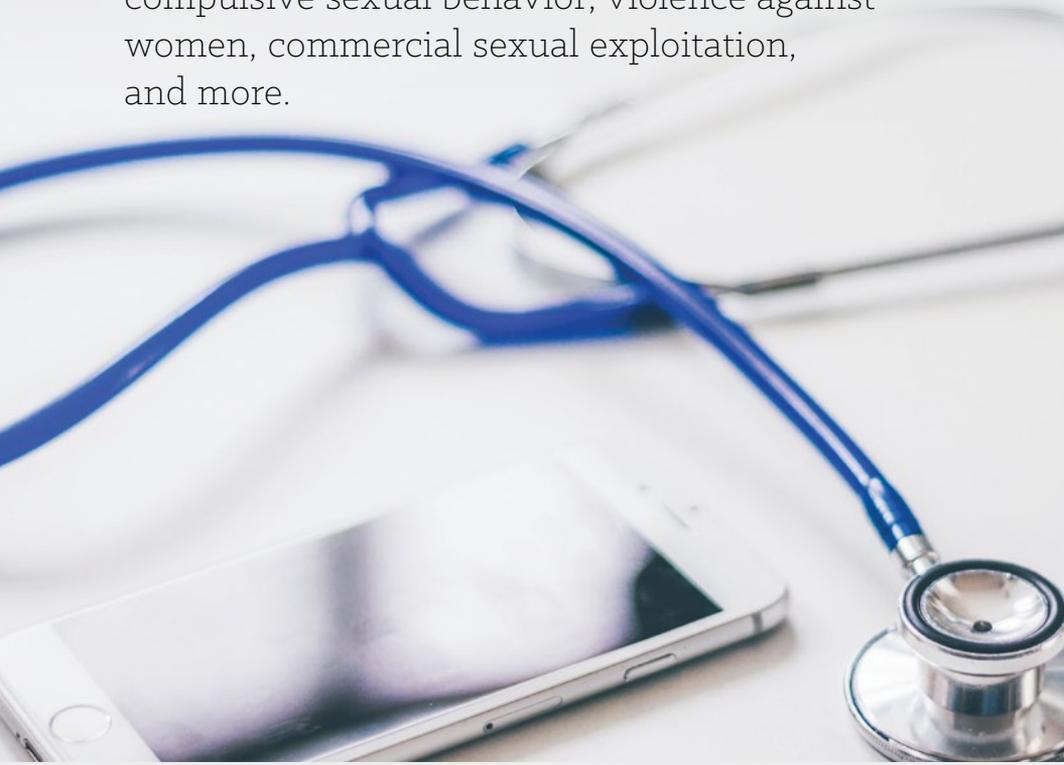


THE PUBLIC HEALTH HARMS OF

# PORNOGRAPHY

How pornography fuels child sexual abuse, compulsive sexual behavior, violence against women, commercial sexual exploitation, and more.



**Research Summaries of Key Peer-Reviewed Studies  
and Collection of Papers Presented at the U.S. Capitol**



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NATIONAL CENTER ON SEXUAL EXPLOITATION

**Founded** 1962

**Headquarters** Washington, DC 20001

**Vision** All individuals have a right to be free from the effects of pornography and all other forms of sexual exploitation.

**Mission** Defending human dignity.  
Confronting sexual exploitation.

**About** The National Center on Sexual Exploitation (NCOSE) is the leading national organization exposing the links between all forms of sexual exploitation such as child sexual abuse, prostitution, sex trafficking and the public health crisis of pornography. As the thread of pornography in the web of sexual exploitation is systemically overlooked by society, the National Center on Sexual Exploitation has prominently advanced this issue as a central pillar of its projects in order to promote more holistic solutions.

To accomplish this vision of abolition from sexual exploitation, NCOSE operates on the cutting edge of **policy activism** to combat corporate and government policies that foster exploitation, advance **public education and empowerment**, and spur united action by **leading the movement** through the international Coalition to End Sexual Exploitation.

**Areas of Concentration** Pornography  
Sex Trafficking of Adults & Children  
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Child Pornography  
Sexually Oriented Businesses  
Child Sexual Abuse  
Sexual Coercion

**Websites** EndSexualExploitation.org

# Pornography: A Public Health Crisis

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February 2018

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# Introduction

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Lisa L. Thompson  
Vice President of Policy and Research,  
National Center on Sexual Exploitation

Pornography is a social toxin that destroys relationships, steals innocence, erodes compassion, breeds violence, and kills love. The issue of pornography is ground zero for all those concerned for the sexual health of our loved ones, communities, and society as a whole. As the following points illustrate, the breadth and depth of pornography's influence on popular culture has created an intolerable situation that impinges on the freedoms and wellbeing of countless individuals.

- **Young Age of First Exposure:** A study of university students found that 93% of boys and 62% of girls had seen Internet pornography during adolescence. The researchers reported that the degree of exposure to paraphilic and deviant sexual activity before age 18 was of “particular concern.”<sup>1</sup> Another sample has shown that among college males, nearly 49% first encountered pornography before age 13.<sup>2</sup>

A study in Australia of 941 15–29 year olds, reported the median age for first viewing pornography was 13 years for males and 16 years for females. This same study reported that 100% of males and 82% of females reported they had ever viewed pornography. Among those who had viewed pornography within the last 12 months prior to the survey, 84% of males and 19% of females used pornography on a weekly or daily basis.<sup>3</sup>

- **Pervasive Use:** A nationally representative survey found that 64% of young people, ages 13–24, actively seek out pornography weekly or more often.<sup>4</sup> A popular tube site reports that in 2016, people watched 4.6 billion hours of pornography on its site alone,<sup>5</sup> 61% of visits occurred via smartphone.<sup>6</sup>

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1 Chiara Sabina, Janis Wolak, and David Finkelhor, “The Nature and Dynamics of Internet Pornography Exposure for Youth,” *CyberPsychology & Behavior* 11, no. 6 (2008): 691–693.

2 Chyng Sun, Ana Bridges, Jennifer Johnson, and Matt Ezzell, “Pornography and the Male Sexual Script: An Analysis of Consumption and Sexual Relations,” *Archives of Sexual Behavior* 45, no. 4 (May, 2016): 983–94.

3 Megan S. C. Lim, Paul A. Agius, Elise R. Carroette, et al., “Young Australians Use of Pornography and Associations with Sexual Risk Behaviours,” *Australian and New Zealand Journal of Public Health* 41, no. 4 (2017): 438–443.

4 Barna Group, *The Porn Phenomenon: The Impact of Pornography in the Digital Age*, (Ventura, CA: Josh McDowell Ministry, 2016).

5 Pornhub, “Pornhub’s 2016 Year in Review,” (2016).

6 Ibid.

Eleven pornography sites are among the world's top 300 most popular Internet sites. The most popular such site, at number 18, outranks the likes of eBay, MSN, and Netflix.<sup>7</sup>

- **Infringement on Individual Rights:** The pornification of culture (i.e. softcore, hypersexualized imagery) is widespread and evident everywhere, from the grocery store checkout lane to advertising, popular entertainment, unsolicited email, and beyond. It's becoming increasingly difficult—if not impossible—to live a porn-free life.
- **Both Genders:** While hardcore pornography users are typically male, use among younger females use is increasing. Teenage girls and young women are significantly more likely to actively seek out porn than women 25 years old and above.<sup>8</sup>
- **Unmanageable at the Individual Level:** The pervasive depictions of softcore and hardcore pornography in popular culture, and their easy accessibility via streaming and mobile devices, produce problems and significant risks outside the ability of individuals and families to manage on their own.
- **Private Behavior with Public Consequences/Porn Users Shape Culture:** The large-scale private use of hardcore pornography by millions of people has public ramifications. The attitudes, beliefs, and behaviors shaped by pornography use have a profound impact on not only users' private relationships, but also their professional and social relationships. Pornography use, to varying degrees, shapes the lens by which users view, interact, and construct the world.
- **Pornography is Prostitution for Mass Consumption:** The medium by which the prostitution is conveyed—photographs, magazines, books, videos, and the Internet—allows for masses of individuals to derive sexual stimulation and gratification from the acts of prostitution that they portray.

Drawing from recent peer-reviewed research literature, as well as the latest reports and surveys, the research summary herein presents evidence supporting the view that pornography constitutes a public health crisis. While independently these studies do not prove that pornography *causes* harm, taken in totality, the converging evidence overwhelming suggests that pornography is correlated

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7 Jonathan Marciano, "Top 300 Biggest Websites: Based on Both Mobile and Desktop Data for the First Time!" Similar Web (July 19, 2016), <https://www.similarweb.com/blog/new-website-ranking> (accessed July 24, 2016).

8 Barna Group, "News Conference on Barna's New Study: 'The Porn Phenomenon,'" (January 15, 2016), <https://www.barna.org/blog/culture-media/barna-group/porn-press-conference#.VrS9OrSJndI> (accessed June 27, 2016).

with a broad array of harms that adversely impact the public health of the nation. These include higher incidence of STIs, increased verbal and physical sexual aggression, acceptance of rape myths, risky sexual behaviors among adolescents, reduced impulse control and reckless decision making, increased sexual dysfunction, and more.

In light of the mounting evidence of harm documented below, we call on the general public, educators, health professionals, corporate executives, and elected officials to recognize pornography as a public health crisis.

# Research Summary

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## Impact on Sexual Violence and Exploitation

- **Hardcore Pornography Portrays Paraphilic Disorders and Extreme Sex:** Since the 1950s, the distribution and availability of pornography has become increasingly normalized.<sup>1</sup> Pornography exposure among college males is now almost universal.<sup>2</sup> Boys and men are consuming hardcore pornography, which may include depictions of sex with persons who look like children or teens, scenarios portraying incest, and other paraphilic interests such as sex with animals (i.e. zoophilia), excretory activities (i.e. coprophilia/urophilia), and violence against women, including rape (i.e. biastophilia) and torture (i.e. algolania).<sup>3</sup> Today "... mainstream commercial pornography has coalesced around a relatively homogenous script involving violence and female degradation."<sup>4</sup>
- **Teaches Users that Women Enjoy Sexual Violence and Degradation:** A content analysis of 172 videos from the website PornHub.com examined the influence of age (teenage performer vs. adult performer) on aggression and pleasure depicted in popular heterosexual pornographic videos uploaded to the site between the years 2000 and 2016. One hundred and seventeen videos exhibited "adult" performers, 55 "teenage" performers. To determine "age," researchers used a variety of cues including: 1) performers' self-declaration of their age, 2) titles of the videos, 3) the categories in which videos were classified, and 4) tags ascribed to each video. The findings were as follows:
  - 43% of videos included what the researchers categorized as "visible aggression" and 15% included "nonconsensual aggression."
  - Teenagers were more likely to experience particular forms of aggression and degrading or risky sex acts. Specifically, teenagers were more than twice as likely as adults (21.8 vs 9.4%) to be in videos featuring anal penetration, and about five times more likely (12.7 vs. 2.5%) to be in videos featuring forceful anal penetration with an apparent intent to

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1 Gail Dines, *Pornland: How Porn Has Hijacked Our Sexuality*, (Boston, MA: Beacon Press, 2010), 1–23.

2 John D. Foubert, Matthew W. Brosi, and R. Sean Bannon, "Effects of Fraternity Men's Pornography Use on Bystander Intervention, Rape Myth Acceptance and Behavioral Intent to Commit Sexual Assault," *Sexual Addiction & Compulsivity: The Journal of Treatment & Prevention* 18, no. 4 (2011): 212–231.

3 Robert Peters, "How Adult Pornography Contributes to Sexual Exploitation of Children" (September 2009); Foubert, *ibid*; Ana Bridges, Robert Wosnitzer, Erica Scharrer, Chyng Sun, and Rachael Liberman, "Aggression and Sexual Behavior in Best-Selling Pornography Videos: A Content Analysis Update," *Violence Against Women* 16, no. 10 (2010): 1065–1085; Gail Dines, *ibid*.

4 Sun, *ibid*.

cause pain. Yet, when broadly considering aggression in pornography, teenagers were subject to similar levels of aggression experienced by older performers.

- Teenagers were also more likely to be in pornography in which the male ejaculated in their mouth or on their face than adults (65.4 vs. 45.3%).
- 90% of teenage females in videos containing visible aggression displayed pleasure, compare to 54% when visible aggression was not present.
- 40% of teenagers displayed sexual climax in videos containing aggression, compared to 8.5% when visible aggression was not present.
- Teenagers were significantly more likely to display pleasure in videos that included spanking, forced vaginal or anal penetration, and forced gagging than in videos that did not include these acts.
- Females of all ages were more likely to display pleasure in videos featuring physical aggression than those that did not.

In response to these findings, the researcher noted that the prevalence of aggressive and demeaning acts in videos featuring teenagers, “may signal to viewers of all ages that these acts are not only normative and legitimate, but perhaps even expected,” thus creating social pressure on both young women and men to re-enact them with their sexual partners. Of further concern, it was noted that “the high prevalence of unprotected anal intercourse in such videos may lead female teenagers to engage more frequently in unprotected anal sex,” thus increasing their risk for various STDs.<sup>5</sup>

In a separate content analysis of free, Internet pornography, researchers found that nearly half of all videos in which two or more persons were present ended with the act of ejaculation on the face or mouth of a female by one or more males.<sup>6</sup>

A 2010 analysis of the 50 most popular pornographic videos (those bought and rented most often) found that 88% of scenes contained physical

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5 Eran Shor, “Age, Aggression, and Pleasure in Popular Online Pornographic Videos,” *Violence Against Women* (2018): 1–19, doi: 10.1177/1077801218804101. Of note, videos including more than two participants were not included in the analysis.

