



**UNDERSTANDING A CONTEXT OF RISK:
PORNOGRAPHY AND CHILD SEXUAL ABUSE**

CULTURE REFRAMED

SOLVING THE PUBLIC HEALTH CRISIS OF THE DIGITAL AGE

Understanding a Context of Risk: Pornography and Child Sexual Abuse

Dr. Jennifer A. Johnson, Virginia Polytechnic Institute and State University

Dr. Ana Bridges, University of Arkansas

Dr. Matthew Ezzell, James Madison University

Dr. Chyng-Feng Sun, New York University

Sarah Aadahl, Virginia Polytechnic Institute and State University

Gianna Amabile, Virginia Polytechnic Institute and State University

Callen Leahy, Virginia Polytechnic Institute and State University

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Introduction

A significant number of children experience sexual abuse globally and, increasingly, the perpetrators of that abuse are other children (*DeLago et al., 2020; D’Inverno et al., 2021*). Most victims are female, most victimizers are male, and a majority of both victims and victimizers will experience repeated sexual assault trauma throughout their lifetime, as well as higher rates of depression, anxiety, PTSD, drug abuse, and increased chances of suicide (*D’Inverno et al., 2021; Federal Bureau of Investigation, 2021; Papalia et al., 2021*). These victimizations take place within a technological-industrial landscape that facilitates hyper access to violent pornography for anyone, of any age, at almost any time (*Wright et al., 2018*). Pornography is now a normative experience among adolescents. An overwhelming majority of adolescents (90+% of boys and 60+% of girls) are exposed to pornography at some point in their teenage years (*Lamb & Koven, 2019*) with 11 being the average age of first exposure, usually on a digital device accessible within the home (*Allen & Lavender-Stott, 2015; Mattebo, et al, 2016; Wolak et al., 2006*). Pornography is now considered a primary source of sexual education among adolescents (*Peter & Valkenburg, 2016*). Given that pornography has repeatedly been shown to impact sexual behavior in myriad ways (*Marshall et al., 2021*), including sexual violence (*Burton et al., 2010*), we ask the question of whether pornography plays a role in the sexual abuse of children, particularly by other children, and, if so, what role does it play.

Through a selective literature search, compiling information from over three dozen articles, we review ways pornography and child sexual abuse may be associated. We begin with an overview of child sexual abuse including rates and observed patterns among victims and perpetrators. We then provide an overview of the techno-economic structure of digital pornography in order to provide context for understanding how pornography may shape the sexual behaviors of children and adolescents. We then methodically identify various themes that outline ways in which pornography may play a complex role in child sexual abuse. Given the damage and trauma that is created by childhood sexual abuse, as well as the increasing rates of pornography use by children and teens, we believe that it is vital to the health of children and families to ensure an accurate understanding of these possible connections.

Child Sexual Abuse: Prevalence Rates and Patterns

The United Nations Children’s Fund (UNICEF) has estimated that 1 in 8 children or 12.7% around the world will be sexually abused before they reach the age of 18 (*Radford et al., 2020*) with an average age of victimization of 14 (*Radford et al., 2020; Wahid Satar et al., 2021*) In the United States, studies show that approximately 18% of girls and 7% of boys will experience childhood sexual abuse (*DeLago et al., 2020; Stoltenborgh et al., 2011, 2015*). Research is somewhat mixed on whether these numbers represent increasing or decreasing overall patterns. When hospital records are analyzed, emergency room

admissions show increasing reports of child sexual abuse (*D'Inverno et al., 2021; Helton et al., 2020*). However, other data sources, including crime data and self-report data, indicate that the sexual abuse of children is declining (*Finkelhor & Jones, 2006, 2012*). While methodological differences in data collection present problems for establishing generalizable patterns in prevalence rates, other patterns are quite clear and consistent across all studies (*Radford et al., 2020*).

The most clear and consistent pattern is that child sexual abuse is gendered and does not fall evenly across groups of children. Girls are significantly more likely to be victimized than boys and boys are significantly more likely to be victimizers than girls. Finkelhor (2014) found that 26.6% of 17-year-old girls had experienced sexual assault in their lifetime as compared to 5.1% of boys. Girls are more likely to be abused by a known family member while boys are more likely to be abused by a known non-family person (*Plummer & Cossins, 2018; Wahid Satar et al., 2021*). Furthermore, men and male adolescents are overwhelming responsible for most acts of child sexual assault (*Plummer & Cossins, 2018*) with some recent research showing that male adolescents aged 10-17 are responsible for upwards of 65% of child sexual abuse contacts (*Malvaso et al., 2020*). Boys who experience child sexual abuse are six times more likely to perpetrate sexual abuse behaviors later in life than boys who do not experience childhood sexual abuse (*DeLisi et al., 2014*). This cycle of abuse is present for boys but not for girls (*Plummer and Cossins, 2018*).

