

RESEARCH ARTICLE

A commentary on sexting, sextortion, and generative AI: Risks, deception, and digital vulnerability

Jessica Pater¹ | Brandon T. McDaniel¹ | Fayika Farhat Nova¹ | Michelle Drouin^{1,2} |

Kimberly O'Connor³ | Douglas Zytka⁴

¹ Parkview Mirro Center for Research and Innovation, Fort Wayne, IN

² Department of Psychology, Purdue University Fort Wayne, Fort Wayne, IN

³ Department of Organizational Leadership, Purdue University Fort Wayne, Fort Wayne, IN

⁴ Department of Computer Science, Engineering, and Physics, University of Michigan–Flint, Flint, MI

Correspondence

Jessica Pater, PhD, Parkview Mirro Center for Research and Innovation, 10622 Parkview Plaza Dr., Fort Wayne, IN 46845, USA.

Email: jessica.pater@parkview.com

Author note

The authors declare that no competing financial interests exist.

This is the author manuscript accepted for publication and has undergone full peer review but has not been through the copyediting, typesetting, pagination and proofreading process, which may lead to differences between this version and the Version of Record. Please cite this article as doi: [10.1111/fare.13152](https://doi.org/10.1111/fare.13152)

This article is protected by copyright. All rights reserved.

ABSTRACT

Objective: We provide a commentary that includes three expert reflections on the impacts of generative AI on sexting and sextortion—an emerging issue amongst youth across the globe.

Background: At the intersection of sexting and generative AI is an emerging, problematic social phenomenon where nude images are being created using AI and shared within teen and young adult populations. This type of online abuse and sextortion has gained recent attention within global news outlets due to the social strife taking place in schools and communities, even prompting the FBI to release multiple public service announcements in 2023 and 2024.

Disciplinary Perspectives: Three experts from psychology, legal, and human–computer interactions domains provide their perspectives related to generative AI, sexting, and sextortion based on emerging accounts of this issue. Across the three perspectives, privacy and consent were consistent themes as were the impacts on trust, relationships, and families.

Conclusion: Future research at the intersections of policy, technology, family relationships, community education, and ethical applications of technology are essential to address this emerging threat to children and families.

Implications: In addition to the many benefits extolled about generative AI, misuse of this technology will continue to be associated with negative consequences for children and families. The multidisciplinary perspectives demonstrate current and potential future issues. Negative consequences of generative AI for children and families should be further examined.

KEYWORDS

adolescents, artificial intelligence (AI), generative AI, relationships, sexting, sextortion, youth

“The sending or receiving of sexually explicit or sexually suggestive images or video via a cell phone” or “sexting” was defined as an emerging issue in 2010 (Hinduja & Patchin, 2010), and the research around sexting is robust (Drouin et al., 2015; Morelli et al., 2021; Mori et al., 2020, 2022; Thorne et al., 2024). Sexting has a duality: People can experience positive sexual and emotional outcomes from sexting (Drouin et al., 2017) but can also experience deleterious impacts on emotional health, privacy, and trust (Kahlow, 2020). Since the onset of sexting, various aspects of the technology ecosystem have transformed people’s daily technology use. One of these advancements is generative artificial intelligence (AI). Within the contexts of sexting, generative AI is acutely problematic because of its ability to generate diverse content that includes things like audio, video, images, text, and even three-dimensional models (Fui-Hoon Nah et al., 2023).

Beginning in late 2023, news articles began shedding light on the intersection of these two phenomena: teens and young adults having nudes of themselves—that were produced using generative AI—sent around schools and communities (Chavez, 2023; Elsesser, 2023; Llach, 2023; Yeo & GMA Team, 2023). Though there is evidence of this worldwide, in early 2024, five middle school students were expelled from a U.S. middle school for creating and circulating AI-generated nude photos of classmates, further fueling discussions of legality, policy, and ethical use of technology (Sharp, 2024). In November 2023, an adult was sentenced to prison for multiple charges, including using AI to create child sexual assault images of minors (FBI, 2024). Although legislation around sexting exists across the United States (“Sexting Laws Across America,” 2022), none deal specifically with AI-generated content, thus leading law enforcement and the legal community to figure this out on a case-by-case basis.

The *Family Relations* special issue on Artificial Intelligence in Everyday Family Life provides a unique venue to discuss this issue from a multitude of perspectives. Youth sexting has various connections to family life, including family functioning patterns and parental supervision (Yepez-Tito et al., 2020). In this article, we present commentary on sexting and generative AI from three distinguished scholars from diverse backgrounds (psychology, human–computer interaction, and law). Each commentary has a brief background, a reflection on specific nuances, and finally implications for the community at large. This interdisciplinary exploration highlights several larger themes like privacy, trust, and consent. We then also provide a general discussion that draws upon these commentaries. The main contribution of this article is connecting this emerging issue with the core concepts of consent, psychological impact, and policy implications. We hope this article generates provocations for the broader research and scientific community, inspiring future research and translational science work with families concerning this emerging social issue.

COMMENTARY 1: AI-GENERATED SEXTING AND SEXTORTION FROM A PSYCHOLOGICAL AND RELATIONAL LENS, BY MICHELLE DROUIN, PHD

Background and motivation

It is no surprise that over the past couple of decades, sexual communication via technology has skyrocketed. The advent of easy-to-use photo and video technologies paired with increased adoption and use of mobile phones created a perfect storm for computer-mediated sexual behavior. And although it appears that sexting (i.e., the sending of sexually explicit words or images; Drouin & Landgraff, 2012) rates have stabilized, at least among youth (Mori et al., 2022), hovering at about 19.3% for sending and 34.8% for receiving, it remains a mainstay of romantic communication for teens and young adults (Mori et al., 2020, 2021, 2022; Thorne et al.,

2024). As a result, the current social landscape includes frequent circulation of digital sexual images.