6 Stacy Gorman, Elizabeth Monk-Turner, and Jennifer N. Fish, “Free Adult Internet Web Sites: How Prevalent Are Degrading Acts?” *Gender Issues* 27, no. 3–4 (2010): 131–45, doi:10.1007/s12147-010-9095-7.

violence, and 49% contained verbal aggression.<sup>7</sup> Eighty-seven percent of aggressive acts were perpetrated against women, and 95% of their responses were either neutral or expressions of pleasure.<sup>8</sup>

- **Committing Sexual Offenses and Accepting Rape Myths:** A meta-analysis of 46 studies reported that the effects of exposure to pornographic material are “clear and consistent,” and that pornography use puts people at increased risk for committing sexual offenses and accepting rape myths.<sup>9</sup>
- **Increased Verbal and Physical Aggression:** A 2015 meta-analysis of 22 studies from seven countries found that internationally the consumption of pornography was significantly associated with increases in verbal and physical aggression, among males and females alike.<sup>10</sup>
- **Sibling Sexual Abuse:** In a study that analyzed 166 cases of males aged 13-17 who were referred to a residential sex offender program in the Midwestern United States from 1994-2005, the cases were divided into two groups: sibling perpetrator (biological, half, step, foster, or adopted; n=100) or non-sibling (n=66). According to the study, compared to those in the non-sibling group, sibling abusers had higher rates of previous sexual abuse (58% to 35%), physical abuse (49.5% to 44.6%), neglect (33% to 21%), domestic violence exposure (58% to 20%) and had higher rates of pornography exposure (58% to 24%). The study concluded that, “Exposure to domestic violence and a sexualized home environment (in this case, exposure to pornography and/or child sexual abuse) may render adolescents particularly at risk for sexual violence.” Researchers also suggested that, “exposure to pornography may negatively impact the sibling-victim in addition to the sibling-offender,” and “early exposure to pornography may impact a child’s view of what is normative and impair the ability to avoid, deter, or negotiate from dangerous situations ...”<sup>11</sup>
- **Link to Harmful/Problem Sexualized Behavior in Youth:** A study of 950 child patients presenting for suspected child abuse (primarily sexual abuse, but also some cases of severe physical abuse) to a Child Advocacy Center

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7 Ana J. Bridges, Robert Wosnitzer, Erica Scharrer, Chyng Sun, and Rachael Liberman, “Aggression and Sexual Behavior in Best-Selling Pornography Videos: A Content Analysis Update,” *Violence against Women* 16, no. 10 (2010): 1065–1085.

8 Ibid.

9 Elizabeth Paolucci-Oddone, Mark Genuis, and Claudio Violato, “A Meta-Analysis of the Published Research on the Effects of Pornography,” *The Changing Family and Child Development*, ed. Claudio Violato, Elizabeth Paolucci, and Mark Genuis (Aldershot, England: Ashgate Publishing, 2000), 48–59.

10 Paul J. Wright, Robert S. Tokunaga, and Ashley Kraus, “A Meta-Analysis of Pornography Consumption and Actual Acts of Sexual Aggression in General Population Studies,” *Journal of Communication* 66, no. 1 (February 2016): 183–205.

11 Natasha E. Latzman, Jodi L. Viljoen, Mario J. Scalora, and Daniel Ullman, “Sexual Offending in Adolescence: A Comparison of Sibling Offenders and Nonsibling Offenders Across Domains of Risk and Treatment Need,” *Journal of Child Sexual Abuse* 20, no. 3 (2011): 245-263.

in the Midwestern U.S., examined intake and self-reported assessment data collected in 2015. The children ranged in age from 3 to 18; 74% were female. Analysis found that children who disclosed exposure to pornography were at 3.3 times greater likelihood of engaging in problem sexualized behavior (PSB) compared to those who did not disclose pornography exposure.

The researchers explained: “Having exposure to pornography at a young age may not only introduce children to behaviors they may eventually acquire, but the children may have those behaviors reinforced by seeing the models (e.g. the individuals shown in the pornography medium, the person who exposed the child to pornography, etc.) being rewarded by the behavior. If the benefits of such sexual behavior are reinforced for the child, they may have a higher likelihood of adopting the behavior themselves.”<sup>12</sup>

In a separate qualitative study of children with harmful sexual behavior (HSB), 14 young people aged 16-21 years old participated in one-hour, semi-structured interviews. The participants were past clients of a government-funded treatment program for youth in Victoria, Australia. Six treatment-providing staff members were also interviewed. From the study:

- Eighty-six percent (n=12) of youth reported being exposed to pornography and 21% (n=3) described pornography as one of the factors that triggered their HSB. One young person told how he was introduced to pornography at age 11 at school and started to view it at home when his parents were gone. Another boy expressed that watching pornography at his grandmother’s house and discussing it with his cousin lead him to later sexually abuse his cousin. Youth workers also agreed that pornography was a factor in the harmful sexual behavior exhibited by these, and other, youth. One worker said: “So from a young age they’ve accessed pornography ... and they’re exposed to this idea that sex and aggression is linked and they’re exposed to these ideas that you don’t necessarily need consent, and that ‘no’ might mean ‘try harder.’”
- The study suggested that the issue of pornography is spiraling out of the ability of individuals and families to control and that there is “merit in government taking an active role in holding industry to account for the harms of pornography against children and young people.” Specifically, the researchers recommended government regulation of pornography and telecommunication industries, as well as an

12 Rebecca Dillard, Kathryn Maguire-Jack, Kathryn Showalter, et al., “Abuse Disclosures of Youth with Problem Sexualized Behaviors and Trauma Symptomatology,” *Child Abuse & Neglect* 88 (2019): 201-211, doi: 10.1016/j.chiabu.2018.11.019.

adjustment of sexually abusive treatment models to take pornography into account.<sup>13</sup>

- **Increased Female Sexual Victimization:** A study of 14- to 19-year-olds found that females who watched pornographic videos were at significantly greater likelihood of being victims of sexual harassment or sexual assault.<sup>14</sup>
- **Increased Likelihood of Selling and Buying Sex:** A Swedish study of 18-year-old males found that frequent users of pornography were significantly more likely to have sold and bought sex than other boys of the same age.<sup>15</sup>
- **Fuels Demand for Sexual Exploitation:** Some pornography consumers use pornography to build sexual excitement in advance of purchasing sex from prostituted persons; others seek to reenact pornographic scenes on prostituted persons.<sup>16</sup> An analysis of 101 sex buyers, compared to 100 men who did not buy sex, found that sex buyers masturbate to pornography more often than non-sex buyers, masturbate to more types of pornography, and reported that their sexual preferences changed so that they sought more sadomasochistic and anal sex.<sup>17</sup> Other research also demonstrates an association between purchase of commercial sex acts and pornography use.<sup>18</sup>
- **Interconnectivity of Mainstream, Deviant, and Child Sexual Abuse Images:** A survey from a general population of Internet pornography users found that users of pornography depicting sexual abuse of children also consume both hardcore pornography (featuring ostensibly adult

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- 13 Gemma McKibbin, Cathy Humphreys, and Bridget Hamilton, "Talking About Child Sexual Abuse Would Have Helped Me': Young People Who Sexually Abused Reflect on Preventing Harmful Sexual Behavior," *Child Abuse & Neglect* 70, (2017): 210-221.
- 14 Silvia Bonino, Silvia Ciairano, Emanuela Rabagliette, and Elena Cattelino, "Use of Pornography and Self-Reported Engagement in Sexual Violence among Adolescents," *European Journal of Developmental Psychology* 3, no. 3 (2006): 265-288.
- 15 Carl Göran Svedin, Ingrid Åkerman, and Gisela Priebe, "Frequent Users of Pornography. A Population Based Epidemiological Study of Swedish Male Adolescents," *Journal of Adolescence* 34, no. 4 (2011): 779-788.
- 16 Mimi H. Silbert and Ayala M. Pines, "Pornography and Sexual Abuse of Women," *Sex Roles* 10, no. 11/12 (1984): 857-868; Rachel Durchslag and Samir Goswami, *Deconstructing the Demand for Prostitution: Preliminary Insights from Interviews with Chicago Men Who Purchase Sex*, (Chicago, IL: Chicago Alliance Against Sexual Exploitation, 2008); Victor Malarek, *The Johns: Sex for Sale and the Men Who Buy It* (New York: NY Arcade Publishing, Inc. 2009).
- 17 Farley et al., "Comparing Sex Buyers with Men Who Don't Buy Sex: 'You Can Have a Good Time with the Servitude' vs. 'You're Supporting a System of Degradation.'" Paper presented at Psychologists for Social Responsibility Annual Meeting July 15, 2011, Boston, MA. San Francisco: Prostitution Research & Education (2011).
- 18 Steven Stack, Ira Wasserman, and Roger Kern, "Adult Social Bonds and Use of Internet Pornography," *Social Science Quarterly* 85 (2004): 75-88; Martin A. Monto and Nick McRee, "A Comparison of the Male Customers of Female Street Prostitutes With National Samples of Men," *International Journal of Offender Therapy and Comparative Criminology* 49, no. 5 (2005): 505-529; Martin A. Monto, "Summary Report for National Institute of Justice Grant #97-IJ-CX-0033 'Focusing on the Clients of Street Prostitutes: A Creative Approach to Reducing Violence Against Women'" (October 30, 1999); Durchslag, *ibid*.

performers), as well as animal pornography. There were *no* consumers of child sexual abuse images who *only* collected child sexual abuse images.<sup>19</sup>

A separate study examining 231 Swiss men charged in a 2002 case for possession of child sexual abuse images (i.e. child pornography), found that 60% percent also used pornography that depicted sexual acts with animals, excrement, or brutality; 33% consumed at least three or more types of deviant pornography. Researchers also found that those convicted for possessing child sexual abuse images were more likely to subscribe to commercial websites containing legal (according to Swiss law) pornographic material (19% vs. 4%).<sup>20</sup>

- **Intent to Rape:** Fraternity men who consumed *mainstream* pornography expressed a greater intent to commit rape if they knew they would not be caught than those who did not consume pornography. Those who consumed *sadomasochistic* pornography expressed significantly less willingness to intervene in situations of sexual violence, greater belief in rape myths, and greater intent to commit rape. Among those who consumed *rape-themed* pornography, the researchers described “serious effects” including less bystander willingness to intervene, greater belief in rape myth, and greater intent to commit rape. In other words, there was *no* type of pornography that did not result in a greater intent to commit rape by a user if they knew they would not be caught.<sup>21</sup>
- **Pornography as a Form of Sexual Exploitation:** “Pornography may meet the legal definition of trafficking to the extent that the pornographer recruits, entices, or obtains the people depicted in pornography for the purpose of photographing commercial sex acts.”<sup>22</sup>

## Impact on Adolescents

- **Harm to Young Brains:** A survey of 813 U.S. teens and young adults (13–25), found that 26% of adolescents aged 13–17 actively seek out pornography weekly or more often.<sup>23</sup> Research has demonstrated

19 Kathryn C. Seigfried-Spellar and Marcus K. Rogers, “Does Deviant Pornography Use Follow a Guttman-like Progression,” *Computers in Human Behavior* 29 (2013): 1997–2003.

20 Endrass et al., “The Consumption of Internet Child Pornography and Violent and Sex Offending,” *BMC Psychiatry* 9, no. 43 (2009).

21 Foubert, *ibid.*

22 Farley et al., “Comparing Sex Buyers with Men Who Do Not Buy Sex: New Data on Prostitution and Trafficking.” *Journal of Interpersonal Violence*, (2015).

23 Barna Group, *The Porn Phenomenon: The Impact of Pornography in the Digital Age*, (Ventura, CA: Josh McDowell Ministry, 2016).

that children are more susceptible than adults to addictions and to developmental effects on the brain.<sup>24</sup>

- **Emotional Bond with Caregivers:** A nationally representative survey of youth ages 9–17 reported that online pornography users were significantly more likely to report a poor emotional bond with their caregiver than adolescents who viewed pornography offline or not at all.<sup>25</sup> A poor emotional bond between caregiver and child is also associated with sexually aggressive behavior.<sup>26</sup>
- **Women as Sex Objects:** Internet pornography is shown to normalize the notion that women are sex objects among both adolescent boys and girls.<sup>27</sup>
- **Sexual Uncertainty and Casual Sexual Exploration:** More frequent use of sexually explicit Internet material is shown to foster greater sexual uncertainty in the formation of sexual beliefs and values, as well as a shift away from sexual permissiveness with affection to attitudes supportive of uncommitted sexual exploration.<sup>28</sup>
- **Sending Sexually Explicit Images:** A survey of 4,564 adolescents aged 14–17 in five European countries found that viewing Internet pornography is significantly associated with an increased probability of having sent sexual images and messages (sexting) among boys.<sup>29</sup> A separate survey of 617 college freshman found that 30% of participants sent nude pictures at some time during high school; 45% had received nude pictures on their cell phones. The most important motivation for sexting was coercion such as blackmail or threats. About half of all sexting may be coercive.<sup>30</sup>

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24 Frances E. Jensen with Amy Ellis Nutt, *The Teenage Brain: A Neuroscientist's Survival Guild to Raising Adolescents and Young Adults*, (New York: Harper Collins, 2015); Tamara L. Doremus-Fitzwater, Elena I. Varlinskaya, and Linda P. Spear, "Motivational Systems in Adolescence: Possible Implications for Age Differences in Substance Abuse and Other Risk-Taking Behaviors," *Brain and Cognition* 71, no. 1 (2010): 114–123.

25 Michele L. Ybarra and Kimberly Mitchell, "Exposure to Internet Pornography among Children and Adolescents: A National Survey," *CyberPsychology & Behavior* 8, no. 5 (2005): 473–486.

26 Ibid.

27 Jochen Peter and Patti Valkenburg, "Adolescent's Exposure to a Sexualized Media Environment and Their Notions of Women as Sex Objects," *Sex Roles* 56 (2007): 381–395; Jane D. Brown and Kelly L. L'Engle, "X-Rated: Sexual Attitudes and Behaviors Associated with U.S. Early Adolescents' Exposure to Sexually Explicit Media," *Communication Research* 36, no. 1 (February 2009): 129–151.

28 Jochen Peter and Patti M. Valkenburg, "Adolescents' Exposure to Sexually Explicit Internet Material, Sexual Uncertainty, and Attitudes toward Uncommitted Sexual Exploration, Is There a Link?" *Communications Research* 35, no. 5 (2008): 579–601.

29 Nicky Stanley et al., "Pornography, Sexual Coercion and Abuse and Sexting in Young People's Intimate Relationships: A European Study," *Journal of Interpersonal Violence* (2016): 1–26.

30 Elizabeth Englander, *Low Risk Associated with Most Teenage Sexting: A Study of 617 18-Year-Olds*, (Massachusetts Aggression Reduction Center, 2012).

In a systematic review and meta-analysis of 14 cross-sectional studies about young people aged 10-24 years, sexting was strongly correlated with having had sexual intercourse, recent sexual activity, alcohol and other drug use before sexual intercourse, as well as having multiple recent sexual partners.<sup>31</sup>

- **Risky Sexual Behaviors:** Internet pornography use is linked to increases in problematic sexual activity at younger ages, and a greater likelihood of engaging in risky sexual behavior, such as hookups, multiple sex partners, anal sex, group sex, and using substances during sex as young adolescents.<sup>32</sup> A recent UK survey found that 44% of males aged 11–16 who viewed pornography reported that online pornography gave them ideas about the type of sex they wanted to try.<sup>33</sup>
- **Physical and Sexual Victimization:** A nationally representative survey of pornography use among youth aged 9–17, found that those with increased exposure to Internet pornography were significantly more likely to report physical and sexual victimization.<sup>34</sup>
- **Association with Adolescent Delinquency, Sexually Aggressive/Coercive, and Other Criminal Behavior:** A 36-month longitudinal study published in 2011 surveyed 1,588 youth (ages 10-15 years old) about their exposure to “X-rated” material and linkages to sexually aggressive behavior. Participants were 49% male, 51% female, and an average of 12.6 years old. The survey consisted of questions about their exposure to X-rated material, the medium of exposure (online, magazine, etc.), and sexual behaviors the youth engaged in. Results found that:
  - Exposure to pornography was relatively common with 23% of youth reporting intentional exposure to X-rated material. The researchers noted that prevalence rates were likely underestimates of actual behaviors.