These gender patterns intersect with other axes of vulnerability. Other vulnerable children are also at higher risk including lesbian, gay, bisexual, transgender, queer, and other (LGBTQ+) youth (*Schneeberger et al., 2014; Wilsnack et al., 2012*), foster children (*Steenbakkers et al., 2018*), and children with disabilities (*Helton et al., 2018*). The possibly heightened vulnerabilities that lie at the intersections of gender, sexuality, disability, and family stability can place some boys at greater risk than others (*Radford et al., 2020*). Additionally, the normative practices of patriarchal masculinity may dissuade boys of all intersecting identities from disclosing sexual abuse, thus depressing the measured rates of abuse (*Allnock & Atkinson, 2019*).

One of the most troubling patterns emerging in the research relates to the increasing number of younger children (under the ages of 12-14) involved in perpetrating child sexual assault. Clinical and legal studies are reporting greater numbers of preteen children demonstrating interpersonal problematic sexual behaviors that intrude on the physical space and security of other children (*Friedrich et al., 2006; Swisher et al., 2008*). In one study, children around the average age of 10 perpetrated over one-third of the inappropriate sexual contact experienced by other children, with boys being responsible for 83% of those encounters (*DeLago et al., 2020*). Research has documented that family adversity, prior sexual and/or physical abuse, exposure to domestic violence, and mental health struggles all play a role in explaining child-perpetrated sexual abuse (*DeLago et al., 2020; Friedrich et al., 2006; Smith et al., 2019*).

Child sexual abuse has both immediate and long-term ramifications for all victims. Immediate effects include significant negative cognitive and mental health consequences including depression, anxiety, posttraumatic stress disorder, and suicidal ideation (*Barrera et al., 2013; Olafson, 2011; Russell et al., 2020*). Longer term impacts include similar negative mental health costs as well as detrimental impacts on multiple adult roles including parenting, employment, and interpersonal relationships (*de Jong et al., 2015; Russell et al., 2020*). Additionally, revictimization rates are quite high. An overwhelming majority of child victims will be victimized multiple times (*D’Inverno et al., 2021; Wahid Satar et al., 2021*) and those who have experienced child sexual abuse are 2-3 times more likely to experience sexual abuse as an adult than those who have never experienced sexual abuse as children (*Arata, 2002*).

Pornography and Child Sexual Abuse

Most relevant to the purpose of this paper is the role of exposure to sexually explicit media as one of the explanatory variables in child sexual abuse. A meta-analysis of 22 studies demonstrates that exposure to pornography, particularly violent pornography, is significantly associated with increased rates of sexual aggression in the general population (*Wright et al., 2016*). Given that the average age of first exposure to pornography is age 11 (*Wolak et al., 2006*), it is important to begin to consider what role, if any, pornography may play in child sexual abuse, particular if perpetrated by children. Several studies have included sexually explicit media as a contributing factor for child-perpetrated sexual abuse. For example, DeLago et al (2020) examined the medical charts of 218 children who had perpetrated problematic sexual behavior with other children in order to identify patterns among initiators. Among other patterns, they found that 58% of the children under the age of 13 had been exposed to sexually explicit media and 72% of those older than 13 had been exposed. While not measuring sexually explicit media directly, Friedrich (2006) found that exposure to adult sexually explicit media is a contributing factor to children initiating problematic sexual behaviors onto other children. Other research has also documented high levels of pornography consumption as a contributing factor to child perpetrated sexual abuse (*Yoder et al., 2018; Smith et al., 2019*).

Several studies have directly explored pornography’s impact on sexually aggressive behaviors among children and teenagers. Using longitudinal data, results demonstrated that exposure to pornography, particularly violent pornography, plays a strong role in the etiology of sexual violence perpetration (*Ybarra & Thompson, 2018; Ybarra et al., 2014*), creating an almost six-fold increase in the odds of self-reporting sexually aggressive behaviors towards others (*Ybarra et al., 2011*). While other factors including caregiver bonds, prior sexual or physical victimization, and various psychosocial variables moderated the strength of the relationship, pornography remained a significant predictor of violence perpetration among 10–15-year-olds, doubling the chances of sexual violence perpetration (*Ybarra et al., 2011*). One of the conclusions of each of these studies was a call for a more nuanced understanding of how pornography shapes the sexual attitudes,

behaviors, and choices of children in order to better design more effective intervention strategies for preventing child perpetrated sexual abuse.