Motivations for the creation and circulation of sexual images include fun, flirtation, and fantasy, and many young adults report positive relational consequences of sexts; however, there are also detrimental consequences of this image sharing, especially in cases of aggravated sexting, wherein individuals are pressured or coerced into providing images (Drouin et al., 2017; Morelli et al., 2021). More distressingly, sexting has been weaponized into digital sexual abuse in the form of revenge porn (i.e., explicit photos are distributed or posted to cause harm to the victim) and sextortion (i.e., explicit photos are solicited or stolen from the victim and used to extort the victim for money, relational power, or another asset). Unfortunately, this type of victimization is not uncommon; a recent meta-analysis and systematic review of 19 studies including 32,247 participants showed that 17.6% of respondents (mostly young adults) have had their image taken without their consent, and 8.8% have had their sexual images shared without their consent (Patel & Roesch, 2022). And Mori et al.'s (2022) meta-analysis of youth sexting from 2009 to 2015 revealed even higher rates of forwarding without consent (14.5%).

Research and media reports alike highlight the mental health consequences that might arise from digital sexual abuse. There is a growing body of literature that details the psychological consequences of individuals who have been victims of aggravated sexting, sextortion, and/or have had their consensually created images distributed nonconsensually (Bates, 2017; Drouin et al., 2015; McGlynn et al., 2021; Patel & Roesch, 2022; Powell et al., 2022; Sciacca et al., 2023). These studies show that there are myriad psychological consequences of this type of victimization, including social anxiety, worry, and mental health symptoms, including anxiety and depression. However, though the effects of this type of digital sexual abuse

on victims has been studied, a recent meta-analysis and systematic review (Patel & Roesch, 2022) showed that there is a paucity of work in this area that focuses on adolescents. That said, as Pashang et al. (2019) found, in their study of young adult women, most of the individuals had become victims between the ages of 10 and 15.

Reflection

In an effort to understand and curb these negative effects, researchers and policymakers alike became interested in investigating the motivations and characteristics of those who perpetrate these various forms of digital sexual abuse. This research has shown that there are many characteristics that underlie the perpetration of these behaviors, from the banal to the harmful. For example, openness to experience is related to sharing images (Morelli et al., 2021), whereas partner violence and permissive attitudes that excuse perpetrators for these behaviors are related to sextortion and revenge porn (O'Malley & Holt, 2022; M. M. Rogers et al., 2023). Moreover, within the context of intimate relationships, these types of behaviors have been classified as technology-facilitated abuse and are included in newer models of intimate partner violence (M. M. Rogers et al., 2023). In short, these behaviors may be modern-day mechanisms through which individuals can exert relationship violence, which leaves intimate partners at risk for sexual exploitation and reverberating, irreparable harm when these images are shared online.

Unfortunately, the advent of AI has created an additional weapon in the arsenal of those who want to inflict harm via digital images on the internet. No longer does one need an actual sexual photo of someone to enact revenge porn or sextortion. With a few clicks of a button and readily available technologies, individuals with even minimal computer skills can “undress” clothed targets or otherwise manipulate photos to deepfake create nonconsensual intimate imagery (NCII). Undoubtedly, as sexualized material is a driver of internet commerce, this will

be an area exploited for profit. Media reports have already highlighted cases in which NCII of celebrities and children has been created and distributed, which likely increased the visibility and demand of these types of AI technologies.

Though research on this topic is still emerging, initial inquiries into deepfake pornography have shown that these forms of abuse are most often perpetrated by men against women (Hall et al., 2023), and that victim blaming and antisocial traits are positively related to lenient judgments related to its creation and dissemination (Fido et al., 2022). Further, it is clear from the extant literature that this area is ripe for research, policy, and education directed at curbing negative consequences of this potentially harmful behavior.

Implications

In terms of mechanisms to combat this type of digital sexual abuse, researchers should begin to focus on the time in life when these behaviors are just beginning to emerge (i.e., adolescence) and endeavor to understand the subjective norms and attitudes that underlie intentions for these behaviors as well as their consequences. This will facilitate empirically driven insights for sexual education programs regarding ways in which teens and young adults can protect themselves against online threats, including discussions of digital sexual abuse and deepfake pornography. Ideally, this programming would include discussions of the potential consequences (emotional, reputational, and legal) of these actions, which may help to deter potential perpetrators, who may not even grasp the possible long-range harm of their momentary decisions. In this case, education may help curb long-term, potentially fatal repercussions of these actions, such as the tragic example of Naperville teen, Corey Walgren, who took his own life hours after he was confronted in his school about creating a video of himself having sex with his classmate (CBS News, 2019). Educational programs focused on partner violence would also benefit from

modules on digital abuse and sexual consent, again focused on both victimization and perpetration.

In sum, researchers, educators, technology developers, and lawmakers must join forces now to start examining the roots of this behavior and creating technologies and policies that curb it before the path is too well worn to change course or the exploitation and manipulation of current systems leads to permanent digital remnants that cause harm to individuals worldwide.