31 Lucy Watchirs Smith, Bette Liu, Louisa Degenhardt, Juliet Richters, George Patton, Handan Wand, Donna Cross, et al., “Is Sexual Content in New Media Linked to Sexual Risk Behaviour in Young People? A Systematic Review and Meta-Analysis,” *Sexual Health*, August 11, 2016, doi:10.1071/sh16037.

32 Debra K. Braun-Courville and Mary Rojas, “Exposure to Sexually Explicit Web Sites and Adolescent Sexual Attitudes and Behaviors,” *Journal of Adolescent Health* 45 (2009): 156–162; C. Marston and R. Lewis, “Anal Heterosex among Young People and Implications for Health Promotion: A Qualitative Study in the UK,” *BJM Open* 4 (February 4, 2016): 1–6; Emily R. Rothman, et al., “Multi-Person Sex among a Sample of Adolescent Female Urban Health Clinic Patients,” *Journal of Urban Health: Bulletin of the New York Academy of Medicine* 89, no. 1 (2011): 129–137; E. Håggström-Nordin, U. Hanson, and T. Tydén, “Association between Pornography Consumption and Sexual Practices among Adolescents in Sweden,” *International Journal of STD & AIDS* 16 (2005): 102–107.

33 Elena Martellozzo et al., “‘I Wasn’t Sure It Was Normal To Watch It ...’ A Quantitative and Qualitative Examination of the Impact of Online Pornography on the Values, Attitudes, Beliefs and Behaviours of Children and Young People,” London: Middlesex University (2016), [https://www.mdx.ac.uk/\\_\\_data/assets/pdf\\_file/0021/223266/MDX-NSPCC-OCC-pornography-report.pdf](https://www.mdx.ac.uk/__data/assets/pdf_file/0021/223266/MDX-NSPCC-OCC-pornography-report.pdf) (accessed August 7, 2016).

34 Ybarra, *ibid.*

- Youth who reported intentional exposure to violent X-rated material over time were nearly six times more likely than those who did not consume X-rated material to self-report sexually aggressive behavior. This association remained significant even after controlling for other factors that may contribute to sexually aggressive behavior (e.g., sexual aggression victimization, alcohol and drug use, witnessing family violence, and general aggressive behavior). The study hypothesized that “viewing pornography that portrays sexual aggression as rewarding may reinforce an individual’s own proclivity toward sexually aggressive behavior.”<sup>35</sup>
- In a meta-analysis of eight studies, male adolescent sex offenders reported more exposure to sex or pornography than non-sex offenders.<sup>36</sup>
- A study of sexually reactive children and adolescents (SRCAs) found that those who used pornography compared to those who did not use pornography were more likely to engage in a prominent pattern of lying, a persistent pattern of theft/stealing, to be truant, to frequently con/manipulate others, to engage in arson/fire setting behaviors, to engage in coerced vaginal penetration and forced sexual acts such as oral or digital penetration, to express sexually aggressive remarks (obscenities), and to engage in sex with animals.<sup>37</sup> Other research also demonstrates an association between pornography consumption and adolescent delinquent behavior.<sup>38</sup>
- **Impact of Young Exposure:** Research has found that among males the younger their age of first exposure to pornography, the higher their current consumption of pornography, as well as their greater integration of pornography into sexual activity, and less enjoyment of partnered sex.<sup>39</sup>
- **Future Use of Deviant Pornography:** A 2013 survey of a general population of Internet pornography users revealed that those who intentionally sought pornography at a younger age were significantly more likely to be users of pornography exhibiting the sexual abuse of animals and children.<sup>40</sup>

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35 Michele L. Ybarra, Kimberly J. Mitchell, Merle Hamburger, et al., “X-Rated Material and Perpetration of Sexually Aggressive Behavior among Children and Adolescents: Is There a Link?” *Aggressive Behavior* 37 (2011): 1 18, doi: 10.1002/ab.20367.

36 Michael C. Seto and Martin L. Lalumière, “What Is So Special About Male Adolescent Sexual Offending? A Review and Test of Explanations through Meta-Analysis,” *Psychological Bulletin* 136, no. 4 (2010): 526–575.

37 Eileen M. Alexy, Ann W. Burgess, and Robert A. Prentky, “Pornography Use as a Risk Marker for an Aggressive Pattern of Behavior among Sexually Reactive Children and Adolescents,” *Journal of the American Psychiatric Nurses Association* 14, no. 4 (2009): 442–453.

38 Ybarra, *ibid.*

39 Sun, *ibid.*

40 Seigfried-Spellar, *ibid.*

- **Sex with Younger Adolescents:** In a cross-sectional study of 710 Norwegian 18- to 19-year-olds, 19.1% of males who indicated some likelihood of having sex with a 13- to 14-year old also reported more high-frequency use of pornography and having more friends with an interest in child pornography and violent pornography.<sup>41</sup>
- **Sexual Satisfaction:** In a longitudinal study of 1,052 Dutch adolescents aged 13-20, research revealed that exposure to sexually explicit Internet material consistently reduced adolescents' satisfaction with their sexual lives. The negative influence of sexually explicit Internet material was equally strong among both males and females.<sup>42</sup>

## Impact on Females

- **Negative Body Image and Pressure to Perform Pornographic Acts:** As a result of viewing pornography, women reported lowered body image, criticism from their partners regarding their bodies, increased pressure to perform acts seen in pornographic films, and less actual sex. Men reported being more critical of their partner's body and less interest in actual sex.<sup>43</sup>
- **Acceptance of Rape Myths:** Women who were exposed to pornography as children were more likely to accept rape myths and to have sexual fantasies that involved rape.<sup>44</sup>
- **Domestic Violence & Sexual Abuse:** The use of pornography by batterers significantly increased a battered woman's odds of being sexually abused. Pornography use alone increased the odds by a factor of almost 2, and the combination of pornography and alcohol increased the odds of sexual abuse by a factor of 3.<sup>45</sup> Other research has found that pornography use by batterers is associated with learning about sex through pornography, imitation of behaviors seen in pornography, comparison of women to pornography

41 Kristinn Henga, Svein Mossige, and Lars Wichstrom, "Older Adolescents' Positive Attitudes toward Younger Adolescents as Sexual Partners," *Adolescence* 39, no. 156, (2004): 627-651.

42 Jochen Peter and Patti M. Valkenburg, "Adolescents' Exposure to Sexually Explicit Internet Material and Sexual Satisfaction: A Longitudinal Study" *Communications Research* 35, no. 5 (2009): 171-194. doi:10.1111/j.1468-2958.2009.01343.x.

43 Julie M. Albright, "Sex in America Online: An Exploration of Sex, Marital Status, and Sexual Identity in Internet Sex Seeking and Its Impacts," *Journal of Sex Research* 45 (2008): 175-186, doi:10.1080/00224490801987481.

44 Shawn Corne, John Briere, and Lillian M. Esses, "Women's Attitudes and Fantasies about Rape as a Function of Early Exposure to Pornography," *Journal of Interpersonal Violence* 7, no. 4 (1992): 454-461.

45 Janet Hinson Shope, "When Words Are Not Enough: The Search for the Effect of Pornography on Abused Women," *Violence Against Women* 10, no. 1 (2004): 56-72.

performers, introduction of other sexual partners, filming sexual acts without consent, and the broader culture of pornography (e.g., fetishes).<sup>46</sup>

- **Increased Marital Rape:** Males who use pornography and go to strip clubs were found to engage in more sexual abuse, stalking, and marital rape than abusers who did not use pornography and go to strip clubs.<sup>47</sup>
- **Sexual Satisfaction and Softcore Pornography:** In a cross-sectional study of 200 sexually active married women, women who did not watch soft-core pornography were more satisfied with their sexual life when compared to their counterparts. Researchers also found that soft-core pornography affects the sex lives of females by increasing sexual boredom in both men and women, causing relational difficulties.<sup>48</sup>
- **Anal Sex:** Women who reported an experience of anal sex were more likely to watch pornography more frequently than those who had not.<sup>49</sup>
- **Sexually Aggressive Behavior:** Girls who reported consumption of violent X-rated material were equally likely as boys to report sexually aggressive behavior. The longitudinal study showed that girls and boys were more than five times more likely to exhibit sexually aggressive behavior if violent X-rated material consumption was reported. The researchers suggested that X-rated material may have a similar effect regardless of sex and that studies examining sexual violence perpetration among youth should ask both boys and girls questions about perpetration as well as victimization experiences.<sup>50</sup>

## Impact on Males

- **Lower Sexual Satisfaction and Sexual Dysfunction:** A 2015 study of online sexual activities among males found 20.3% reported that “one motive for their porn use was to maintain arousal with their partner.” It also found that pornography use was linked to higher sexual desire, but lower overall sexual satisfaction, and lower erectile function.<sup>51</sup> Other research has correlated

46 Walter S. DeKeseredy and Amanda Hall-Sanchez, “Adult Pornography and Violence against Women in the Heartland: Results from a Rural Southeast Ohio Study,” *Violence against Women* (May 2016), 1–20.

47 C. Simmons, P. Lehmann, and S. Collier-Tenison, “Linking Male Use of the Sex Industry to Controlling Behaviors in Violent Relationships: An Exploratory Analysis,” *Violence Against Women* 14, no. 4 (2008): 406–417.

48 Abd El-Rahman, Eman M. Sanad, and Hanaa H. Bayomy, “Effect of Soft-Core Pornography on Female Sexuality,” *Human Andrology* 6, no. 2 (June 2016): 60–64, doi:10.1097/01.xha.0000481895.52939.a3.

49 Lim, et al., *ibid.*

50 Ybarra, et al., 2011.

51 Aline Wéry and Joel Billieux, “Online Sexual Activities: An Exploratory Study of Problematic and Non-Problematic Usage Patterns in a Sample of Men,” *Computers in Human Behavior* 56 (2016): 257–266.

pornography use with “negative effects on partnered sex, decreased enjoyment of sexual intimacy, less sexual and relationship satisfaction.”<sup>52</sup>

- **Negative Body Image:** A 2015 study found that men’s frequency of pornography use is positively linked to body image insecurity regarding muscularity and body fat, and to increased anxiety in romantic relationships.<sup>53</sup>
- **Pornography Induced Erectile Dysfunction:** Historically, erectile dysfunction (ED) has been viewed as an age-dependent problem, with rates in men ages 18–59 as low as 2–5%.<sup>54</sup> In the early 2000s, the Global Study of Sexual Attitudes and Behavior (GSSAB) reported that the ED rate among men aged 40–80 was approximately 13%.<sup>55</sup> In 2011, among males aged 18–40 the GSSAB found ED rates of 14–28%.<sup>56</sup> This dramatic increase in ED rates among young men coincides with the sharp increase in the availability and accessibility of Internet pornography tube sites.

A 2-year longitudinal study of sexually active young males (n=180) aged 16–21 published in 2016 (which did not assess pornography use), found high rates of sexual dysfunction among young males. Specifically, the study found:

- low sexual satisfaction (47.9%)
- low desire (46.2%)
- problems in erectile function (45.3%)<sup>57</sup>

Another study reported that one in four patients seeking medical help for new onset ED were under 40, with severe ED rates being 10% higher than those in men over 40.<sup>58</sup>

A study on men (mean age 36) seeking help for excessive sexual behavior—frequent use of pornography and masturbation—found that ED

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52 Brian Y. Park et al., “Is Internet Pornography Causing Sexual Dysfunctions? A Review with Clinical Reports,” *Behavioral Sciences* 6, no. 17 (2016): 1–25.

53 Wéry, *ibid.*

54 Park, *ibid.*

55 Alfredo Nicolosi et al., “Sexual Behavior and Sexual Dysfunctions after Age 40: The Global Study of Sexual Attitudes and Behaviors,” *Urology* 64 (2004): 991–997.

56 Ivan Landripet and Aleksandar Štulhofer, “Is Pornography Use Associated with Sexual Difficulties and Dysfunctions among Younger Heterosexual Men?” *The Journal of Sexual Medicine* 12 (2015): 1136–1139.

57 Lucia F. O’Sullivan et al., “A Longitudinal Study of Problems in Sexual Functioning and Related Sexual Distress among Middle to Late Adolescents,” *The Journal of Adolescent Health* 59 (2016): 318–324.

58 Paolo Capogrosso, et al., “One Patient Out of Four with Newly Diagnosed Erectile Dysfunction Is a Young Man—Worrisome Picture from the Everyday Clinical Practice,” *The Journal of Sexual Medicine* 10 (2013): 1833–1841.

combined with low desire for partnered sex is a common observation in clinical practice.<sup>59</sup>

An investigation examining subgroups of men struggling with sexual compulsivity, found that among those who reported seven or more hours of pornography viewing (or seven episodes of masturbation) per week, 71% reported sexual dysfunctions, and 33% reported delayed ejaculation.<sup>60</sup>

A Cambridge University study that was evenly divided between men with compulsive sexual behavior (CSB) and those without, found that 60% of those with CSB experienced diminished libido or erectile function in physical relationships with women.<sup>61</sup>

In a study of gay men recruited from bathhouses, bars, and STI clinics, 50% of the men (average age 29) reported erectile dysfunction with video pornography. The men spent considerable amounts of time in environments where pornography was omnipresent and continuously playing. The men explained that high exposure to sexually explicit media resulted in a lower responsivity to “vanilla sex” media and an increased need for novelty and variation. This is evidence of tolerance, a key indicator of addiction. Researchers revised the experiment allowing the men to choose many more varieties of pornography. In the new experiment, 25% of men still could not become aroused to the pornography of their choice.<sup>62</sup>

In a clinical study of 35 men with erectile dysfunction or anorgasmia, a French psychiatrist found that addictive masturbation is often associated with cyber-pornography. Most of the men viewed pornography, and some were addicted to it, with the study pointing to it as a key player in these problems. With treatment, which included the removal of pornography, participants saw a reduction of symptoms and were able to enjoy satisfactory sexual activity.<sup>63</sup>

- **Correlated to Male Sexual Objectification of Women and Attitudes Supporting Violence against Women:** Among collegiate men, frequency of exposure to men’s lifestyle magazines, reality TV programs that objectify

59 Verena Klein, Tanja Jurin, Peer Briken, and Aleksandar Štulhofer, “Erectile Dysfunction, Boredom, and Hypersexuality among Couple Men from Two European Countries,” *The Journal of Sexual Medicine* 12, no. 11 (2015): 2160–2167.