Purpose and Method

The aim of this white paper is to provide more detailed discussion of the various ways in which pornography may play a role in child sexual abuse, including child perpetrated sexual abuse. We begin with a discussion of how the technological underpinnings of the pornography industry create a context of risk that can accelerate children and adolescent sexual growth and development beyond what they are emotionally capable of processing. We then outline four key ways that pornography can put children at risk for child sexual abuse, either as the victim or as the perpetrator. First, pornography is highly present in the everyday lives of children, the content of which depicts risky behaviors and choices. Second, pornography eroticizes child-like imagery and behavior thus grooming children and adolescents to see themselves as both sexual objects and sexual initiators. Thirdly and fourthly, this grooming creates risk in relationships whereby children and adolescents may misinterpret behavioral expectations for sexual experiences, underestimate the consequences of those misinterpretations, and perpetrate abusive behavior, wittingly or unwittingly, including the making of child pornography.

We focus our review on the role of pornography in the everyday lives of children and adolescents as well as the legal and safety implications of pornography on the lives of children and adolescents. We use the term 'risk' in the same way that the term is used in health literature. As defined by the National Institutes of Health (2016):

A health risk is the chance or likelihood that something will harm or otherwise affect your health. Risk doesn't mean that something bad will definitely happen. It's just a possibility. Several characteristics, called risk factors, affect whether your health risks are high or low.

To use the term 'risk' in discussing pornography is to acknowledge that pornography plays a role in the complex situational, personal, interpersonal, and societal factors that shape the chances of child sexual abuse. Risk does *not* mean causal; we are not saying that pornography causes child sexual abuse. The content and themes outlined below are meant to provide health and front-line workers with a strong understanding of the ways in which exposure to pornography, as a prevalent experience for children and adolescents, may contribute to the chances of children being victimized and/or becoming victimizers.

The themes and key topics were identified by the research team using the THOMAS method, with some modifications to organize the information (Agmon, 2018). The THOMAS method of literature collection is a mnemonic tool, with each of the letters standing for: Topic, Histogramy, Organization, Methodology, Arguments, and Significance (Agmon, 2018). As the team began to amass literature on a variety of topics, we modified the

THOMAS method to include categories for the main themes of each piece, in addition to “tier” ranking the articles on a scale of 1 to 3. Articles ranked in tier 1 were most closely related and significant to the project, while articles ranked in tier 3 had relevant information, but potentially were not studies directly related to the project. Additionally, as relevant themes emerged through research team discussions and coding of early interviews with front-line workers providing services to child victims of sexual assault, those themes became search topics to be added to our collection and review of literature.

The Pornography Industry: Creating a Context of Risk

Over the past 25 years, the scope, content, and influence of pornography has radically changed. No longer confined to backroom interludes or hidden magazines, pornography now proliferates the mainstream culture through free, easily accessible, digital content. This proliferation is driven almost exclusively by the rise of the internet and the corresponding birth of the modern digital pornography industry (*Tarrant, 2016*). Pornography is, at its core, a commercial artifact organized and driven by technological development (*Johnson, 2011; Rohlinger et al., 2021*). Contrary to conventional wisdom, it is not a reflection of innate sexual desires, personal choice, or the politics of free speech. Instead, digital pornography is an industrial product that occupies an estimated 4%-20% of digital media (*Buchholz, 2019; Kamvar & Baluja, 2006; Ogas and Gaddam, 2011*). The company that dominates the modern digital pornography industry is Mindgeek.com, a multi-national, privately held technology company that bills itself as an industry leader in web design, information technology (IT), web development, and search engine optimization. Mindgeek.com reports that its sites receive 115 million daily visitors who browse 15 terabytes of pornographic material while being exposed to three billion advertising impressions.

Managing this amount of digital material is accomplished through software development and a mastery of algorithms and online analytics designed to consolidate and monetize content into easily accessible niches of very specialized, graphic, and visceral sexualized behaviors (*Auerback, 2014; Johnson et al., 2019; Paasonen, 2010*). Algorithms, bots, and financial and user-surveillance software aggregate and curate ostensibly ‘free’ content into hypersexualized niches in order to monetize personal data and viewing habits, and/or capture some form of profit, either through clicks, advertising, or purchases. Presentation of content is prioritized, either on websites or in search results, based on its effectiveness at generating profit. Thus, the most easily accessible digital pornography is that which is hyper-sexualized and tailored to maximize profitability.

