abuse Vermont (PCAVT), 2022). But the variety and complexity of the dynamics suggest the importance of careful design and evaluation of such programs and their messages.

4.1. Limitations

This study has a large and varied set of cases of image exploitation and abuse that characterize a victim perspective on the problem. Yet certain limitations must be kept in mind. As an online panel-based survey with a relatively low participation rate, it might be biased toward online active respondents more prone to victimization of certain kinds. As a survey of young adults, it may also be biased toward experiences in the older teen years, closer in time and more readily remembered. Given the rapidly changing nature of the online environment, this adult retrospective representation of cases also may not apply to the teens from current cohorts. Because of our ability to get information on only two cases per respondent based on space constraints, this sample of episodes could be skewed in other unidentified ways. Indeed some of the episodes with more information may have qualified for other categories.

5. Conclusion

The dynamics of image abuse of children are varied. They are not just images taken by adult abusers. They are also not just images misused by romantic partners. They include misuse by other youth, both taking and sharing. They include misuse by adults, who receive voluntarily produced images from youth, sometimes for money.

There are several innovations proposed in this paper that need to be considered by this developing field. First, the field should move away from the term CSAI, to image based sexual exploitation and abuse of children – or IBSEAC. The concept of image abuse should also be expanded to include voluntary sharing of images in relationships that match statutory sex crime statutes or that entail commercial exchange, consistent with the conventional concept of sexual exploitation.

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Data availability

Data will be made available on request.

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