60 Katherine S. Sutton et al., “Patient Characteristics by Type of Hypersexuality Referral: A Quantitative Chart Review of 115 Consecutive Male Cases,” *Journal of Sex & Marital Therapy* 41, no. 6 (2015): 563–580.

61 Valerie Voon et al., “Neural Correlates of Sexual Cue Reactivity in Individuals with and without Compulsive Sexual Behaviors,” *PLOS ONE* 9, no. 7 (2014): 1–10.

62 Erick Janssen. *The Psychophysiology of Sex*. Bloomington: Indiana University Press, 2007.

63 R. Porto, “Habitudes Masturbatoires et Dysfonctions Sexuelles Masculines,” *Sexologies* 25, no. 4 (August 17, 2016): 160-65, doi:10.1016/j.sexol.2016.03.004.

women, and pornography, predicted more objectified cognitions about women and stronger attitudes supportive of violence against women.<sup>64</sup>

- **Risky Behaviors and Other Harms:** For males, increased pornography use is correlated with more sex partners, more alcohol use, more binge drinking, greater acceptance of sex outside of marriage for married individuals, greater acceptance of sex before marriage, and less child centeredness during marriage.<sup>65</sup>
- **Pornography as Sex Ed:** A study of male high school seniors in Sweden found that nearly 70% of those who frequently used pornography reported that pornography made them want to try out what they had seen compared to 42% of boys in a reference group.<sup>66</sup> Frequent users of pornography viewed all forms of pornography more often, especially advanced or more deviant forms of pornography including violence and sexual abuse of children and animals.<sup>67</sup>
- **Sexual Harassment and Coercion:** A study of 804 Italian males and females aged 14 to 19, found that males who viewed pornography were significantly more likely to report having sexually harassed a peer or forcing someone to have sex.<sup>68</sup>
- **Psychological Symptoms:** An online survey of 71 homosexual males showed strong correlations between cybersex addiction symptoms and indicators of coping by sexual behaviors and psychological symptoms. These psychological symptoms included emotional avoidance, loss of control/time management, and social problems.<sup>69</sup>
- **Addiction:** In a study of 360 undergraduate students in the United States, researchers discovered a significant correlation between being male and being clinically addicted to cybersex, with 19% of men in the sample scoring in the clinical range.<sup>70</sup>

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64 Paul J. Wright and Robert S. Tokunaga, "Men's Objectifying Media Consumption, Objectification of Women, and Attitudes Supportive of Violence against Women," *Archives of Sexual Behavior* 45, no. 4 (2015): 955–64, doi: 10.1107/s10508-015-0644-8.

65 Jason S. Carroll et al., "Generation XXX: Pornography Acceptance and Use Among Emerging Adults," *Journal of Adolescent Research* 23, no. 1 (2008): 6–30; Svedin, *ibid.*

66 Svedin, *ibid.*

67 *Ibid.*

68 Bonino, *ibid.*

69 Christian Laier, Jaro Pekal, and Matthias Brand, "Sexual Excitability and Dysfunctional Coping Determine Cybersex Addiction in Homosexual Males," *Cyberpsychology, Behavior, and Social Networking* 18, no. 10 (2015): 575–80. doi:10.1089/cyber.2015.0152.

70 Amanda L. Giordano and Craig S. Cashwell, "Cybersex Addiction among College Students: A Prevalence Study," *Sexual Addiction & Compulsivity*, 2017, 1-11, doi:10.1080/10720162.2017.1287612.

A study analyzing the brainwaves of 52 men aged 18-30 found that pornography use may downregulate sexual arousal—i.e., cause habituation or desensitization. These symptoms are signs of addiction.<sup>71</sup>

- **Interpersonal Satisfaction:** In a meta-analysis of fifty studies encompassing cross-sectional and longitudinal surveys, as well as experimental research methods, pornography consumption was associated with lower interpersonal outcomes. The meta-analysis, which collectively included more than 50,000 participants from 10 countries, revealed a significant negative association between pornography consumption and interpersonal satisfaction. Specifically, male viewers of pornography reported significantly lower sexual and relational satisfaction.<sup>72</sup>
- **Impulsivity/Discounting Long-term Consequences:** In a study of 122 undergraduate students, male participants exposed to pictures of “sexy” women were more likely to discount the future (i.e., a tendency to prefer smaller, immediate gains to larger, future ones) and were more inclined to make cyber-delinquent choices (e.g., cyberbullying, cyber fraud, cyber theft, and illegal downloading), compared with those exposed to less sexy opposite-sex pictures. In a second experiment within the same study of 72 males, participants exposed to sexual primes showed a greater willingness to purchase a wide range of counterfeit rather than authentic products online and experienced a higher likelihood of logging into the other person’s Facebook webpage (i.e., invading online privacy). These sexual primes may engender a “short-sighted” self-state in men, which leads to them yielding to short-term gains while failing to consider the long-term costs of delinquent behavior.<sup>73</sup>

## Impact on Mental Health

- **Loneliness:** The results of a study revealed that the association between loneliness and viewing pornography was positive and significant. Survey data of 1,247 participants seeking help for pornography use, revealed that those who viewed pornography were more likely to experience loneliness, and that those who were experiencing loneliness were more likely to view pornography.

71 Sajeew Kunaharan et al., “Conscious and Non-Conscious Measures of Emotion: Do They Vary with Frequency of Pornography Use?” *Applied Sciences* 7, no. 5 (2017): 493, doi:10.3390/app7050493.

72 Paul J. Wright, Robert S. Tokunaga, Ashley Kraus, and Elyssa Klannm, “Pornography Consumption and Satisfaction: A Meta-Analysis,” *Human Communication Research*, 2017, doi:10.1111/hcre.12108.

73 Wen Cheng, and Wen-Bin Chiou, “Exposure to Sexual Stimuli Induces Greater Discounting Leading to Increased Involvement in Cyber Delinquency among Men,” *Cyberpsychology, Behavior, and Social Networking*, 2017, doi:10.1089/cyber.2016.0582.

The researchers explained:

*Conceptualizing the potential for pornography viewing and the sexual response to be employed as a maladaptive coping strategy fits the behavioral and psychological contours of addiction. The sexual response cycle, with its twin aspects of intense, preoccupying physical pleasure during the arousal phase, followed by comforting, soothing experience during the resolution phase, mediated by the brain's dopaminergic reward structure in part by oxytocin, allows for the possibility of a two-stage drug-like experience providing both euphoric and narcotic brain effects, permitting temporary escape into "fantasy" and/or "obliviousness" to real-world concerns and stressors. A person may experience palliative relief from distressing experience through the preoccupying, distracting euphoria or fantasy accompanying pornography and sexual arousal. Pornography use readily becomes a tightly integrated component of that recurring compulsive, addictive pattern. In this manner, pornography may provide a self-soothing, autoerotic narcosis from real life circumstances, an experience that mirrors a drug-like intoxication... .*

*Emotional attachment, and other demands of relational pair-bond sexuality help ground sexual expression and can help circumvent (though not entirely) it being formed and fitted to maladaptive purpose and addictive use... .*

*Pornography use that is only temporarily palliative while failing to address root causes of loneliness, and which in turn intensifies triggering conditions qualifies as a maladaptive coping strategy.<sup>74</sup>*

- **Mood & Anxiety Disorder/Impulse-control Disorders:** In a U.S. study utilizing a convenience sample of 103 male patients seeking treatment for compulsive pornography use and sexual promiscuity, 70% self-identified as gay, 17% heterosexual, 6% bisexual, and 8% transgendered. More than half (51.5%) reported only using pornography compulsively, and the remainder (48.5%) reported compulsive pornography use and frequent anonymous sex with strangers. Using results from a scale of compulsivity adapted for compulsive sexual behavior, researchers found that two-thirds of the men reported moderate to severe levels of obsessive and compulsive symptoms related to their underlying pornography use or sex with strangers. Similar to other studies, this study found frequent co-occurring mood (71%), anxiety (40%), substance-use (41%), and impulse-control disorders such as pathological gambling (24%) among patients. The researchers therefore

74 Mark H. Butler et al., "Pornography Use and Loneliness: A Bi-Directional Recursive Model and Pilot Investigation," *Journal of Sex & Marital Therapy*, March 7, 2017, doi:10.1080/0092623x.2017.1321601.

stress the importance of careful psychiatric assessment of individuals with compulsive sexual behavior, and screening for CSB in psychiatric patients.<sup>75</sup>

- In a cross-sectional study of 792 emerging adults from college campuses, researchers observed that higher pornography use was significantly associated with less self-worth and more depressive symptoms. This was consistent after controlling for age, religiosity, impulsivity, race, and parent's marital status.<sup>76</sup>
- A study in Australia of 941 15–29 year olds reported that those who reported mental health problems during the previous six months were 65% more likely to report watching pornography less than monthly and 52% more likely to watch pornography weekly or more frequently compared to those that did not report mental health problems.<sup>77</sup>

## Impact on the Brain/Evidence of Addiction

- **Detrimental Impacts on the Brain:** Since 2011, there have been 30 peer-reviewed studies which reveal pornography use has negative and detrimental impacts on the brain.<sup>78</sup>
- **Similarity to Substance or Behavioral Addictions:** A functional MRI (fMRI) study of men seeking clinical treatment for problematic pornography use (PPU) found that those with pornography addictions share similar brain reactions to other behavioral addictions such as gambling or substance abuse. PPU is often accompanied by excessive masturbation and is a form of compulsive sexual behavior. Researchers also extrapolated that, when compared to those addicted to gambling or drugs, problematic pornography users experience more powerful and faster conditioning to anything associated with their use (computer, being alone, pop-ups, etc.).<sup>79</sup>

In a fMRI study of 23 men with problematic hypersexual behavior (PHB) and 22 men without PHB, researchers found alterations and activation

75 Shane W. Kraus, Marc N. Potenza, Steve Martino, and Jon E. Grant, "Examining the Psychometric Properties of the Yale-Brown-Obsessive-Compulsive Scale in a Sample of Compulsive Pornography Users," *Comprehensive Psychiatry* 59 (2015): 117–122, doi: 10.1016/j.comppsy.2015.02.007.

76 Brian J. Willoughby et al., "Associations between Relational Sexual Behaviour, Pornography Use, and Pornography Acceptance among US College Students," *Culture, Health & Sexuality* 16, no. 9 (2014): 1052–69, doi:10.1080/13691005.8.2014.927075.

77 Lim, et al., *ibid.*

78 Your Brain on Porn, "Brain Studies on Porn Users," (2014) <http://yourbrainonporn.com/brain-scan-studies-porn-users> (accessed July 13, 2016).

79 Mateusz Gola et al., "Can Pornography be Addictive? An fMRI Study of Men Seeking Treatment for Problematic Pornography Use," *Neuropsychopharmacology*, 2017, doi:10.1038/npp.2017.78.

patterns in the prefrontal cortex which matched those observed in drug addicts. They had greater cue-reactivity (i.e. physiological and subjective reactions to presentations of addiction-related stimuli) to sexual images, yet inhibited response to other normal stimuli.<sup>80</sup>

In a study of 20 men with compulsive sexual behavior (CSB) and 20 men without CSB, the neural correlates of appetitive conditioning and neural connectivity were altered in the CSB group. According to the researchers, the first alteration—heightened amygdala activation—might reflect facilitated conditioning (greater “wiring” to previously neutral cues predicting porn images). The second alteration—decreased connectivity between the ventral striatum and the prefrontal cortex—could be a marker for impaired ability to control impulses. The findings of greater amygdalar activation to cues (sensitization) and decreased connectivity between the reward center and the prefrontal cortex (hypofrontality) are two of the major brain changes seen in substance addiction.<sup>81</sup>

- **Decreased Brain Matter in the Right Caudate of the Caudate Nucleus:** A 2014 fMRI study of 64 pornography users found that increased pornography use (i.e. pornography dosage) is linked to decreased grey matter in brain regions associated with motivation and to less brain activation for sexual images. The authors speculate that the brain structural volume deficit and reduced activation “may reflect the results of tolerance after desensitization to sexual stimuli.”<sup>82</sup>
- **Enlargement of the Amygdala:** Structural MRI data comparing healthy adult males to those with compulsive sexual behaviors (CSB) concluded that there was increased volume of amygdala grey matter in the brains of those with CSB. The amygdala plays a key role in processing emotions, including response to stress, enlarging under moderate to severe stress. Perhaps the chronic stress related to compulsive porn use stimulates amygdala hypertrophy. The study also reported poorer connectivity between the amygdala and the prefrontal cortex, mirroring findings in drug addicts, reflecting reduced ability to control impulsive behaviors.<sup>83</sup>

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80 Ji-Woo Seok, and Jin-Hun Sohn, “Neural Substrates of Sexual Desire in Individuals with Problematic Hypersexual Behavior,” *Frontiers in Behavioral Neuroscience* 9 (November 30, 2015), doi:10.3389/fnbeh.2015.00321.

81 Tim Klucken et al., “Altered Appetitive Conditioning and Neural Connectivity in Subjects with Compulsive Sexual Behavior,” *The Journal of Sexual Medicine* 13, no. 4 (2016): 627–36, doi:10.1016/j.jsxm.2016.01.013.

82 Simone Kühn and Jürgen Gallinat, “Brain Structure and Functional Connectivity Associated with Pornography Consumption,” *JAMA Psychiatry* 71, no. 7 (2014): 827–834.

83 Casper Schmidt et al., “Compulsive Sexual Behavior: Prefrontal and Limbic Volume and Interactions,” *Human Brain Mapping* 38, no. 3 (October 27, 2016): 1182–190, doi:10.1002/hbm.23447.