There are several important consequences for children whose first sexual encounter will most likely be with a digital pornography landscape that is more corporate and technological than personal and sexual. First, presentation of content that is curated by bots and algorithms designed to maximize profit skews the most easily accessible material

towards the sexual interests of the most experienced and invested users. Research shows that high-frequency users are more likely to demonstrate high-risk personality traits, high risk patterns of sexual behaviors, and a greater likelihood of violence (*Johnson et al., 2019; Willis et al., 2020; Grubbs et al., 2019*). This technological reality raises serious concerns about the impact on the sexual development of children and adolescents whose first exposure to sex will be curated by the tastes of high-risk users.

A second set of concerns pertain to issues of privacy and transparency. MindGeek.com operates one of the most sophisticated digital data collection and analysis operations on the web, collecting more user data than Netflix and Hulu combined (*Hassan, 2018*). AI facial recognition of performers is being used to provide more nuanced curation of content for users (*Vincent, 2017*) and push marketing on social media such as Snapchat and Instagram is used to target adolescents (*Berr, 2018*). MindGeek has acknowledged that 80% of the content collected and curated by bots and algorithms comes from unverifiable sources (*Cole, 2021*) and has admitted that content featuring underage teenagers and child pornography is present on its websites (*Caruso-Moro, 2021*). Additionally, the pornography industry has an extensive presence on social media platforms such as Instagram, SnapChat, TikTok, Reddit, and OnlyFans, most of which takes place out of the sight of parents and adults and is difficult to monitor in terms of content and legal boundaries (*National Center on Sexual Exploitation of Children, 2021; Karamizadeh & Arabsorkhi, 2018*). Again, the technological underpinnings of digital pornography create risk for all children but are even more acute for vulnerable children who face co-morbid risk factors.

Theme 1: Pornography in the Everyday Lives of Children

One of the primary ways in which pornography contributes to risk of child sexual abuse is through the proliferation of the pornographic script in the everyday lives of young people. Pornography is now a ubiquitous experience; an overwhelming majority of both boys and girls have been exposed to pornography by age 17, with the average first exposure occurring in middle school, before their first romance and well before their first sexual encounter (*Allen & Lavender-Stott, 2015*). The dominant theoretical framework in the study of pornography is 'sexual scripts theory' which holds that through viewing of sexualized media, such as pornography, individuals are conditioned to understand a particular iteration of the who, what, when, and where of sexual behavior and desire. This understanding shapes their sexual behaviors, choices, and interactions as well as their sexual worldview (*Gagnon & Simon, 1973, 1986; Wright, 2020*). Research demonstrates that pornography operates as a sexual script for both adolescents and adults (*Wright et al., 2017*) and is considered the primary source of information about sexual behavior among adolescents (*Peter & Valkenburg, 2016*).

Violence, sexual aggression, and sexual assault are common behaviors found in pornography. While the vast amount of content present on the web makes it difficult to

accurately measure the level of violence and aggression in pornography, content analysis of popular pornography, particularly in content marketed to heterosexual male viewers, highlight patterns and themes (*Bridges, 2019*). While extreme forms of sexual assault such as rape are rarely depicted, acts of sexual aggression such as choking, gagging, slapping, biting, pinching, bondage, and spanking are quite common (*Vogels & O'Sullivan, 2019; Wright et al., 2021*). *Bridges, et al (2010)* found 90% of pornographic videos contained some level of violence committed mostly by men (70.3%) and almost all directed at women (94.4%). A more recent analysis of 400 scenes from content on the four most popular pornographic websites (Pornhub, RedTube, YouPorn, and xHamster) found 40% of scenes contain these types of physical violence, with 93% of those containing violence against women (*Klaassen and Peter, 2015*). Finally, a meta-analysis of 23 studies that included both digital and non-digital forms, as well pornography directed towards LGBTQ viewers, found subtle acts of violence and aggression were common and were almost always directed at women by men (*Carrotte et al., 2020*). Overall, the content of pornography reflects heteronormative standards of gender inequities in that violence and aggression, however subtle, are quite common, and are almost always committed by men and directed at women.

These risky sexual behaviors are often presented without proper depictions of affirmative consent, which puts both adults and children at risk for engaging in problematic sexual behaviors (*Wright et al., 2021*). Pornography often relies on nonverbal cues for consent, depicts non-consent as a normative sexual behavior, and places emphasis on taking sexual risk rather than sexual agency (*Terán & Dajches, 2020; Willis, et al, 2020*). In a 2020 study, Ahmad and colleagues concluded that, although college-aged students had a general understanding of consent, they did not understand specific components of it, and many believed that specific behaviors, such as unwanted kissing or touching, did not require consent (*Ahmad et al., 2020*). Another study found that higher rates of pornography consumption were positively associated with higher levels of sexual permissiveness and decreased assertiveness to refuse sex; in other words, pornography was associated with a sense of entitlement on the one hand and a reduction in feelings of sexual agency on the other (*Terán & Dajches, 2020; Wright et al., 2021*).