COMMENTARY 2: AI-GENERATED SEXTING: A CALL TO ACTION FOR PARENT–CHILD DISCUSSION OF CONSENT, BY DOUGLAS ZYTKO, PHD

Background and motivation

Consent is the defining characteristic of various forms of sexual harm, meaning we can often differentiate harmful and nonharmful sexual experience based on whether the experience is consented to by all parties. For example, the Centers for Disease Control and Prevention (2024) in the United States defines sexual violence as “sexual activity when consent is not obtained or freely given” (para. 1). Likewise, in legal contexts consent is a key determinant of whether one has committed a sexual crime such as rape (Beres, 2007).

Parents have historically played an important role in sex education of their children to mitigate sexual violence (A. A. Rogers, 2017; Walker, 2004), particularly through discussion of consent (Mountford, 2020). This parental role is perhaps more essential than ever in the age of computer-mediated communication given the competing influence of technology on how children learn consent practices. For instance, online dating research shows that the act of using a dating app shapes how young people understand consent to sex in ways that can predispose them to becoming victims and perpetrators of sexual violence (Dietzel, 2024; Zytke et al., 2021). They may interpret one’s mere presence on a dating app *as* consent to sex, therefore alleviating the

perceived need to ask for permission to sex (Zytke et al., 2021); they may also blame themselves for sexual violence due to an understanding that dating apps are “for” sex, thus (perceptually) obligating them to engage in such behavior (p. 11).

AI-generated sexting adds a new layer of complexity to how young people understand and exchange consent to sexual activity online. Sexting is commonly defined as the “sending, receiving, or forwarding” of sexual imagery online (Klettke et al., 2014, p. 45). We thus define AI-generated sexting as the sending, receiving, or forwarding of sexual imagery that was created by generative AI. A theme in early discourse on AI-generated sexting is ambiguity in its legality and the appropriate recourse for those who create and distribute AI-generated sexual content (Belanger, 2023; Harwell, 2023; Nassau County District Attorney’s Office, 2023). Beyond knee-jerk demands of punishment for the unwanted circulation of AI-generated sexual imagery in one’s likeness, authorities struggle to identify precisely what harmful (or nonconsensual) action has occurred.

AI-generated sexting is itself a provocation to consent advocates and scholars spanning many fields through the following question: How should consent be obtained and shared with respect to AI-generated sexting? This question will likely be debated for years at national and global levels before prescriptive guidance finds its way into formal consent education and technology design. This puts the immediate responsibility on families for informal consent education by forming their own dialogue between parent and child about consent to creation and sharing of AI-generated imagery and associated behaviors.

Reflection: Parent–child discussion of consent to AI-generated sexual imagery

The process of creating and sharing AI-generated sexual imagery involves several steps, each with its own opportunity for parents to support calls for sexual imagery and consent education (Aznar-Martínez et. al., 2024) by discussing consent with their children.

Creating AI-generated sexual imagery

Apps for generating sexual imagery (colloquially called “nudify” apps) necessitate the uploading of images of the person who will be the basis of new AI-generated sexual content (Murphy, 2023). These images, which can be entirely nonsexual, serve to train the generative AI to create new sexual imagery in the person’s likeness. These images can be taken from a person’s public social media account without their awareness or consent. Parents should gauge their children’s understanding of the appropriateness of saving and reusing images of a person found online for purposes that said person may be uncomfortable with. For example, how would they feel if someone took images from their social media account and uploaded them to a nudify app?

Possessing AI-generated sexual imagery

It is important to differentiate the possession of AI-generated sexual imagery and the sharing of it, not least because a person may consent to one but not the other. For example, two adults who are dating may consent to their partner creating AI-generated sexual imagery in their likeness to facilitate sexual exploration and self-pleasuring, while also not wanting their partner to share such imagery with others. While the legality of possessing AI-generated sexual imagery is debated, parents could talk to their children about establishing consent to the *uses* of AI-generated sexual imagery that they may have received or created with their partner’s permission as well as consent concerning the deletion of such images.

Sharing AI-generated sexual imagery

Stories of AI-generated sexual imagery in popular media have mainly involved the sharing of such imagery with others without the awareness or consent of the person represented in the imagery, particularly in high schools (Belanger, 2023; Chavez, 2023; Llach, 2023). Parents could play an important role in discussing the role of consent when their children hear about or receive AI-generated sexual imagery in the likeness of another person. For example, they could remind their children to consider if the person represented in the imagery is aware of its existence and sharing, and how they may perpetuate a nonconsensual act by saving or sharing the imagery with others.

Implications

Framing AI-generated sexting as a matter of consent poses two particular provocations. One, it reveals the limitations and inadequacies of current “best practice” models on consent exchange. For example, affirmative consent is promoted across disciplines (Im et al., 2021), yet it was created in 1991 and makes no mention of the role technology should play in interpersonal consent exchange. AI-generated sexting is the latest reason why new, inherently computer-mediated models of consent are needed to serve as the basis not only in formal consent education in schools, but for at-home discussions of consent in familial settings. This must be an interdisciplinary effort between consent educators, human–computer interaction researchers, and legal scholars.

Two, it reveals the limitations and inadequacies in design of existing social platforms to support consent exchange to the creation and sharing of AI-generated imagery. Today’s social platforms lack features or mechanics to support users in asking for and giving consent to actions such as saving public social media photos, uploading those photos to a generative AI model, and sharing the resultant content with other people. Such features could complement at-home and

formal consent education by giving young people the tools to practice and maintain explicit consent around AI-generated sexual imagery. This realization necessitates a fundamental rethinking of how social technologies can be designed with consent exchange in mind.