- **Hijacks the Brain's Reward System:** Motivation and reward are regulated by the mesolimbic system. There is ample evidence that the mesolimbic system is activated in response to both substance abuse and natural rewards such as sex.<sup>84</sup> Addiction occurs when the pleasure/rewards pathways of the brain are hijacked by drugs such as cocaine or by natural process vital to survival such as eating and sex.<sup>85</sup> The constant novelty of Internet pornography, as well as properties such as violation of expectations, anticipation of reward, and the act of seeking (i.e. surfing) stimulate mesolimbic dopamine activity.<sup>86</sup>

Growing evidence suggests that pornography use hijacks the brain's reward system in the same way that drug use does. For instance, a study of 19 men with compulsive sexual behavior (CSB) and 19 men without CSB, the same brain activity pattern in pornography addicts (CSB subjects) was seen as in drug addicts and alcoholics. The study also identified a dissociation between desiring or wanting but not liking sexually explicit materials—a finding consistent with theories of incentive motivation underlying drug addiction.<sup>87</sup>

- **Interference and Desensitization:** A study of sexually active individuals found that higher sexual compulsivity scores correlated with greater interference (increased distraction) during a task. Additionally, more years of “compulsive sexual activity” lead to greater habituation or a general numbing of the pleasure response (desensitization).<sup>88</sup>
- **The Addiction Gets Worse:** Using functional MRI, a 2015 study from Cambridge found that compulsive sexual behavior is characterized by novelty-seeking, conditioning, and habituation to sexual stimuli in males—meaning users need more extreme content over time in order achieve the same level of arousal.<sup>89</sup>
- **Addictive Potential:** Longitudinal research has found that among Internet activities, searching for pornography has the most addictive potential and

84 K.S. Frohmader et al., “Methamphetamine Acts on Subpopulations of Neurons Regulating Sexual Behavior in Male Rats,” *Neuroscience* 166, (2010):771–784.

85 Donald L. Hilton, Jr., and Clark Watts, “Pornography Addiction: A Neuroscience Perspective.” *Surgical Neurology International* 2, no. 19 (2011). doi:10.4103/2152-7806.76977.

86 Park, *ibid.*

87 Voon, *ibid.*

88 Ian P. Albery, et al., “Exploring the Relationship between Sexual Compulsivity and Attentional Bias to Sex-Related Words in a Cohort of Sexually Active Individuals,” *European Addiction Research* 23, no. 1 (November 14, 2016): 1–6, doi:10.1159/000448732.

89 Voon, *ibid.*

should be regarded as the most important risk factor for the development of Compulsive Internet Use (also referred to as Internet addiction).<sup>90</sup>

- **Working Memory Performance:** In a study of 28 healthy, heterosexual men, researchers found that viewing pornographic pictures significantly negatively affected working memory (WM) performance. WM performance was not significantly impacted by neutral pictures (e.g. unmoved faces, people at work, walking in a street), negative pictures (e.g. a mugging, a person with a weapon, harassment), nor positive pictures (e.g. laughing people, a bride, sport awards). WM is responsible for the short-term holding, processing, and manipulation of information. It is essential for understanding, reasoning, problem solving, learning and development of speech, and decision making.<sup>91</sup>

## Impact on Sexually Transmitted Infections

- **Pornography and STI's:** Pornography use among adult males in America is associated with increased engagement in sexual behaviors that increase the risk of STIs. Internet pornography consumption has been positively associated with having sex with multiple partners, engaging in paid sex, and having had extramarital sex.<sup>92</sup>
- **Increased STI's Among Adolescent Minority Females:** Exposure to X-rated movies among Black females 14 to 18 years old was associated with being more likely to have negative attitudes toward using condoms, to have multiple sex partners, to have sex more frequently, to have not used contraception during the last intercourse, to have not used contraception in the past 6 months, to have a strong desire to conceive, and to test positive for chlamydia.<sup>93</sup>
- **Condom Use:** In a systematic review and meta-analysis of cross-sectional studies about young people aged 10-24 years, exposure to sexually explicit websites was correlated with condomless sexual intercourse.<sup>94</sup>

90 G.J. Meerkerk, R. J. J. M. V. D. Eijnden, and H.F.L. Garresten, "Predicting Compulsive Internet Use: It's All about Sex!" *CyberPsychology & Behavior* 91, no. 9 (2006): 95–103.

91 Christian Laier, Frank P. Schulte, and Matthias Brand, "Pornographic Picture Processing Interferes with Working Memory Performance," *Journal of Sex Research* 50, no. 7 (2013): 642–52, doi:10.1080/00224499.2012.716873.

92 Paul J. Wright and Ashley K. Randall, "Internet Pornography Exposure and Risky Sexual Behavior among Adult Males in the United States," *Computers in Human Behavior* 28 (2012): 1410–1416.

93 Gina M. Wingood et al., "Exposure to X-Rated Movies and Adolescent's Sexual and Contraceptive-Related Attitudes and Behaviors," *Pediatrics* 107, no. 5 (2001): 1116–1119.

94 Smith, *ibid.*

## Impact on Relationships and Sexual Behaviors

- **Earlier Sexual Debut, Multiple Partners, and Risky Sexual Practices:** Pornography consumption is linked to initiating sex at an earlier age, multiple sexual partners, more frequent practice of anal sex, use of psychoactive substances, and lack of protection against STIs.<sup>95</sup> Bulot, Leurent, and Collier (2015) report that, “All the work done in this area is in fact unanimous in concluding that pornography is a pervasive influence on young people.”<sup>96</sup>
- **Casual Sexual Behavior:** Longitudinal research has found that pornography exposure was associated with a nearly twofold increase in the odds of casual sexual behavior. This association was found even after controlling for age, ethnicity, religiosity, education, and gender. Casual sex increases the risk of undesirable outcomes such as physical and sexual aggression, STIs, and unwanted pregnancies.<sup>97</sup>
- **Dissatisfaction with Partners:** Research has demonstrated that the more pornography a man watches, the more likely he is to deliberately conjure images of pornography during sex to maintain arousal, and to experience decreased enjoyment of intimate behaviors with a partner.<sup>98</sup>

A separate cross-sectional study of 405 sexually active men and women who had viewed pornography, frequency of pornography consumption was directly related to a relative preference for pornographic rather than partnered sexual excitement. This preference, as well as devaluing sexual communication, was associated with less sexual satisfaction for both men and women.<sup>99</sup>

- **Negative Impact on Marriage Formation:** Researchers report that declining rates of marriage formation bring demographic and socio-economic changes that negatively impact society, while marriage formation creates substantial socio-economic improvements. Pornography has been shown

95 C. Bulot, B. Leurent, and F. Collier, “Pornography Sexual Behavior and Risk Behaviour at University,” *Sexologies* 24, (2015): 78–83; Debra K. Braun-Courville and Mary Rojas, *ibid*; Jane D. Brown and Kelly L. L’Engle, *ibid*; Elizabeth M. Morgan, “Associations between Young Adults’ Use of Sexually Explicit Materials and Their Sexual Preference, Behaviors, and Satisfaction,” *The Journal of Sex Research* 48, no. 6 (2011): 520–530; Shane W. Kraus and Brenda Russell, “Early Sexual Experiences: The Role of Internet Access and Sexually Explicit Material,” *Cyberpsychology & Behavior* 11, no. 2 (2008): 162–168.

96 Bulot, Leurent, and Collier, *ibid*.

97 Paul J. Wright, “A Longitudinal Analysis of US Adults’ Pornography Exposure. Sexual Socialization, Selective Exposure, and the Moderating Role of Unhappiness,” *Journal of Media Psychology* 24, no. 2 (2012): 67–76.

98 Chyng Sun, Ana Bridges, Jennifer Johnason, and Matt Ezzell, “Pornography and the Male Sexual Script: An Analysis of Consumption and Sexual Relations,” *Archives of Sexual Behavior* 45, no. 4 (2014): 983–994.

99 Paul J. Wright et al., “Associative Pathways between Pornography Consumption and Reduced Sexual Satisfaction,” *Sexual and Relationship Therapy*, (2017): 1–18, doi:10.1080/14681994.2017.1323076.

to significantly negatively impact marriage formation, and in light robust controls, the effect is likely causal.<sup>100</sup>

- **Negative Impact on Marital Quality:** A longitudinal study of married couples found that those who used pornography more often reported lower satisfaction with their sex-life and decision-making as a couple. Pornography use was strongly and negatively related to marital quality over time. “The findings provide qualified support for the notion that more frequent pornography viewing—rather than simply being a proxy for the participants’ dissatisfaction with sex-life or marital decision-making—may negatively influence marital quality over time.”<sup>101</sup>
- **Extramarital Affairs:** A study found that persons who have had an extramarital affair were more than 3 times more apt to have used Internet pornography than ones who had lacked affairs.<sup>102</sup> Other research affirms that pornography consumption is associated with more positive attitudes towards extramarital affairs.<sup>103</sup>
- **Romantic Breakups:** A longitudinal study of Americans found those who viewed pornography at all in 2006 were nearly twice as likely as those who never viewed pornography to report experiencing a romantic breakup by 2012. Additionally, a statistically significant relationship was found between frequently viewing pornography and experiencing a breakup. Researchers also extrapolated that earlier pornography use significantly predicts relational instability, particularly for men.<sup>104</sup>
- **Divorce Rates:** In a nationally representative longitudinal study, researchers found the probability of divorce roughly doubles for men and women who begin viewing pornography. Conversely, women who quit using pornography were significantly less likely to get divorced.<sup>105</sup>
- **Sexual Dissatisfaction:** In a study of 832 French men and women, researchers discovered that, even when controlling for perceived addiction

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100 Michael Malcolm and George Naufal, “Are Pornography and Marriage Substitutes for Young men?” *Eastern Economic Journal* 42 (2016): 317–334.

101 Samuel L. Perry, “Does Viewing Pornography Reduce Marital Quality Over Time? Evidence from Longitudinal Data,” *Archives of Sexual Behavior*, (2016).

102 Steven Stack, Ira Wasserman, and Roger Kern, “Adult Social Bonds and Use of Internet Pornography,” *Social Science Quarterly* 85 (2004): 75–88.

103 Paul J. Wright, Robert S. Tokunaga, and Soyoung Bae, “More Than a Dalliance? Pornography Consumption and Extramarital Sex Attitudes among Married U.S. Adults,” *Psychology of Popular Media Culture* 3, no. 2 (2014): 97–109.

104 Samuel L. Perry and Joshua T. Davis, “Are Pornography Users More Likely to Experience A Romantic Breakup? Evidence from Longitudinal Data,” *Sexuality and Culture*, [https://www.academia.edu/32868948/Are\\_Pornography\\_Users\\_More\\_Likely\\_to\\_Experience\\_A\\_Romantic\\_Breakup\\_Evidence\\_from\\_Longitudinal\\_Data](https://www.academia.edu/32868948/Are_Pornography_Users_More_Likely_to_Experience_A_Romantic_Breakup_Evidence_from_Longitudinal_Data).

105 Samuel L. Perry and Cyrus Schleifer, “Till Porn Do Us Part? A Longitudinal Examination of Pornography Use and Divorce,” *The Journal of Sex Research*, 2017, 1–13, doi:10.1080/00224499.2017.1317709.

to cyberpornography and overall sexual functioning, cyberpornography use was directly associated with sexual dissatisfaction. Additionally, cyberpornography use had a significant negative indirect effect on sexual satisfaction through increased sexual dysfunction and sexual avoidance. Sexual dysfunction encompassed the quality of sex drive, arousal, vaginal lubrication/penile erection, ability to reach orgasm, satisfaction from orgasm, and pain during sex.<sup>106</sup>

In a study of 15,246 Americans, a symmetrical relationship was revealed between men and women as a result of viewing pornography. Women reported more negative consequences, including: lowered body image; that their partner was more critical of their body; increased pressure to perform acts seen in pornography; and less actual sex. Meanwhile, men reported being more critical of their partners' bodies and less interest in actual sex. The findings also suggest that males are more likely to use Internet pornography as a solitary, autoerotic activity.<sup>107</sup>

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106 Sarah Blais-Lecours et al., "Cyberpornography: Time Use, Perceived Addiction, Sexual Functioning, and Sexual Satisfaction," *Cyberpsychology, Behavior, and Social Networking* 19, no. 11 (2016): 649–55, doi:10.1089/cyber.2016.0364.

107 Albright, *ibid.*

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# Collection of papers from a Symposium held at the U.S. Capitol on July 14, 2015

HONORARY SPONSOR **U.S. Senator Charles Grassley**  
HOSTED BY **National Center on Sexual Exploitation**

The purpose of the briefing was to bring together Members of Congress, their staffs, the national press, and the public to educate on the public health crisis resulting from pornography and sexual exploitation. Experts—including medical doctors, a cognitive therapist, sociologists, leading child safety advocates, and the former head of the National Center for Missing & Exploited Children—discussed many facets of the issue.

# Today's Pornography and the Crisis of Violence Against Women and Children

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Gail Dines, Ph. D.

Professor of Sociology, Wheelock College, Boston, MA  
Founder and Chair, Culture Reframed

I have studied the nature and extent of pornography for over twenty-five years, during which time the porn industry has grown to be one of the world's most lucrative and harmful businesses. As an academic and founding chair of the non-profit health education organization Culture Reframed, I am here today to speak about porn as what we recognize to be the public health crisis of the digital age. For many in this room today, porn may seem like a minor issue given the tsunami of violence against women and children and the prevailing misrepresentation of porn as harmless or even empowering. In reality, porn is deeply and increasingly implicated in virtually all forms of sexual violence. We cannot speak about rape, child sexual abuse, commercial sexual exploitation, teen dating violence, domestic violence, sexual harassment, college sexual assault, sexting, or teen suicide following cyberbullying without understanding porn as a driving force behind the normalization and legitimization of violence against women and children. Failure to see and address the role pornography can play in sexual violence, as well as myriad other health problems related to exposure such as PTSD, depression, compulsive use, and hypersexualized behavior, is to turn a blind eye on an environmental risk factor of epic proportions. Ignoring the role porn plays in socializing our children and youth is a dereliction of our collective duty to protect the safety and well-being of the next generation.

The most important point I want to make today is that mainstream porn, the porn you see within 15 seconds of typing "porn" into Google, is cruel, abusive, violent, and **free**. No credit card is needed to enter this world of sexual abuse. Advances in technology, especially mobile devices, enable pornography to be viewed anywhere, anytime, by any child or adult who has Internet access. Never before have we reared a generation of boys on hardcore porn, and we are in the midst of a social experiment that few have signed on for, but everyone will ultimately pay a price for.

Today's porn is not your father's Playboy. Type "porn" into Google, and you won't see anything that looks like the old pinups; instead, you will be catapulted into a world of sexual cruelty and brutality where women are subject to body-

punishing sex and called vile names. You will see women being gagged with a penis till they almost pass out, spat on, penetrated by multiple men in all orifices, ejaculated on, and treated as disposable objects.

In porn, sex is not about making love. The feelings and emotions we normally associate with such an act—connection, empathy, tenderness, caring, affection—are missing. In their place are those emotions we normally associate with hate—fear, disgust, anger, loathing and contempt. In porn, the man “makes hate” to the woman, as each sex act is designed to deliver the maximum amount of degradation. Yet, the women are still portrayed as enjoying these scenes. Now commonplace and pervasive throughout the Internet, these images are shaping the way a whole generation of boys thinks about and relates to sex, relationships, and intimacy.