The viewing of pornography for pleasure has been linked to increased sexual desire for these behaviors as well as an increased likelihood of engaging in these behaviors (*Bridges, et al, 2016*) but these preferences are highly gendered. Male consumers report greater preference in engaging in extreme sexual behaviors, largely as the initiator, while women, as the target of the extreme sexual acts, report less willingness and pleasure (*Ezzell et al., 2020; Sun et al., 2017*). For example, choking is a common 'rough sex' behavior depicted in pornography and is an increasingly common preferred sexual behavior among men, as the partner who almost always does the choking (*Herbenick et al., 2021; Herbenick, Patterson et al., 2021; Wright et al., 2021*). However, for women, who are almost always the targets of aggressive sexual acts, choking made them feel unsafe and was not found to be pleasurable (*Johnson, et al, 2019; Ezzell, et al, 2020; Herbenick et al., 2021; Wright et al., 2021*). Additionally, in line with the way in which consent is often portrayed in pornography, men tend to minimize the importance of affirmative consent to sexual choking if their partner

had consented to sex (Wright et al., 2021).

Contrary to the pornographic script, choking presents clear and present health risks, of which many young people are unaware (Herbenick et al., 2021). Sexual choking or nonfatal intimate partner strangulation poses “significant acute and long-term morbidity risks,” particularly for women (Patch et al., 2021, p. 438). While technically the correct term for the action is ‘strangulation’, the term ‘choking’ is the conventional term used to describe the sexual practice of using hands or ligature objects around the neck to block blood flow and oxygen to the brain to heighten sexual pleasure (Joshi et al., 2012). Depriving the brain of oxygen, even for short periods of time, has been shown to result in short-term and long-term cognitive impairments including depression, anxiety, and recurrent headaches (Bichard et al., 2021; Busse et al., 2015) and even eventual death (Berkman et al., 2021; Savage, 2020). Choking also creates legal risks (Bows & Herring, 2020) and has been increasingly present in sexual assault cases (Cannon et al., 2019; Patch et al., 2021). Most troubling is that when asked, most young people are unaware of these risks and/or do not consider them in their sexual decision making (Wright, et al, 2021).

Another risky sexual health message sent via the pornographic script is the preference for condomless sex. Research shows that pornography viewing increases the likelihood of engaging in condomless sex (Braithwaite et al., 2015), particularly if the male believes that pornography is a reliable source of sex education (Wright et al., 2019). One particularly problematic way in which this aspect of the pornographic script may reveal itself is through the act of ‘stealthing.’ ‘Stealthing’ is an increasingly popular term used on social media and in pornography to describe a specific problematic sexual behavior where a sexual partner purposefully removes a condom during penetration without the consent or knowledge of their partner (Bonar et al., 2021, p. 576). Stealthing puts both parts at risk for transmission of HIV or other sexually transmitted infections (STI), and in heterosexual sex, the female is put at risk of unwanted pregnancy (Ahmad et al., 2020). In a 2019 study, 19% of women reported stealthing victimization (Davis, 2019) while another study reported 10% of male participants engaging in nonconsensual condom removal (Bonar et al., 2021). Men with more hostile views towards women, as well as a more severe sexual aggression history, were more likely to have engaged in stealthing (Davis, 2019). Using an experimental design, Nguyen et al. (2021) found that men were less likely to see ‘stealthing’ as sexual assault when it was justified using male entitlement and/or instinct. While no study directly links stealthing to pornography viewing, qualitative interviews by Ahmad et al. (2020) found that college students mentioned learning about stealthing from social media and pornography.