COMMENTARY 3: AI-GENERATED IMAGES: LEGAL CONSIDERATIONS OF SEXTING AND SEXTORTION, BY KIMBERLY O’CONNOR, JD

Background and motivation

Navigating the intricate landscape of AI-generated sexting and sextortion requires a comprehensive understanding of the legal, technological, and ethical dimensions at play. As these issues become increasingly prevalent in the digital age, gaps in legislation, along with the continual emergence of new technology, leave individuals vulnerable to exploitation and harm. Additionally, concerns about the well-being of families, teens, and children underscore the diverse ramifications of these challenges and necessitate collaborative solutions across various domains. To tackle the legal implications of AI-generated sexting and sextortion effectively, a comprehensive approach requires collaboration among policymakers, online platforms, educators, and community support organizations.

Reflection

The absence of federal legislation specifically prohibiting the creation and distribution of AI-generated explicit content leaves technology users particularly vulnerable (Lucas & Collier, 2023). Although existing laws concerning privacy, cyberbullying, child pornography, sexting, and revenge porn offer some degree of protection, particularly in cases involving minors, these laws often fail to address the nuances of AI-generated content. This is likely attributable to the hurdles presented by a legislative process that is unable to keep pace with technological

Author Manuscript

advancements and that struggles with the complexities of AI algorithms and their role in content generation. Additionally, these types of laws are often narrowly tailored due to free speech concerns, meaning that laws must pass strict scrutiny by using the least restrictive means of achieving the state's goal of regulating online content (O'Connor et al., 2017). Consequently, the laws that are currently in place tend to focus on very specific types of human-generated digital material that is harmful or illegal, such as revenge porn and cyberbullying laws and address the intentional harm caused by individuals who use digital platforms to target and harass others. Most of these laws therefore do not consider the growing complexities of AI-generated content because the process of generating and sharing content can be accomplished without direct human intervention.

Whereas government intervention is limited by free speech protections, privately owned web-based companies have the authority to regulate content on their platforms (Wilkerson, 2021). Online platforms themselves could therefore easily, swiftly, and effectively address the current legislative gaps. Arguably, their limited efforts have fallen short. For example, the current process for removing AI-generated images is often complex and inefficient, leaving sexting and sextortion victims vulnerable to prolonged exposure of compromising content, which likely exacerbates the emotional and psychological harm they experience (O'Connor et al., 2017). Reform is therefore needed to streamline the process for identifying and removing AI-generated images and ensuring swift and effective protection for those impacted by online exploitation. This can be accomplished if web-based companies invest in AI detection tools, establish clear reporting mechanisms, implement rapid response protocols, and collaborate with law enforcement.

Recent state-level legislative efforts to hold social media sites accountable for safeguarding minors' access to the sites themselves show progress. However, it is imperative that efforts to regulate minors' access extend beyond age restrictions and parental consent. True accountability for AI-mediated exploitation must also be addressed. Similarly, recent congressional hearings have sought to hold social media sites accountable for their content and its impact on minors (Reader, 2024). These hearings have provided lawmakers with an opportunity to question executives from major social media platforms, such as Meta (Facebook, Instagram), TikTok, X (Twitter), and others, about their policies and practices related to data protection, algorithmic transparency, and efforts to combat harmful content (Ortutay & Hadero, 2024). Accordingly, robust enforcement mechanisms and penalties should be implemented to hold platforms accountable for failures to safeguard users from AI-mediated exploitation and other types of digital harm. Reinforcing state and federal initiatives that tackle not only traditional concerns over content and access, but also the nuanced challenges presented by AI-mediated exploitation will ensure a safer digital environment for all social media users.

Additionally, education emerges as a critical tool in empowering families, teens, and children to navigate the digital realm safely. Currently, a few states mandate digital literacy and responsible online behavior curriculum in schools, and some even educate students about AI-related topics (e.g., teaching students how to identify deepfakes, or digital manipulations of images, videos, or audio that appear to be authentic but are not). However, age-appropriate resources about AI-generated sexting, sexual coercion, sextortion, and other types of digital harm are likely limited and may not be comprehensive enough (Vasilogambros, 2024). There is therefore a pressing need to enhance and expand educational programs that will fully address the complexities of AI within K–12 schools.

Along with educational initiatives aimed at promoting digital literacy and responsible online behavior, parental awareness and understanding of the risks of AI-generated exploitation is paramount. Open communication within families can facilitate discussions about online threats and empower individuals to recognize and respond effectively to potential digital harm (Chawki, 2024). Comprehensive support systems are equally essential. Counseling services, legal assistance, and crisis intervention must be readily available to victims and their families, to perpetrators, and especially to teen perpetrators. These support networks play a vital role in addressing the psychological and emotional toll of digital exploitation.

Implications

Reflecting on the implications of AI-generated sexting and sextortion underscores the urgent need for action. By fostering awareness, implementing preventive measures, and amending existing or creating new laws to address technological advancements, we can better safeguard the rights and well-being of individuals in an increasingly digitized world. It is especially incumbent upon legal professionals and advocates for justice to lead the charge in protecting vulnerable populations from the harms of AI-generated sexting and sextortion. Criminal and civil liability, as well as platform accountability, need to be addressed by state and federal law. Through collaborative efforts such as these, we can better navigate the challenges posed by AI-mediated exploitation and build a safer digital future for all technology users.