Today, the average age of first viewing porn is eleven years old. This is not an unfortunate byproduct of easily accessible porn, but a business strategy developed by the porn industry to attract younger and younger viewers. The younger the boy starts masturbating to porn, the more likely he is to develop habitual and/or addictive porn use. Porn is often misleadingly defined as fun or fantasy, but in reality, it is a predatory multi-billion dollar industry that has our sons (and daughters) in its crosshairs.

Andrew Edmond, President and CEO of Flying Crocodile, a \$20 million pornography Internet business, succinctly explained why so few people understand the scale and scope of the industry. He stated that “a lot of people [outside adult entertainment], get distracted from the business model by [the sex]. It is just as sophisticated and multilayered as any other market place. We operate just like any Fortune 500 company.”<sup>1</sup> Similarly, 2009, Steven Yagielowicz, a well known porn industry journalist, stated in an article for XBIZ:

The corporatization of porn isn't something that will happen or is happening, it is something that has happened—and if you're unaware of that fact then there truly is no longer a seat at the table for you. It's Las Vegas all over again: the independent owners, renegade mobsters and visionary entrepreneurs pushed aside by mega-corporations that saw a better way of doing things and brought the discipline needed to attain a whole new level of success to the remaining players.<sup>2</sup>

The size and scale of the pornography business has important cultural implications. The entertainment industries do not just influence us, they constitute our dominant culture, our identities, our conceptions of the world, and our norms of acceptable behavior. Moreover, in the void of comprehensive school-based sex education, porn fills the knowledge gap for children and youth and significantly shapes adolescent sexual templates. This is especially

worrisome given the findings from a comprehensive content analysis of contemporary porn by Bridges (2010) and her team. They found that the majority of scenes from 50 of the top-rented and downloaded porn movies contained both physical and verbal abuse targeted against the female performers. Physical aggression, which included spanking, open-hand slapping, and gagging, occurred in over 88% of scenes, while expressions of verbal aggression—calling the woman names such as “bitch” or “slut”—were found in 48% of the scenes. The researchers concluded that 90% of scenes contained at least one aggressive act if both physical and verbal aggression were combined.<sup>3</sup>

Porn as a major industry engages in the normal business activities that other industries pursue. Porn businesses raise capital, hire managers and accountants, undergo mergers and acquisitions, organize trade shows, have their own lobbying group (The Free Speech Coalition, FSC) and enter into co-marketing arrangements with other companies. While these activities are in themselves unremarkably normal business operations, they signal that porn is becoming a mainstream, normal, business—a legitimate business, being taken more seriously by Wall Street, the media, and the political establishment. The porn business is embedded in a complex value chain, linking not just film producers and distributors, but also bankers, software producers, Internet providers, cable companies, and hotel chains. These other businesses become allies and collaborators, with a vested interest in the growth and continued viability of the porn business. Banks, for example, make money from the porn industry, as the revenue it generates is invested in stocks, bonds, mutual funds etc. Indeed, everyone in the supply chain from production to consumption is complicit in building and strengthening the porn industry.

This is a business with considerable political clout, with the capacity to lobby politicians, engage in expensive legal battles, and use public relations to influence public debate. Like the tobacco industry, this is not a simple matter of consumer choice; rather the business is increasingly able to deploy a sophisticated and well-resourced marketing machine, not just to push its wares but also to cast the industry’s image in a positive light. Indeed, one of the key myths that the industry promotes is that porn is harmless fun: that it is all about fantasy and play, and that we should not take it too seriously.

Over forty years of empirical research tells a very different story. My colleagues here today will discuss the major findings, but to give a snapshot view of the research, I will list some of the most consistent results that span a range of studies using varied methodologies.

Youth with greater pornography exposure have been found more likely to <sup>4</sup>

- have sex at a younger age
- engage in risky sexual behavior
- have negative attitudes toward using condoms
- have oral sex, anal sex, and sex with multiple partners, which increases their risk for sexually transmitted infections
- view women as sex objects
- have attitudes that support violence against women
- believe “rape myths”—beliefs that justify or defend rape
- report decreased empathy for rape victims
- choose not to intervene when witnessing college sexual assault
- have increasingly aggressive behavioral tendencies
- report increased interest in coercing partners into unwanted sex acts
- experience increased difficulty in developing intimate relationships with partners
- report decreased sexual interest in their girlfriends or wives
- develop compulsive Internet use

## **Teen Porn as a Major Growth Niche**

In 2002, the FSC took a case to the US Supreme Court to change the 1996 Child Pornography Prevention Act, which prohibited any image that “is, or appears to be, of a minor engaging in sexually explicit conduct.” Arguing that the term “appears-to-be” limiting the free speech of the pornographers, the coalition succeeded in removing this “limitation,” and the law was narrowed to cover only those images in which an actual person (rather than one who appears to be) under the age of eighteen was involved in the making of porn. Thus, the path was cleared for the porn industry to use either computer-generated images of children or real porn performers who, although age eighteen or over, are “childified” to look much younger.

Since that 2002 decision, there has been an explosion in the number of sites that childify women, as well as those that use computer-generated imagery. Pseudo Child Pornography (PCP) sites that use adults (those people defined by law as eighteen years of age or over) to represent children are never called child pornography by the industry. Instead, almost all of those sites that childify the female porn performer are found in the sub-genre called “teen-porn” or “teen-sex” by the industry. There are any number of ways to access these sites, the most obvious one being through Google. Typing “Teen Porn” into Google yields over sixteen million hits, giving the user his<sup>5</sup> choice of thousands of porn sites. A number of the hits are actually for porn portals where “teen porn” is one sub-

category of many, and when the user clicks on that category, a list of sites comes up that runs over ninety pages.

Many of the actual sites in this category have the word “teen” in the name—for example, *Solo Teen*, *Solo Teen Babe*, *Sexy Teen Girl*, *Teen Cuties*, and *Solo Teen Girls*. When the user clicks on any one of these sites, the first and most striking feature is the body shape of the female porn performers. In place of the large-breasted, curvaceous bodies that populate regular porn websites, one sees small-breasted, slightly built women with adolescent-looking faces that are relatively free of makeup. Many of these performers do look younger than eighteen, but they do not look like children, so the pornographers use a range of techniques to make them appear more childlike than they actually are. Primary among these is the use of childhood clothes and props such as stuffed animals, lollipops, pigtails, pastel-colored ribbons, ankle socks, braces on the teeth, and, of course, the school uniform. It is not unusual to see a female porn performer wearing a school uniform, sucking a lollipop, and hugging a teddy bear while she masturbates with a dildo.

Evidence as to just how this win on the part of the FSC shaped the content of mainstream porn can be found in the fact that “teen porn” has grown rapidly, and is now the largest single genre, whether measured in terms of search term frequency or proportion of web sites. In original research I conducted in 2013 with David Levy (Professor of Management at U/Mass Boston), for the Department of Justice in the case [*Free Speech Coalition, Inc., et al. vs. Holder*,] a Google Trends analysis indicates that searches for “Teen Porn” have more than tripled between 2005–2013, and teen porn was the fastest-growing genre over this period. Total searches for teen-related porn reached an estimated 500,000 daily in March 2013, far larger than other genres, representing approximately one-third of total daily searches for pornographic web sites. Moreover, the content of the three most popular “porntubes,” the portals that serve as gateways to online porn contained about 18 million teen-related pages—again, the largest single genre and about one-third of the total content.

There is a wealth of research within media studies that shows that people construct their notions of reality from the media they consume, and the more consistent and coherent the message, the more people believe it to be true.<sup>6</sup> Thus, the images of girls in PCP do not exist within a social vacuum, but rather are produced and consumed within a society where the dominant pop culture images are of childified women and hypersexualized, youthful female bodies. Encoded within all of these images is an ideology that encourages the sexual objectification of the female body, an ideology that is internalized by both males and females, and has become so widespread that it normalizes the sexual use and abuse of females. This does not mean that all men who masturbate to

PCP will rape a child, or even be sexually attracted to a child. What it does mean, however, is that on a cultural level, when we sexualize the female child, we chip away at the norms that define children as off limits to male sexual use. The more we undermine such cultural norms, the more we drag girls into the category of “woman,” and in a porn-saturated world, to be woman is to be a sexual object deserving of male contempt, use, and abuse.

To prevent unprecedented emotional, psychological, and physical damage to the generations born in the digital age, we must first recognize pornography as a public health crisis, and then respond with skillfully prepared and executed intervention. The pornography epidemic requires collaborative, comprehensive, evidence-based response across the lifespan and diverse ecology of human experience. Committed to urgent, effective action, Culture Reframed pursues a multilevel, multidisciplinary, multiculturally competent solution to prevent, build resilience to, and ultimately eradicate the harmful effects of pornography. We aim to build the public’s capacity to deal with pervasive sexually violent online pornography through education and support that promote healthy development, relationships, and sexuality.

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- 1 [Brandweek](#), October 2000, v41, p 1Q48.
  - 2 Yagielowicz, Stephen. 2009. The State of the Industry. *XBIZ News*. <http://www.xbiz.com/articles/106157/>. Accessed March 20, 2009
  - 3 Bridges, A., Wosnitzer, R., Scharrer, E., Sun, C. & Liberman, R. (2010). Aggression and Sexual Behavior in Best-Selling Pornography Videos: A Content Analysis Update. *Violence Against Women*, 16, 1065-1085
  - 4 For a more detailed account of the studies, see Owens, E.W., Behun, R., Manning, J., & Reid, R. (2012). The impact of Internet pornography on adolescents: A review of the research. *Sexual Addiction and Compulsivity* 19, 99-122
  - 5 I refer to the user in the masculine since the majority of porn consumers are men. While it is impossible to give an accurate breakdown of male and female consumers, Mark Kernes, senior editor of the pornography trade magazine *Adult Video News*, stated: “Our statistics show that 78% of the people that go into adult stores are men. They may have women with them, but it’s men, and 22%, conversely, is women or women with other women or women alone.” Interview at the Adult Entertainment Expo in Las Vegas with Robert Jensen, January 7, 2005.
  - 6 See Jhally, S. (2012). “Image-Based Culture: Advertising and Popular Culture.” *Gender, Race, and Class in Media*. Eds. Gail Dines and Jean Humez. Thousand Oaks, CA: Sage, 199-204

# Why Pornography is a Public Health Issue

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Cordelia Anderson, M.A.

Founder and Director of Sensibilities Prevention Services

- A therapist calls first thing in the morning; she is looking for a referral for a ten-year-old girl who is developing problematic thoughts and behaviors after repeated exposure to pornography. After a training on the impact of pornography, a participant says she is concerned about her own porn use and preference for violent images. It never bothered her before; she is a therapist who works with men who've committed sex offenses. However, since becoming a mother she is no longer comfortable with the shift in her own arousal, which is focused solely on these sexually violent images.
- A mother called frustrated and in search of better help for her family. Her spouse had a life-threatening illness and they were also dealing with a fourteen-year-old son who quickly became so obsessed with Internet pornography that they had to lock up all their technology. Attempts to find a therapist who would actually talk about the pornography and the way it had become problematic in his life failed. Even after the boy's behavior escalated to include behaving in sexually inappropriate ways with a young girl, the therapists were not attentive to his and his family's stated concerns with his pornography use.
- A young female college student said her abuser seemed to get more aroused the more she suffered. It seemed like he was reenacting a scene from pornography.
- An adult male survivor of child sexual abuse who often speaks about his childhood victimization only recently began considering how his early trauma was linked to what he now considered to be his problematic use of pornography.

Individual stories and realities do not constitute a public health concern, but because the reach of today's pornography—through ever expanding and changing technologies—create what some researchers, academics, and activists have called “the largest unregulated social experiment ever,” (Dines, 2010; Seto, 2013; Carr, 2014 ) we have reason to be concerned. When the increased access and excessive use of pornography is linked to problematic behaviors, this trend then becomes a public health issue. As a public health concern we must go

beyond the individual responsibility to also include a system-wide response to address pornography's toxic reach and impact.

Yesterday's pornography is today's mainstream media and it, along with the pornography industry, has been the country's main "sex" educator of young people. Contrary to common arguments protecting the industry, there is ample research that shows a wide-range of harms from ease of access, exposure and use. Understanding the research that is outlined by the other speakers that are part of this Symposium is critical to laying the foundation of pornography as a public health issue. Additionally, many children/teens learn more about sex, gender and relationships from mainstream media (pop culture) and today's pornography than from parents and other caring adults in their lives. Certainly adults who care about the healthy development of children need to know what they are learning and how to have deeper conversations with their children to counter the harm. However, the harms related to pornography cannot be addressed only through individual parent's application of filters, education, treatment, prosecution, or incarceration of sex offenders. This massive unregulated social experiment has been allowed to go unchecked for too long and requires broader social change and leadership. Until now, our approach to this growing concern has been to allow complete individual freedom and choice, but few are considering the long-term costs to their own health or the expense of the broader well being of society.

Part of the challenge is that images and other depictions of sexual harm have become normalized in the hyper-sexualized mainstream media. Images of women as sexual objects in mainstream media and especially in pornography have become so common as to no longer be a novelty. Novelty sells, and from a pornography business point of view, is needed to keep the viewers' attention (Wilson, 2013). So business decisions were made to use images using younger and younger children, designed to shock and hook more and more "customers."

Many argue that pornography and the industry behind it are simply an established reality that is harmless, or is too big and pervasive to challenge. Other defenders argue that any concerns about pornography stem only from a religious or moral basis or from those who are anti-male, or who have repressive or prudish sexual norms. However, research shows that in actuality the content of pornography is far more about violence than sex (Bridges, et.al. 2010). Equally disturbing is the fact that excessive use of pornography is harmful, not helpful, to sexual functioning and development for males and females of all ages. Recent research has shown that a child or teen's exposure to violent pornography or excessive exposure to pornography can contribute to changing a child's brain, social interactions, and emotional skills, well into their mid-20s (Anderson, 2011).

## **Why a Public Health Approach?**

Pornography has been identified as a public health concern for over 25 years (Perrin, et. al., 2008; Koop, 1987). However, rising concern about its increasing violent content and ever-expanding reach through advancing technologies has increased this concern in recent years. Finally, the mounting research showing the negative impact of viewing violent pornography on health and on the brain, especially to developing children and adolescents, has created urgency for public action. An important aspect of a public health perspective is adding resources to problems that affect individuals or groups beyond their capacity to correct them. In a public health approach, the responsibility shifts from that of individuals alone to the public as a whole, to address external social causes or influences and hold them accountable for their impact on individuals and society (Wallack, 1989).