Theme 2: The Eroticization of Children in Pornography

Another way in which pornography contributes to risk for children centers on the way in which youth/child-like behaviors and aesthetics are eroticized and sexualized in the pornographic script, which can subtly groom children and adolescents into assuming the role of victim and/or perpetrator. Research extensively documents the way in which popular culture eroticizes youth and child-like cues (Boyle, 2010; Dines, 2010; Hardy, 2008; Jensen, 2010; Paul, 2007) with consistent consequences on how girls and boys see themselves and other as sexual objects (Ward, 2016). Content analyses of pornography find frequent erotization of youth (Ezzell, 2009; Jensen, 2010; Peters, 2014; Prichard et al., 2022). Categories such as “incest,” “barely legal,” and “familial porn” (father-daughter, mother-son, brother-sister) are increasing in popularity (Ezzell, 2009; Morczek, 2018). These films are characterized by adult (at least 18 years old) female actresses having or adorned with signifiers of childhood and adolescence such as with small breasts, slight builds (fewer curves), little to no pubic hair, wearing braces, being dressed in school uniforms, wearing pigtails, holding props such as plushies and lollipops, and being described as “innocent,” “cute,” “young,” “small,” and “tight” with the intent of enhancing the fantasy that the adult actress is a minor (Ezzell, 2009; Schick et al., 2011). Research indicates that these images have an impact on how males and females see themselves (Owens et al., 2012) and understand sexual behavior (Paul & Linz, 2008; Peters, et al, 2014) and they may increase the likelihood of aggression among males with other predisposing risk factors such as prior sexual abuse (Malamuth, 2018). Additionally, research indicates that these images are often gateways to illegal child pornography sites (Prichard et al., 2021) and entice viewers to explore more explicit and extreme images (Basson et al., 2015).

Concerns about the impact of eroticized media on adolescents led the American Psychological Association to develop a task force to document the myriad ways children, with particular emphasis on girls, are sexualized and the harms that can come from early sexualization (APA Task Force, 2008). The report outlined the ways in which sexualization is imposed upon children starting at an early age through “virtually every media... including television, music videos, music lyrics, movies, magazines, sports media, video games, the Internet and advertising” (APA Task Force, 2008, p. 4). For our purposes, one of the most significant impacts of this panoptic sexualized media environment is how it is used, primarily by girls, as a mirror for self-objectification (Pacilli et al., 2016; Schafer et al., 2013; Ward, 2016). Self-objectification is the process by which individuals come to see themselves primarily as objects of desire and judgement for and by others rather than autonomous human beings with personal needs and goals. Behavior outcomes of self-objectification include comparing one’s own body to pornographic media imagery, including the size and shape of genitalia (Hustad et al., 2021), removal of and shaming of the presence of pubic hair (Stone et al., 2017), dressing or behaving in sexually age-inappropriate ways (McKenney & Bigler, 2016), objectifying others (McKenney & Bigler, 2016), and enacting behaviors seen in pornography (Mikorski & Szymanski, 2017). Self-objectification as a behavioral response is especially problematic for children as they may

act in “seductive” ways, per media models, without understanding how their behaviors may be interpreted by adults around them, placing them at greater potential risk for abuse (Coventry, 2020).

This problematic response can be seen in ‘sexting,’ an image-based sexual interaction whereby naked pictures are shared via digital devices, which is a form of D.I.Y. (do-it-yourself) pornography. A recent meta-analysis found approximately 15% of youth send sexts and 27% receive sexts (Madigan et al., 2018), with rates increasing over time and as youth age. While sexting is now relatively common in middle and high schools, it carries risks that are gendered (Van Ouytsel et al., 2019). For girls, sexting is often nonconsensual and is a result of significant peer pressure, particularly from male partners (Van Ouytsel et al., 2019). For boys, sexting is associated with cyberbullying, dating violence, and sexual harassment (Drouin et al., 2015). Research has demonstrated that higher rates of viewing pornography are associated with increased likelihood of boys perpetrating sexting-based harassment and sexual coercion (Stanley et al., 2018), and can be an ongoing pattern among boys over time (Van Ouytsel et al., 2019). The law is struggling to differentiate between normative sexual exploration and sexual predation as well as pornography vs. child pornography, all of which puts children and adolescents at risk for legal trouble and lifetime stigmatization (Holoyda et al., 2018; Rollins, 2015).

Theme 3: Grooming Potential Child Abuse Victims and Perpetrators through Pornography

Pornography, particularly as it is found on the internet and in social media, is an unusual medium of communication because it straddles the line between fiction and documentary (Ezzell, 2009; Taylor, 2022). On one hand, the relations among actors, sets, costuming, and verbal exchanges are scripted to form a fantastic narrative. On the other hand, pornography documents real sexual behavior among people, involving real bodies and real physical experiences. This blurry line is a deliberate marketing technique used by the industry to generate profit (Johnson, 2010). Children and adolescents, who generally encounter pornography before they have had their sexual debut with real world partners, are particularly vulnerable to this marketed fantasy that can function as a form grooming of both victims and perpetrators (Rollins, 2015).