DISCUSSION

As highlighted by the commentaries, the erosion of trust has deleterious consequences on both individuals and families. The negative psychological impacts of sextortion, as highlighted in the first commentary, are potentially further exacerbated via the undermining of trust through the removal of consent when sexual images are created using generative AI. As discussed, our

current technical systems can lead to permanent digital artifacts (e.g., a photo that stays on a website) that can continue to cause harm, possibly revictimizing individuals throughout the course of a lifetime. A recent legal review of Canadian case law highlights that digital technologies significantly impact the scalability, replicability, persistence, and searchability related to nonconsensual intimate image distribution (Dodge, 2019). This will only further be exacerbated by the rapid evolution of underlying technologies in the years to come (Martínez et al., 2024). The ability to have your likeness created and distributed without your knowledge erodes the privacy boundaries that individuals construct between their private and public information, and the fact that they are not able to actively decide on and manage those boundaries further erodes trust and could have negative impacts on future decisions around sharing information (Kahlow, 2020).

A key concern raised by all commentaries is the escalation of technology-mediated abuse within modern instances of intimate partner violence (M. M. Rogers et al., 2023). Though the rise in generative AI has opened the windows to explore innovative applications and creative possibilities, it has also brought forth critical discussions about ethical boundaries and potential risks, particularly in sensitive areas like sexting. Technologies like generative AI enable perpetrators to create harmful and deceptive images using someone's likeness, which introduces a more insidious form of online abuse. This allows individuals to be targeted and victimized through the distribution of fabricated and compromising content without their consent or knowledge. Research into the psychological effects of online image-based sexual abuse or sextortion has uncovered risks such as feelings of isolation, disconnection, and mistrust toward others, as well as heightened symptoms of depression and anxiety (Hong et al., 2020; Huber, 2023). Although investigations into generative AI in the context of sextortion are still emerging,

similar risks and potential harm are expected to extend to victims of sexual deepfake and digitally altered imagery. Further research is essential to understand the effects of nonconsensual acts around sexting and potentially sextortion, uncertainty about the perpetrator's identity, and the enduring public nature of digital violence on victims. Understanding the prevalence and incidence rates of these types of events is a missing critical component that needs to be assessed. Given the complex layers of ambiguity surrounding this issue, it is crucial to explore how these factors influence an individual's capacity to form relationships and the ability to cultivate or sustain trust.

Unfortunately, the adoption of generative AI for creating nonconsensual intimate imagery has transitioned from personal exploitation to commercialization. According to a recent report, a group of 34 providers monetizing synthetic NCII attracted over 24 million unique visitors to their websites in September 2023 (Lakatos, 2023). The report posited it is the widespread availability of open-source AI image diffusion models that allows providers to create cheap NCII with ease. This raises ethical concerns around the commercial use of generative AI technology and its potential relationship with increased sexual violence against women. Does the use of platforms that employ advertising slogans like "Undress Any Girl You Want" have a correlation with the recent uptick in sexual violence against women (Obeng, 2022)? This prompts questions about the true motivations behind developing such technologies and the potential for harmful manipulation and misuse that these technologies may enable. The third commentary highlights tensions in the United States concerning free speech, legal precedents, and the challenges posed by policies and laws struggling to keep pace with rapid technological advancements. Such harmful adaptation of powerful technologies can further exacerbate these tensions. Within the United States, how can coordination across federal, state, and local governments help address these life-altering issues?

What roles do regulatory bodies like the Federal Trade Commission play? As previously mentioned, this issue is not contained within the United States. Therefore, how do aspects like expectations of privacy, legal recourse, and cultural norms impact this discussion and what could potentially be done at a supranational level?

Clearly, these technologies are here to stay, are advancing rapidly, and parents and families must find ways to be informed and prepared. Similar to the American Academy of Pediatrics (Hill et al., 2016), we recommend that families have regular discussions regarding technology use, its potential meaning and effects on their lives, and etiquette and responsible use of technology. Parents should also not assume that every company or app has a vested interest in keeping their child safe. For example, with the rapid development of and integration of AI into apps, parents need to monitor and interact with the apps their children use so that they also understand the features of such apps—what a surprise it might be to find a certain app that a child or teenager thought was simply a virtual friend began generating and sending them sexualized images! Parents need to communicate and explore their values and expectations with their children, especially teenagers, regarding love, romance, sex, sexual exploration, healthy relationships, and the kinds of behaviors that will lead to healthy, strong relationships over time (such as trust and consent). We plead for families to discuss and be aware of the potential for AI-generated sexualized images to be created from the images one posts online. Indeed, the FBI noticed an increase in April 2023 in sextortion happening to victims using “fake images or videos created from content posted on their social media sites or web postings” (FBI, 2023, para. 4). Some of their recommendations include (a) monitoring children’s online habits, (b) discussing the risks of posting or sharing personal images or content online, (c) making social media accounts private, (d) securing accounts with strong passwords, and (e) regularly searching

for information about oneself and one's children online. Additionally, parents should teach their children that the creation and possession of child pornography, which could also be termed "child sexual abuse material," is illegal, and this includes "realistic computer-generated images" or "material created by generative AI" (FBI, 2024). In other words, unless they are taught, children and teenagers may unwittingly be exposed to or create illegal images, which could have serious ramifications for the child's life. Parents also need the support of federal, state, and local agencies to better help educate them on these emerging threats and what resources are available to them if they find these types of issues impacting their families.