Public health is a societal strategy to assure the conditions are in place so that people can be healthy (Institute of Medicine, 2001). Therefore, strategies to counter the harm of pornography need to target the whole population. Public health approaches have worked with many other social issues that, at the time, seemed too entrenched to change including tobacco control versus an individual's right to smoke; use of seat belts and car seats versus individual freedoms; concern for shaken baby syndrome versus a parents' rights to discipline; mandated vaccines versus individual parental rights to choose health treatment for their child. But over time, when it was society's decision to step into the debate, the public health of our society has been improved. As George Albee, a public health leader in 1983 said, "No mass disorder afflicting mankind is ever brought under control or eliminated by attempts at treating the affected individual" (Cohen, Chavez, & Chehimi, 2007).

What is missing from the current conversation is our society's responsibility to invest in primary prevention. Primary prevention is taking action to prevent health and social problems *before* their onset. Primary prevention requires fostering health-supportive community environments through a range of strategies that make the healthy choice the easy choice (Cohen, Chavez, & Chehimi, 2007).

## **Public Health Model**

The Center for Disease Control identifies four elements of a public health model as: 1) define and monitor the problem, 2) identify risk and protective factors, 3) develop and test prevention strategies, and 4) assure widespread adoption (Center for Disease Control & Prevention). Following this format, some factors to consider when applying this approach to pornography include:

**1. Define the problem:** Part of the challenge of taking a public health approach is that we have not consistently defined what we mean by the term “pornography.” And we have learned that how this issue has been framed will have an impact on how we define and attempt to resolve the problem. Some argue that a standard definition of pornography such as ‘sexually explicit materials designed for sexual arousal’, or ‘visual sexual stimuli’, or ‘sexually explicit Internet materials’ needs to be neutral. Yet for those who are persuaded by the research that pornography is harmful, especially to children, are concerned that the definition of pornography should not be neutral, especially when it enters the mainstream media.

This definition (or frame) as a neutral approach has far-reaching impacts. For example, the laws in the United States on this topic refer to “pornography” that involves children as “child pornography.” In contrast to this “neutral approach,” around the world these same illegal materials are recognized as harmful to the child and referred to as “child sexual abuse images” or “child abuse images.” Through these abuse-oriented terms, these images are recognized as the documentation of sexual abuse, not of sex. These images of children and young teens are recognized in the United States as evidence of crimes and are not something protected as free speech. However, once the person being exploited reaches the age of eighteen, the arguments go back to harmlessness, choice, and just sex; any victimization or exploitation is ignored for the benefit of those who use and profit. Imagine the difference if pornographic images were defined as ‘sexually *exploitive* images’ or ‘sexual violence images’ irrespective of the ages of those portrayed.

Various studies document the harms of viewing pornography including sexually aggressive behavior in adults and youth, sexually reactive behaviors in youth, desensitization to others in sexual situations, rape supportive attitudes, arousal to increasingly violent content, increased levels of sexual insecurities, and difficulties with intimacy or sexual functioning such as erectile dysfunction in males (Deem, 2014).

**2. Identify risk and protective factors:** Further research and analysis is needed to identify the various risk and protective factors within the pornography industry for victims (e.g., adult “actors,” child victims, as well as those harmed by exposure), the adult, adolescent and even children who are users, the partners and family of users, and society in general. Additionally, there is research that provides some indication of a “second hand effect” from pornography (World Vision, 2006). This means that if a parent manages to protect their children from any exposure in or outside of the home, their children are likely to be effected by the attitudes, behaviors and expectations of others who were exposed. Like with tobacco, it is not only the individual user’s “choice” but the effect of the second hand smoke all around the user.

**3. Develop and test programs and strategies:** There are a number of emerging programs and strategies that could have an impact on limiting the negative consequences of unlimited access to pornography across all age groups. These would include programs to educate children, parents, and professionals about the impact of pornography, especially on the developing brain, along with broader initiatives to engage communities, build broader coalitions, change organizational practices and identify necessary policy changes. One example is an “opt in” rather than an “opt out” strategy that requires default filters that automatically block access to pornography unless an individual opts in. Beyond individual homes, this can help minimize unwanted exposure to pornography in hotels or other public access places. In these cases, adults would need to make a conscious decision to view pornography rather than shifting the burden to parents to understand all of the points of access to these materials available to their children.

**4. Assure widespread adoption:** Once programs are tested and the most effective strategies are identified, financial support is needed to disseminate information and programs while continuing to evaluate for adaptability. Policies can also set the expectation that no family or child is left alone to deal with these issues, but rather that protecting our children and adolescents from harm is a community and societal responsibility

## **An Example that Change is Possible: Smoking & Tobacco Industry**

Remember when doctors were depicted in ads heralding the benefits of smoking? Remember when smoking was a regular activity of cartoon characters that children watched while playing with their candy cigarettes? Remember when the Marlboro man was depicted as the embodiment of manliness and sexiness? Smoking was such a norm, even in confined spaces like airplanes that no one could have imagined a smoke-free area in a restaurant much less a complete ban of smoking in an entire public building.

When people began to recognize the health consequences of smoking, our initial approach was to educate the individual and encourage him or her to stop smoking. Over time, despite the industry’s denial, it became evident that smoking was addictive and that the harm was done to the individual and to the public all for the industry’s profit. The pornography industry now, in many ways equates with the dominance of the tobacco industry and social norms of smoking of just a few decades ago (Eberstadt, 2009). Now that research has documented pornography’s harm to individuals and the public— especially children—it is time for a societal response on this issue as well.

## The Environment Matters

In our current environment, hypersexualized media including pornography is easily accessible and educational messages about sexuality are regulated and censored. This is arguably a sexually toxic environment.

The term, “normalization of sexual harm” refers to the process by which a harmful idea or behavior goes from clearly problematic to *an accepted part of societal culture*. Once accepted it becomes “just the way it is” or “just what people do.” With further indoctrination and barriers removed, it can even become viewed as beneficial or preferential. Additionally, it becomes beyond questionable; if questions are raised, then the questioner gets identified as the problem, rather than the image or social norm they are questioning (Anderson, 2011). Consider the “soft core pornography” of the 1960s that is non-existent as a stand-alone industry today because it is currently found in advertisements, films, videos, and other media formats, as well as a wide-range of merchandise.

There are many examples of products that depict this normalization of sexual harm but a particularly egregious category is the infant onesies that promote messages such as: “pimp squad junior,” “playground pimp,” and “mother sucker.” Keep in mind that no child will think of, create, produce, market or buy these products—it is the adults surrounding that child who do so. Toxic decisions make sense in a toxic environment. Given today’s sexually toxic environment it becomes far less easy for people to make the healthy choices expected of them and that they are responsible.

Earlier and earlier exposure to pornography is just one impact of this growing normalization of sexual harm. One study indicated that when the age of first exposure to pornography was under eleven years old, the adolescent developed sexual sensation-seeking behaviors and demonstrated more sexual risk-taking as a young adult, both female and male (Sinkovic, 2014). Another study shows a significant link for both boys and girls between sexting and pornography use (Liebert, 2014). A study of fourteen to twenty-one-year-olds found that nearly one in ten of them, 9 % report some type of sexually abusive behaviors and that 9 % had significantly higher exposure to and use of violent sexual materials (Ybarra & Mitchell, 2013). Another powerful indicator of the pervasiveness of pornography in the environment and its toxicity is in the demand for the relatively new Fortify Program. Fortify offers on-line treatment for young people who reach out for help because of the negative impact pornography is having on their life. According to the June 2015, data from the program, the average age of first pornography exposure for youth reaching out to the Fortify program for help is 11.9. Of the applicants to the program, 9 % have viewed pornography by age eight, 24 percent by age ten, and 77 percent by age 13. Of the 16,185 applicants

to the program between February 2014 and July 2015, 85% are males and 15% are females. The Fortify program has great promise and is showing a significant reduction of pornography use and symptoms of depression among its participants.

## **The Cat is Out of the Bag, but it is Not Too Late**

There is a lot that can be done through individual and collective action at local, state and federal levels. The Centers for Disease Control and Prevention have documented significant achievements within public health including:

- immunizations
- motor vehicle safety
- workplace safety
- control of infectious diseases (typhoid: hygiene and sanitary conditions)
- decline in death from heart disease and stroke (identification of risk factors)
- healthier mothers and babies
- family planning
- fluoride in drinking water
- tobacco as a health hazard

To counter the pervasive reach of pornography, an equally extensive set of initiatives are needed to counter and ultimately prevent the harm.

## **Invest in Research**

Efforts are needed to draw attention to the existing research that shows the harmful impact of pornography/sexually exploitive images while simultaneously investing in the promotion of accurate and evidence-based information on sexual development and sexual and relational health. Further funding is needed for more research on expected child and adolescent socio-sexual development. In addition, more research is needed on the specific impact of pornography on various groups—the risks and protective factors.

## **Name the Harm & Ignite Champions for Change**

Massive changes happened around child sex trafficking when government and business leaders stepped up in concert with survivors and non-profits agencies to name the harm and identify critical changes needed. It is time to name the links between pornified or hyper-sexualized mainstream media, the

pornography industry, and a wide range of harms including demand for children and youth as sexual objects and commodities. It's time to build a much broader coalition of diverse groups working together in a movement to ignite more champions for change and to take back sexual and relational health and well-being. Leadership is needed among government and business leaders and men who are willing to speak to the harm of the pornography industries who profit at the expense of their health and well-being. Adults need to address the gendered socialization of girls, also as well as boys who are groomed to behave as users, takers, and pornography makers until they cross a line and become identified as sex offenders who then need to be registered as such. Initiatives are also needed to engage youth to help them see how the industry is manipulating and grooming them and then how to take action to counter the harm. The collective strengths of new and long-term leaders on this issue, non-profits, and others with direct-lived experiences as a result of the harms of pornography are all needed to focus on prevention and broad-based, social change. Education and broader support efforts are needed for all these groups, including parents, so they can effectively educate their children; but it is important not to put all of the burden on individual parents to filter out pornography. In fact, wouldn't it be a whole lot better if they didn't have so much to filter against and weren't the only ones concerned about protecting their children from toxic images?

## Policy

For major social change to be effective it has to go beyond education and awareness to a broad range of actions across the spectrum of prevention. In England, with the leadership of Prime Minister Cameron, there was an initiative to create an 'opt in' versus an 'opt out' approach to limiting access to pornography via the Internet. The idea is that for those who want to view pornography, they simply sign up for it. It means that adults need to make a conscious decision to view this material. The various filters that are automatically put into all technology in the UK can then be removed to provide access to pornography for those who choose to consume it. This alternative highlights the shift towards empowering consumers to make an active decision to view pornography rather than the provision of unlimited access until you decide to learn about and install the appropriate filters on every technology at home. Furthermore, parents currently have to consistently view cell phones, iPads, iPods, and so much more because they can't be assured that there are safety nets installed in every place a parent or child may go. Iceland is another interesting example of a country that decided against unlimited access to pornography based on the fact that gender equity is part of their constitution. Advertisers in the US could make a difference by picking up on the work of the Dangerous Promises campaign – a volunteer effort amongst the wine companies to not use women's bodies as objects to sell their product. Perhaps a start is agreement amongst advertisers to not use

sexually exploitive images of children to sell products. Other policy actions that could help prevent harm from pornography include requiring accurate, age appropriate, healthy relationship and sexuality education that includes a broader understanding of consent and media literacy skills to challenge the tsunami of unhealthy images young people are exposed to.

## Truth Campaign

When the tobacco industry was held accountable, part of the settlement went in part to a Truth Campaign that allowed for multiple media exposures available at that time to creatively demonstrate the lies in typical advertisements and to name the harm. A Truth Campaign is needed to address the lies of pornography and to promote health.

## Priority of Health Groups

Given the impact of pornography on the health of many, places like the Institute of Medicine, the office of the Surgeon General, and the Center for Disease Control, should also have this as a priority area along with state departments of health and local public health departments. For instance, in 2014, the Minnesota Department of Health sponsored a daylong data symposium that brought in a range of professionals to address the issue and a panel of those directly affected while also outlining potential areas for action.

## Closing

Perhaps, sooner rather than later, unlimited access to increasingly violent pornography will be recognized as a barrier to sexual and relational health. Perhaps, sooner rather than later, it will be seen as a barrier to prevention of all types of sexual abuse, exploitation, and violence. Perhaps, sooner rather than later, pornography will be also recognized as a barrier to gender equity and contributor to harmful gender socialization. The pervasiveness and ease of access to pornography is a social justice and public health concern. By building on the growing body of research, it is possible to transform what is often a sexually toxic culture to one where sexual dignity, sexual respect and equity become modeled as the expected norms. **Indeed, by not doing all we can to limit our constant exposure to sexually exploitive images/pornography—at least**

**to children—while also not allowing for accurate health based information, to promote sexual health and to prevent the harm—we are contributing to a type of sexual neglect.** Other public health campaigns have shown that major social change is possible and health can be reclaimed. It is time to take similar actions against pornography as a barrier to public health.

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- For an extensive resource list see: [cordeliaanderson.com/Resources/Documents/Porn%20Resource%20List%204%202015.pdf](http://cordeliaanderson.com/Resources/Documents/Porn%20Resource%20List%204%202015.pdf)

# **Pornography and the Brain**

## ***Public Health Considerations***

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Donald L. Hilton, Jr., MD, FAANS

Adjunct Associate Professor, Department of Neurosurgery  
University of Texas Health Sciences Center at San Antonio

For too long, pornography has been protected as a First Amendment right, with little consideration for the rights of those who might be harmed in its production and consumption. The time has come to consider pornography from the perspective of public health. As a medical doctor, I would like to address two considerations regarding pornography that have been largely ignored in the past, and which now warrant our attention. First, pornography is a biologically addictive medium that alters brain reward and motivation systems in a negative way. In the past, addiction was defined only from the perspective of the behavioral sciences, whereas the definition of addiction is now increasingly informed by the biological sciences. For instance, drug addiction has long been associated with shrinkage in key brain areas important in valuing and processing reward and judgment. It has also been associated with negative metabolic, or functional, changes in how the reward system works. Based on an evolving understanding of how the chemistry of the brain changes with both drug addiction and with behavioral addictions such as to food, sex, and gambling, Dr. Clark Watts and I predicted in a paper published in the journal *Surgical Neurology International* in 2011 that pornography would be associated with shrinkage in the brain's reward areas, and that it would also demonstrate similar metabolic changes in these same reward areas, both of which are seen in drug addiction.<sup>1</sup> This hypothesis was based on our understanding that similar DNA mechanisms are involved with craving states associated both with drug addiction and with natural rewards as well. I was involved in a study published in the *Proceedings of the National Academy of Sciences (PNAS)* which demonstrated that one of the most basic natural drives, the craving for salt, is driven by the same DNA transcripts which drive drug craving. Our paper summarized that addiction 'usurps' these natural craving pathways.<sup>2</sup> In an article about this paper, *National Geographic* used the work 'hijack' to describe how addiction changes the perspective of the brain's reward mechanism.<sup>3</sup>

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1 Hilton, D. L., & Watts, C. (2011). "Pornography Addiction: A Neuroscience Perspective." *Surgical Neurology International*, 2, 19.