Grooming is a process through which children come to believe sexual abuse and exploitation are normal. Grooming involves both building trusting relationships with children in order to lower their inhibitions and acclimating them to adult sexual interactions (Craven et al., 2007). Not only is pornography a common tool used by adult sexual predators of children to acclimate children to abuse – normalizing sexual behaviors and disinhibiting resistance – it is also a tool to condition children to engage in the behaviors that comprise the abuse. Research demonstrates that the eroticization of children in sexualized media, including pornography, can function as a form of grooming

whereby girls are conditioned to be 'porn ready' and thus more vulnerable to abusers (Dines, 2009, 2010; Ouystel, 2020; Whisnant, 2010; Wild, 2013). Not only can this grooming reduce girls' inhibitions for participating in the production of pornography (International Centre for Missing and Exploited Children, 2017), it can lower girls' ability to differentiate between consensual sex and sexual assault (Ost, 2009), and make them more vulnerable to sexual assault (Ost, 2009). For boys, the consumption of pornography can groom them to see sexual assault as normative behaviors for heterosexual men (Whisnant, 2010), it can condition feelings of hostility towards females (Bonino et al., 2006), and it can increase the likelihood that they will engage in acts of sexual violence (DeKeseredy & Corsianos, 2016).

It is true that most children and adolescents go on to develop healthy sexual habits, even if they consumed pornography at one point in their childhood. However, retrospective research on adult perpetrators of child sexual abuse demonstrates how pornography can be a particularly powerful grooming tool for some people that escalates their chances of perpetrating child sexual abuse. Basson and colleagues (2015), drawing on 18 in-depth interviews with adult convicted child sexual abuse offenders in South Africa, found that pornography, alongside a number of other contributory factors related to personality, dysfunctional family dynamics, experiences of child abuse, and early exposure to pornography, can have a multi-faceted effect (physiological, cognitive, and behavioral) on some individuals. This contributes to the levels of sexual satisfaction and experienced need for immediate sexual gratification that, in part, drives abusive sexual behavior toward children. Their respondents noted early initial exposure to pornography and feeling overwhelmed by it, addictive experiences of habituation and desensitization, and quickly escalating exposure to more extreme and harmful, even illegal, material facilitated by the ease of access on the internet. Although not representative of all people exposed to pornography nor all active consumers of pornography, Basson and colleagues' (2015) respondents made frequent reference to their addictive relationship to pornography as a component of their trajectory toward child sexual abuse. For the convicted perpetrators, the role of pornography in this trajectory was significant, both in terms of its addictive nature and the ease of exposure to more and more extreme material – "It becomes like your shot of heroin. If you don't have your little something to look at, it is the same as alcohol addiction;" "The starting point was porn, it is addictive. The more you view, the more you want" (Basson et al., 2015, p.72) – and in terms of its contribution to their patterns of real-world sexual abuse of children – "I do feel if I had not watched it, I would not have done it, committed that offence. I really believe it"; "... except for after a period of time that what gave you a kick in the beginning, doesn't give you a kick anymore. And then you take it to the next level. So I would say that porn on the Internet definitely had an influence on me starting to molest the youngsters as well" (p. 72). The authors argue that these findings underscore the need for an ecological understanding of the influences of pornography on human behavior, specifically as it relates to the sexual exploitation of children.

Theme 4: Abuse of Children in the Making of Pornography

The most direct way in which pornography is connected to child sexual abuse is through the production of child pornography. Child pornography is, itself, the documentation of child sexual abuse (*Holoyda et al., 2018*). So long as there remains a market for child pornography, children will continue to be exploited and victimized. Indeed, numerous child pornography rings (or organized child abuse groups) have been targeted by law enforcement officials in various countries (*Itzin, 1997*). However, with the internet, social media, and smartphones, the definitions of child pornography and indecent images are unclear and law enforcement officials and institutions are having a difficult time clearly differentiating between “normal” adolescent sexual exploration in the digital era and the sexual abuse of minors without unintentionally creating loopholes that sexual predators could use to avoid prosecution (*Rollins, 2015*). These technological and legal challenges present serious legal, policy, and public health challenges in the sexual development of children and adolescents.

Sexting images, even those taken consensually, are often found on child pornography sites because sexting is, in practice, the production of child pornography. Many ‘sexts’ are forwarded to other people without the original sender’s consent (*Madigan et al., 2018*), a form of sexual abuse in and of itself, which often results in serious negative impacts on the original sender who, beyond having trust and boundaries violated, is also at risk for further harassment, coercion, and other forms of abuse (*McGlynn & Rackley, 2017*). Legally, both the person who produces the ‘sext’ and the one who ‘redistributes’ the image are engaging in the production and distribution of child pornography. Both may end up on the Sex Offender Registry which requires them to notify employers, schools, neighbors, and other public groups of this status potentially for the rest of their life (*Levine, 2017*). Furthermore, research does not demonstrate that this legal, overly punitive, process is effective at deterring future harmful behaviors (*Cleary & Najdowski, 2020*), and that it does overly police normative expressions of adolescent development and sexuality and fail to clarify or deter child pornography and other forms of child sexual abuse (*Lee & Darcy, 2021*). Suicide is not an uncommon occurrence among adolescents who have been victimized by ‘sexting’ and/or who have been caught up in the legal system’s attempts to regulate child pornography (*McGlynn & Rackley, 2017; Ricketts et al., 2015*).