The unprecedented digital vulnerability that generative AI-based sexting and sextortion represents will likely bring new types of victimization. In this commentary, we provided distinct points of view related to the risks and potential harms of the new trend to create nude images using generative AI. We also highlighted areas where future work is essential for understanding the impacts on the individual, relationships, societal norms, and the policies and laws that govern the development and use of this emerging technology. Continued vigilance is needed as technological advancements continue to transform this concept and its potential impacts, and we must also work with families to assist them in understanding, mitigating, and managing these technological developments and potential harms.

REFERENCES

- Aznar-Martínez, B., Lorente-De-Sanz, J., López-i-Martín, X., & Castillo-Garayoa, J. A. (2024). Pornography and gender-based violence: Two neglected topics in sexuality education. A systematic review. *Sex Education*. Advance online publication.

Bates, S. (2017). Revenge porn and mental health: A qualitative analysis of the mental health effects of revenge porn on female survivors. *Feminist Criminology*, 12(1), 22–42.

<https://doi.org/10.1177/1557085116654565>

Belanger, A. (2023, June 20). *Thousands of realistic but fake AI child sex images found online, report says*. ArsTechnica. <https://arstechnica.com/tech-policy/2023/06/thousands-of-realistic-but-fake-ai-child-sex-images-found-online-report-says/>

Beres, M. A. (2007). Spontaneous' sexual consent: An Analysis of sexual consent literature. *Feminism & Psychology*, 17(1), 93–108. <https://doi.org/10.1177/0959353507072914>

CBS News. (2019, August 31). *Suit settled in Naperville teen suicide that led to Illinois law change*. <https://www.cbsnews.com/chicago/news/suit-settled-in-naperville-teen-suicide/>

Centers for Disease Control and Prevention. (2024). *About sexual violence*.

<https://www.cdc.gov/sexual->

[violence/about/?CDC_AAref_Val=https://www.cdc.gov/violenceprevention/sexualviolence/fastfact.htm](https://www.cdc.gov/violenceprevention/sexualviolence/about/?CDC_AAref_Val=https://www.cdc.gov/violenceprevention/sexualviolence/fastfact.htm)

Chavez, B. (2023, November 9). *No charges as AI-generated nude pictures of female students circulate around Issaquah school*. KIRO News 7. <https://www.kiro7.com/news/local/no-charges-ai-generated-nude-pictures-female-students-circulate-around-issaquah-school/MCQTOKWRVREPTK3K2IAQWTRR6U/>

Chawki, M. (2024). Navigating the legal challenges of deepfakes in the American context: A call to action. *Cogent Engineering*, 11(1), Article 2320971.

<https://doi.org/10.1080/23311916.2024.2320971>

- Dietzel, C. (2024). Clickable consent: How men who have sex with men understand and practice sexual consent on dating apps and in person. *The Journal of Sex Research*, 61(3), 481–494. <https://doi.org/10.1080/00224499.2023.2235584>
- Dodge, A. (2019). Nudes are forever: Judicial interpretations of digital technology's impact on "revenge porn." *Canadian Journal of Law and Society*, 34(1), 121–143. <https://doi.org/10.1017/cls.2019.4>
- Drouin, M., Coupe, A., & Temple, J. R. (2017). Is sexting good for your relationship? It depends. *Computers in Human Behavior*, 75, 749–756. <https://doi.org/10.1016/j.chb.2017.06.018>
- Drouin, M., & Landgraff, C. (2012). Texting, sexting, and attachment in college students' romantic relationships. *Computers in Human Behavior*, 28(2), 444–449. <https://doi.org/10.1016/j.chb.2011.10.015>
- Drouin, M., Ross, J., & Tobin, E. (2015). Sexting: A new, digital vehicle for intimate partner aggression? *Computers in Human Behavior*, 50, 197–204. <https://doi.org/10.1016/j.chb.2015.04.001>
- Elsesser, K. (2023, December 8). Apps that undress women's photos surge in popularity. What could go wrong? *Forbes*. <https://www.forbes.com/sites/kimelsesser/2023/12/08/apps-that-undress-womens-photos-surge-in-popularity-what-could-go-wrong/?sh=6af934f823d3>
- FBI. (2023, June 5). *Malicious actors manipulating photos and videos to create explicit content and sextortion schemes* (Alert No. I-060523-PSA).
- FBI. (2024, March 29). *Child sexual abuse material created by generative AI and similar online tools is illegal* (Alert No. 032924-PSA).

Fido, D., Rao, J., & Harper, C. A. (2022). Celebrity status, sex, and variation in psychopathy predicts judgements of and proclivity to generate and distribute deepfake pornography.

Computers in Human Behavior, 129, Article 107141.

<https://doi.org/10.1016/j.chb.2021.107141>

Fui-Hoon Nah, F., Zheng, R., Cai, J., Siau, K., & Chen, L. (2023). Generative AI and ChatGPT:

Applications, challenges, and AI-human collaboration. *Journal of Information*

Technology Case and Application Research, 25(3), 277–304.

<https://doi.org/10.1080/15228053.2023.2233814>

Hall, M., Hearn, J., & Lewis, R. (2023). Image-based sexual abuse: Online gender-sexual

violations. *Encyclopedia*, 3(1), 327–339. <https://doi.org/10.3390/encyclopedia3010020>

Harwell, D. (2023, June 19). AI generated images of child sexual abuse are on the rise.

Washington Post. <https://www.washingtonpost.com/technology/2023/06/19/artificial-intelligence-child-sex-abuse-images/>

Hill, D., Ameenuddin, N., Chassiakos, Y. L. R., Cross, C., Radesky, J., Hutchinson, J., Levine,

A., Boyd, R., Mendelson, R., Moreno, M. A., Smith, J., & Swanson, W. S. (2016). Media use in school-aged children and adolescents. *Pediatrics*, 138(5), Article e20162592.

<https://doi.org/10.1542/peds.2016-2592>

Hinduja, S., & Patchin, J. W. (2010). *Sexting: A brief guide for educators and parents*.

Cyberbullying Research Center.

Hong, S., Lu, N., Wu, D., Jimenez, D. E., & Milanaik, R. L. (2020). Digital sextortion: Internet

predators and pediatric interventions. *Current Opinion in Pediatrics*, 32(1), 192–197.

<https://doi.org/10.1097/MOP.0000000000000854>

- Huber, A. (2023). 'A shadow of me old self': The impact of image-based sexual abuse in a digital society. *International Review of Victimology*, 29(2), 199–216.
<https://doi.org/10.1177/02697580211063659>
- Im, B., Dimond, J., Berton, M., Lee, U., Mustelier, K., Ackerman, M. S., & Gilbert, E. (2021). Yes: Affirmative consent as a theoretical framework for understanding and imagining social platforms. *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems*, Article 403. <https://doi.org/10.1145/3411764.3445778>
- Kahlow, J. A. (2020). The influence of technology on privacy boundary management in young adults' sexting relationships: A communication privacy management perspective. In R. Kalish (Ed.), *Young adult sexuality in the digital age* (pp. 73–93). IGI Global.
<https://doi.org/10.4018/978-1-7998-3187-7.ch005>
- Klettke, B., Hallford, D. J., & Mellor, D. J. (2014). Sexting prevalence and correlates: A systematic literature review. *Clinical Psychology Review*, 34(1), 44–53.
<https://doi.org/10.1016/j.cpr.2013.10.007>
- Lakatos, S. (2023). *A revealing picture: AI-generated 'undressing' images move from niche pornography discussion forums to a scaled and monetized online business*. Graphika.
<https://graphika.com/reports/a-revealing-picture>
- Llach, L. (2023, September 24). *Naked deepfake images of teenage girls shock Spanish town: But is it an AI crime?* EuroNews. <https://www.euronews.com/next/2023/09/24/spanish-teens-received-deepfake-ai-nudes-of-themselves-but-is-it-a-crime>
- Lucas, J., & Collier, E. (2023, October 19). *Confront AI threats with more consistent federal legislation*. Bloomberg Law. <https://news.bloomberglaw.com/us-law-week/confront-ai-threats-with-more-consistent-federal-legislation>

Martínez, G., Watson, L., Reviriego, P., Hernández, J. A., Juárez, M., & Sarkar, R. (2024).

Towards understanding the interplay of generative artificial intelligence and the internet.

In F. Cuzzolin & M. Sultana (Eds.), *Epistemic uncertainty in artificial intelligence* (pp. 59–73). Springer. https://doi.org/10.1007/978-3-031-57963-9_5

McGlynn, C., Johnson, K., Rackley, E., Henry, N., Gavey, N., Flynn, A., & Powell, A. (2021).

“It’s torture for the soul”: The harms of image-based sexual abuse. *Social & Legal Studies*, 30(4), 541–562. <https://doi.org/10.1177/0964663920947791>

Morelli, M., Urbini, F., Bianchi, D., Baiocco, R., Cattelino, E., Laghi, F., Sorokowski, P.,

Misiak, M., Dziekan, M., Hudson, H., Marshall, A., Nguyen, T. T. T., Mark, L.,

Kopecky, K., Szotkowski, R., Demirtas, E. T., Ouystel, J. V., Ponnet, K., Walrave, M.,

... Chirumbolo, A. (2021). The relationship between dark triad personality traits and sexting behaviors among adolescents and young adults across 11 countries. *International Journal of Environmental Research and Public Health*, 18(5), Article 2526.

<https://doi.org/10.3390/ijerph18052526>

Mori, C., Choi, H. J., Temple, J. R., & Madigan, S. (2021). Patterns of sexting and sexual

behaviors in youth: A latent class analysis. *Journal of Adolescence*, 88(1), 97–106.

<https://doi.org/10.1016/j.adolescence.2021.01.010>

Mori, C., Cooke, J. E., Temple, J. R., Ly, A., Lu, Y., Anderson, N., Rash, C., & Madigan, S.

(2020). The prevalence of sexting behaviors among emerging adults: A meta-analysis.

Archives of Sexual Behavior, 49(4), 1103–1119. <https://doi.org/10.1007/s10508-020-01656-4>

Mori, C., Park, J., Temple, J. R., & Madigan, S. (2022). Are youth sexting rates still on the rise? A meta-analytic update. *Journal of Adolescent Health, 70*(4), 531–539.

<https://doi.org/10.1016/j.jadohealth.2021.10.026>

Mountford, M. (2020). Beyond yes and no: Practising consent in children's everyday lives. In S. Frankel & S. McNamee (Eds.), *Bringing children back into the family: Relationality, connectedness and home* (pp. 73–94). Emerald Publishing.