Another way in which children and adolescents may participate in the production of child pornography is through ‘revenge porn’ or the non-consensual forwarding of privately shared nude images. Revenge porn is the non-consensual distribution of images of a partner or ex-partner often with the intent of inflicting emotional or reputational harm (*McGlynn & Rackley, 2017*). Another term for this type of harassment is ‘sextortion;’ both terms fall under new terms for digital harassment and violence including, ‘cyber intimate partner violence’ or ‘cyber victimization.’ Research shows that among those who had ever sent a nude photo, 70% reported feeling some degree of pressure or coercion to send a nude photo and 23% of them said they felt seriously threatened (*Englander, 2015*). Other

research shows that about 18% of young people have experienced some type of non-consensual forwarding of private nude texts (*Fleschler Peskin et al., 2013*) and the likelihood of forwarding non-consensually was associated with the viewing of pornography, as well as higher levels of rape-supportive beliefs and hostility towards women (*Thompson & Morrison, 2013*). Additionally, those more likely to engage in cyber victimization are also more likely to engage in in-person interpersonal violence (*Marganski & Melander, 2015; Morelli, et al., 2016*) and use cyber-victimization to exert control and direct aggression (*Borrajo et al., 2015*). These behaviors are highly gendered; boys generally believe that there is nothing wrong with forwarding images without consent and are more likely to do so; whereas girls view sexting as private and are more likely to experience cyber victimization (*Walker & Sleath, 2017*).

Summary and Conclusions

Pornography is a nearly ubiquitous experience for adolescents and teenagers. The most accessible and popular content is produced largely for a presumed adult, heterosexual male consumer and frequently contains some level of violence and aggression, often targeting women. Research consistently demonstrates that pornography consumption is associated with negative behavioral, emotional, and physical outcomes. With regards to child sexual abuse, studies so far have demonstrated that exposure to pornography, particularly violent pornography, plays a strong role in the etiology of sexual violence perpetration. However, research on the ways in which this association shapes child sexual abuse, particularly by child perpetrators, has been limited by samples (e.g., known sexual offenders; case studies that lack generalizability), methods (primarily qualitative), focus (oftentimes these relations were not central questions under investigation, but emerged as ancillary observations made by researchers), and location (most were in the US, UK, and Canada). Thus, more research is needed to fully develop effective intervention strategies that ensure healthy sexual growth and development for children.

In this paper, we outline ways in which pornography can play a role in creating risk for both child abuse victims and perpetrators. Beginning with the larger techno-economic context, we illustrate how the pornography that is most easily accessible to children and adolescents is that which is preferred by those adults who consume the most pornography. Heavy-use adult consumers demonstrate higher levels of problematic personality traits and lean towards more aggressive content. Thus, the sexual development of children, who, on average, come into contact with pornography beginning at age 11, begins with sexual behaviors well beyond their cognitive and emotional age. This problematic starting gate shapes the other risk factors.

The ease at which pornography is now accessible via the internet and digital devices means that the pornographic script is a part of the everyday lives of young people. The pornographic script routinely portrays sexually risky behaviors including choking,

condomless sex, and vague notions of consent. The eroticization of children and child-like imagery grooms children to participate in the production of pornographic imagery through self-objectification, consensual and coercive sexting, and body modifications such as removal of pubic hair. This grooming process extends to perpetrators who can find their sexual tastes conditioned into and escalating towards sexualized images of childhood/children and child pornography, intentionally or unintentionally. And finally, these risks can culminate into the actual production of child pornography, including the forwarding of private 'sexts' to third party individuals or sites thus putting all parties in legal jeopardy.

As with most human behavior, the links between pornography and individual outcomes are complex, probabilistic, and multiply determined. Causal links are difficult, if not impossible, establish. However, given the weight of the evidence, it is safe to say that pornography consumption is a risk indicator that differentially shapes the sexual health of children, adolescents, and adults and is one that medical practitioners and front-line health care personnel should be increasingly aware, particularly among those who work with children. Getting data from people who work directly with child abuse victims and perpetrators and asking specific questions designed to uncover what role, if any, pornography plays in the abuse of children would allow for a more nuanced and recovery response by health care providers.

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