<https://doi.org/10.1108/S1537-466120200000027006>

Murphy, M. (2023, December 8). 'Nudify' apps that use AI to 'undress' women in photos are soaring in popularity. *Time*. <https://time.com/6344068/nudify-apps-undress-photos-women-artificial-intelligence/>

Nassau County District Attorney's Office. (2023, April 18). Seaford man sentenced to jail and 10 years' probation as sex offender for 'deepfaked' sexual images [Press release].

<https://www.nassauda.org/CivicAlerts.aspx?AID=1512>

Obeng, C. (2022, May 19). *The shadow pandemic: Violence against women and girls*. Women's Health Education Program, Drexel University.

<https://drexel.edu/medicine/academics/womens-health-and-leadership/womens-health-education-program/whpe-blog/the-shadow-pandemic-violence-against-women-and-girls/>

O'Connor, K., Drouin, M., Yergens, N., & Newsham, G. (2017). Sexting legislation in the United States and abroad: A call for uniformity. *International Journal of Cyber*

Criminology, 11(2), 218–245. <https://doi.org/10.5281/zenodo.1037397>

O'Malley, R. L., & Holt, K. M. (2022). Cyber sextortion: An exploratory analysis of different perpetrators engaging in a similar crime. *Journal of Interpersonal Violence, 37*(1-2),

258–283. <https://doi.org/10.1177/0886260520909186>

Ortutay, B., & Hadero, H. (2024, January 31). *Meta, TikTok, and other social media CEO's testify in heated Senate hearing on child exploitation*. AP News.

<https://apnews.com/article/meta-tiktok-snap-discord-zuckerberg-testify-senate-00754a6bea92aaad62585ed55f219932>

Pashang S., Khanlou N., & Clarke J. (2019). The mental health impact of cyber sexual violence on youth identity. *International Journal of Mental Health and Addiction*, 17(5), 1119–1131. <https://doi.org/10.1007/s11469-018-0032-4>

Patel, U., & Roesch, R. (2022). The prevalence of technology-facilitated sexual violence: A meta-analysis and systematic review. *Trauma, Violence & Abuse*, 23(2), 428–443. <https://doi.org/10.1177/1524838020958057>

Powell, A., Scott, A. J., Flynn, A., & McCook, S. (2022). Perpetration of image-based sexual abuse: Extent, nature and correlates in a multi-country sample. *Journal of Interpersonal Violence*, 37(23-24), NP22864–NP22889. <https://doi.org/10.1177/08862605211072266>

Reader, R. (2024, January 13). *States get serious about limiting kids' social media exposure*. Politico. <https://www.politico.com/news/2024/01/13/kids-online-states-social-media-00135390>

Rogers, A. A. (2017). Parent–adolescent sexual communication and adolescents' sexual behaviors: A conceptual model and systematic review. *Adolescent Research Review*, 2, 293–313. <https://doi.org/10.1007/s40894-016-0049-5>

Rogers, M. M., Fisher, C., Ali, P., Allmark, P., & Fontes, L. (2023). Technology-facilitated abuse in intimate relationships: A scoping review. *Trauma, Violence, & Abuse*, 24(4), 2210–2226. <https://doi.org/10.1177/15248380221090218>

Sciacca, B., Mazzone, A., Loftsson, M., O'Higgins-Norman, J., & Foody, M. (2023).

Nonconsensual dissemination of sexual images among adolescents: Associations with depression and self-esteem. *Journal of Interpersonal Violence*, 38(15-16), 9438–9464.

<https://doi.org/10.1177/08862605231165777>

Sexting laws across America. (2022). Cyberbullying Research Center.

<https://cyberbullying.org/sexting-laws>

Sharp, J. (2024, March 8). *5 Beverly Hills middle school students expelled following AI-generated nude photo scandal*. CBS News. <https://www.cbsnews.com/losangeles/news/5-beverly-hills-middle-school-students-expelled-following-ai-generated-nude-photo-scandal/>

Thorne, E., Babchishin, K. M., Fisico, R., & Healey, L. (2024). Sexting in young adults: A normative sexual behavior. *Archives of Sexual Behavior*, 53(2), 593–609.

<https://doi.org/10.1007/s10508-023-02728-x>

Vasilogambros, M. (2024, January 23). *Some states want to help students question social media, news*. Government Technology. <https://www.govtech.com/education/k-12/some-states-want-to-help-students-question-social-media-news>

Walker, J. (2004). Parents and sex education—Looking beyond ‘the birds and the bees.’ *Sex*

Education, 4(3), 239–254. <https://doi.org/10.1080/1468181042000243330>

Wilkerson, J. J. (2021). Revenge porn: State laws, constitutional challenges, and the progress of federal legislation. *University of Louisville Legal Review*, 60(2), 301–330.

Yeo, S., & GMA Team. (2023, November 6). *Teen and mother speak out after alleged AI-generated photos sent around high school*. ABC News.

<https://abcnews.go.com/GMA/Family/teen-mother-speak-after-alleged-ai-generated-photos/story?id=104653622>

Yepez-Tito, P., Ferragut, M., & Blanca, M. J. (2020). Sexting in adolescence: The use of technology and parental supervision. *Revista Latinoamericana de Psicología*, 52, 115–130. <https://doi.org/10.14349/rlp.2020.v52.12>

Zytka, D., Furlo, N., Carlin, B., & Archer, M. (2021). Computer-mediated consent to sex: The context of Tinder. *Proceedings of the ACM on Human-Computer Interaction*, 5(CSCW1), Article 189. <https://doi.org/10.1145/3449288>