2 Liedtke, W. B., McKinley, M. J., Walker, L. L., Zhang, H., Pfenning, A. R., Drago, J., et al. (2011). Relation of addiction genes to hypothalamic gene changes subserving genesis and gratification of a classic instinct, sodium appetite. *Proceedings of the National Academy of Sciences*, 108(30), 12509\_12514.

3 Brian Handwerk, Cocaine Addiction Uses Same Brain Paths as Salt Craving. *National Geographic Daily News*. July 19, 2011.

In the last year, our prediction that these changes would be associated with pornography addiction has been verified. A study published in the *Journal of the American Medical Society Psychiatry (JAMA Psychiatry)* out of the Max Planck Institute in Germany demonstrated that pornography is associated both with shrinkage in the brain's reward center as well as with impairment in connectivity with the frontal judgment and control areas.<sup>4</sup> This shrinkage was more pronounced in the heaviest users. While this was a correlational study rather than a longitudinal one, causation must be inferred based on other prospective data. However, the fact that the shrinkage was more pronounced in heavier pornography users versus those with less hours per week is certainly supportive of causation when considering what we know about how our brains change with learning.

For instance, until the mid '90s we all thought that learning did not change the physical structure of the brain. However, in 1995 a study published in the journal *Science* in 1995 demonstrated that the part of the brain that controls hand function is enlarged in violin players, and that this effect is increased the earlier they begin playing.<sup>5</sup> Other learning modalities have been found to cause physical enlargement in the brain, with a diversity encompassing taxi cab drivers and even jugglers. One study published in the *Journal of Neuroscience* in 2006 showed that medical students' brains show enlargement in key learning areas when scanned before and after a three-month period of studying for exams.<sup>6</sup> These are prospective, rather than correlational, and thus support a causative role for learning in changing the structure of the brain. For instance, in a study in the journal *Nature* on learning and juggling, the authors summarize: "This discovery of a stimulus-dependent alteration in the brain's macroscopic structure contradicts the traditionally held view that cortical plasticity is associated with functional rather than anatomical changes."<sup>7</sup> Another study in *Behavioral Brain Research* voices the same conclusion: "Contrary to assumptions that changes in brain networks are possible only during critical periods of development, modern neuroscience adopts the idea of a permanently plastic brain."<sup>8</sup> Zatorre et al., in the journal *Nature Neuroscience* said in 2012: "The brain is the source of behavior, but in turn it is modified by the behaviors it produces ... learning sculpts brain structure."<sup>9</sup>

4 Kuhn S., Gallinat J. (2014). *JAMA Psychiatry*, May 28

5 Elbert, T., Pantev, C., Wienbruch, C., Rockstroh, B., & Taub, E. (1995). Increased use of the left hand in string players associated with increased cortical representation of the fingers. *Science*, 270, 305-307.

6 Draganski, B., Gaser, C., Kempermann, G., Kuhn, H. G., Winkler, J., Buchel, C., et al. (2006). Temporal and spatial dynamics of brain structure changes during extensive learning. *Journal of Neuroscience*, 26(23), 6314-6317.

7 Draganski, B., Gaser, C., Busch, V., Schuierer, G., Bogdahn, U., & May, A. (2004). Neuroplasticity: Changes in grey matter induced by training. *Nature*, 427, 311-312.

8 Draganski B, May A (2008) Training-induced structural changes in the adult human brain. *Behav Brain Res* 192:137-142.

9 Zatorre, R. J., Field, R. D., & Johansen-Berg, H. (2012). Plasticity in gray and white: Neuroimaging changes in brain structure during learning. *Nature Neuroscience*, 15, 528-536.

Kaeur and Malenka, in a paper in *Nature Neuroscience Reviews* looking at how brain cell connections are affected by addiction said, “Addiction represents a pathological, yet powerful, form of learning and memory.”<sup>10</sup> Given what we now know about how learning changes the brain, would we expect to see physical changes in the brain in addiction? We would, and we do. Virtually every study looking at addiction has shown shrinkage and abnormality in the reward areas and in judgment centers. These include addictions to drugs such as cocaine,<sup>11</sup> methamphetamine,<sup>12</sup> and opiates,<sup>13</sup> and to behavioral addictions such as to food,<sup>14</sup> sex,<sup>15</sup> the Internet,<sup>16</sup> and as we have discussed, pornography.<sup>17</sup> When we look at the Kuhn study showing shrinkage with pornography, and interpret the results in the context of the other studies, we would have to come to the ludicrous conclusion that if pornography does not cause at least some of the shrinkage seen, it is the only learning to which the brain is immune!

Incentive sensitization is where the brain’s reward center is hypersensitive to cues associated with addiction. For instance, when a person with a cocaine addiction is shown a picture of a line of cocaine, the brain’s reward center lights up more than a person who is not addicted and shown the same picture. Voon et al., in a study done at Cambridge University and published in two papers in the journal *PlosOne* last year found that the brains of those addicted to pornography light up just like the cocaine addicts when shown pornography cues as compared to normal controls. They also found that pornography addicts demonstrate a wanting/liking split, where the addict craves the drug or behavior of choice, but does not even like it anymore. This is a hallmark of addiction. They summarize: “These studies together provide support for an incentive motivation theory of addiction underlying the aberrant response towards sexual cues in CSB [compulsive sexual behaviors].”<sup>18</sup>

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10 Kaeur JA, Malenka JC: “Synaptic plasticity and addiction.” *Nature Reviews Neuroscience* 8, 844-858 (November 2007)

11 Franklin, T. E., Acton, P. D., Maldjian, J. A., Gray, J. D., Croft, J. R., Dackis, C. A., et al. (2002). Decreased gray matter concentration in the insular, orbitofrontal, cingulate, and temporal cortices of cocaine patients. *Biological Psychiatry*, 51(2), 134\_142.

12 Thompson, P. M., Hayashi, K. M., Simon, S. L., Geaga, J. A., Hong, M. S., Sui, Y., et al. (2004). Structural abnormalities in the brains of human subjects who use methamphetamine. *Journal of Neuroscience*, 24(26), 6028\_6036.

13 Lyoo, K., Pollack, M. H., Silveri, M. M., Ahn, K. H., Diaz, C. I., Hwang, J., et al. (2005). Prefrontal and temporal gray matter density decreases in opiate dependence. *Psychopharmacology*, 184(2), 139\_144.

14 Lyoo, K., Pollack, M. H., Silveri, M. M., Ahn, K. H., Diaz, C. I., Hwang, J., et al. (2005). Prefrontal and temporal gray matter density decreases in opiate dependence. *Psychopharmacology*, 184(2), 139\_144.

15 Schiffer, B., Peschel, T., Paul, T., Gizewski, E., Forshing, M., Leygraf, N., et al. (2007). Structural brain abnormalities in the frontostriatal system and cerebellum in pedophilia. *Journal of Psychiatric Research*, 41(9), 754\_762.

16 Yuan K, Qin W, Wang G, Zeng F, Zhao L, et al. (2011) Microstructure Abnormalities in Adolescents with Internet Addiction Disorder. *PLoS ONE* 6(6): e20708. doi:10.1371/journal.pone.0020708

17 Voon, V., Mole T.B., Banca P., Porter L., Morris L., Mitchell S., Lapa T.R., Potenza M.N., Irvine M. (2014). Neural Correlates of Sexual cue Reactivity In Individuals with and without Compulsive Sexual Behaviors. *Plos One*, July 11, 2014 DOI: 10.1371/journal.pone.012419

18 Mechelmans, D.G., Irvine, M., Banca, P., Porter, L., Mitchell, S., Mole, T.B., Lapa, T. R., Harrison, N. A., Potenza, M. N., Voon, V. (2014). Enhanced Attentional Bias towards Sexually Explicit Cues in Individuals with and without Compulsive Sexual Behaviours. *PlosOne*. DOI: 10.1371/journal.pone.0105476

Pornography, particularly as presented via the Internet, is a supranormal stimulus. Nicholas Tinbergen, a Nobel Prize winning biologist, coined the term. He did an experiment where he painted plaster bird eggs bigger and brighter than normal eggs and found that the birds would try to roost their plaster eggs and ignore the real eggs. Even more relevant to the present discussion, he did another experiment with a butterfly species where the males were attracted to the females based on the color of their wings. He painted paper butterfly wings bigger and brighter than normal. When given the choice between the real and the artificial, the males chose and tried to mate with the artificial females and ignored the real females.

We are seeing a generation of adolescent males conditioned to prefer the endless novelty of porn to actual females. As feminist Naomi Wolfe said, “For the first time in human history, the images’ power and allure have supplanted that of real ... women. Today, real ... women are just bad porn.”<sup>19</sup> I described this phenomenon in a paper on pornography as a supranormal stimulus and on its potential to invoke a neuroplastic response<sup>20</sup>

The second issue is exploitation. Pornography conditions men to view women as objects to exploit and use. It conditions women to become those objects. The brain’s mirror systems are involved in this conditioning process. One functional MRI study looking at the brain’s mirror systems found that “the mirror-neuron system prompts the observers to resonate with the motivational state of other individuals appearing in visual depictions of sexual interactions.”<sup>21</sup> What is that motivational state? Male pornography performer Bill Margold described it as follows: “I’d like to really show what I believe the men want to see: violence against women. I firmly believe that we serve a purpose by showing that.”<sup>22</sup> We should not be surprised, then, that sexual assault on college campuses and in the military is becoming rampant. Pornography apologists such as Milton Diamond and Anthony DeAmato published correlative data with no prospective perspective in the past claiming that because sexual assault was decreasing and pornography was increasing, men would watch violent pornography and then be content not to go and do likewise. If this is true, car advertisers must beware; consumers will be more inclined to admire the advertised cars instead of buy! However, no one today is trying to claim that rape is decreasing, and recent papers such as that by Cory Yung published in the

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19 Naomi Wolfe, The Porn Myth, *New York Magazine*

20 Hilton, D.L., “Pornography Addiction: A Supranormal Stimulus Considered in the Context of Neuroplasticity.” *Socioaffective Neuroscience and Psychology*, Vol 3 (2013).

21 Mouras, H., Stoleru, L., Moullet, V., Pelegrini-Issac, M., Rouxel, R., Grandjean, B., et al. (2008). Activation of mirror-neuron system by erotic video clips predicts degree of induced erection: An fMRI study. *NeuroImage*, 42(3), 1142\_1150.

22 Bill Margold, pornography performer, as quoted by Gail Dynes, *Pornland: How Porn Has Hijacked our Sexuality*. Beacon Press, Boston 2010, pg xxvi

Iowa Law Review expose their discredited studies. He summarized: “Instead of experiencing the widely reported ‘great decline’ in rape, America is in the midst of a hidden rape crisis.”<sup>23</sup>

Adolescents are more vulnerable to the molding and addicting power of pornography. They elaborate DeltaFosB, a brain protein important in addiction, more potently than adults. Their frontal reward and control areas are not fully pruned and myelinated until the mid to late 20s, yet we allow pornographers to ruin the lives of countless young girls who are consumed and discarded by the pornography industry, which is primarily fueled by men using vulnerable women to make money from other men. We got rid of Joe Camel and the marketing of tobacco to kids. We decided that the tobacco industry’s right to free speech infringed on the emerging generations right to live. Can we not do the same with pornography and our youth? The allure of the toxic sex of pornography to our emerging adults has much more in common with Joe Camel than we thought. It is time to protect the vulnerable. We need to be as serious about keeping pornography out of their eyes as we are about keeping tobacco out of their lungs, and pass Internet ‘op-in’ protection for youth. It is time to stop this harmful cultural conditioning.

Our brains are marvelous, and are designed for a much richer human experience than the cheap food of toxic porn sex. We are designed to experience pleasure, but also to think, to feel, and to love. We can do better. Let us reclaim our humanity for ourselves and for future generations.

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23 Young, *Iowa Law Review*, 2014, Volume 99:1197-1255.

# Pornography: Sex Education for the Developing Brain

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Sharon Cooper, MD, FAAP  
CEO, Development and Forensic Pediatrics

The easy accessibility of adult pornography on the Internet, and its availability through mobile phone technology, is a significant threat to the safety and healthy development of children in America. The multibillion dollar industry intended for the sexual satisfaction of adults has so profoundly invaded the space of children that the impact is mind-boggling. There is no doubt that adult pornography brings great harm to children.

There are numerous ways that children are harmed by the availability of online explicit material. The argument that parents must have the responsibility of making sure that children cannot access this content is unrealistic when one considers the ubiquitous nature of information and communication technology. The past reality of domain name usage to startle and shock children with pornographic images underscores the desire of producers to make this content as easy to find as possible, even for children. The Truth in Domain Names Act as part of the PROTECT Act (2003) was passed in an attempt to protect children from such prurient practices, but today far more is needed to protect children from extraordinarily perverse media content.

Adult Internet pornography has only made child sex offenders' efforts to seduce children easier. Whereas in the past, adults would show children magazine images, or illicit DVDs when non-offending parents or guardians were not in the vicinity, today access to the Internet on any device makes this visual exploitation so much more facile.

It has been a well-known practice that adults who seek to sexually harm children have used adult pornography to groom children and youth into believing that sex with adults is normal. The offender's motives of such exposure are:

- to *educate* children of the mechanics of sexual behaviors,
- to *encourage* children to be comfortable in re-enacting these behaviors,
- to sexually *excite* children, and,
- to have children *enter* into sexual contact with adults and/or other children.

When children are exposed to adult pornography by sex offenders who are voyeurs, the entrance into a sexual liaison with other children is facilitated as a “rite of passage,” often in a youth serving organizational setting. When such exposure to a child is facilitated by a smartphone, it is nearly impossible for protection to take place, short of the presence of multiple adults at all times. The very smartphone which is used to “show” exploitative images can then easily be used to “tell” others as the offender may surreptitiously or overtly photograph or videotape children who are being encouraged to sexually experiment with each other. These child abusive images (erroneously referred to as child pornography), when jettisoned into cyberspace cannot at this time be destroyed. The goal of this production is not only to make an illicit “keepsake” for the offender to revisit repeatedly for sexual gratification, but also as a potential instrument for blackmail of children into continued sexually exploitative behaviors. This latter phenomenon is often referred to as “sextortion.”

Sextortion cases of children are increasing in frequency as has been noted from cybertipline reports to the National Center for Missing and Exploited Children. These sobering cases lead children into an endless maze of acquiescing to producing sexually explicit content of themselves to never-ending demands of invisible offenders who threaten distribution onto adult pornography sites, should the youth refuse. Such production causes such guilt, shame, and self-blame that severe depression, rational paranoia, and suicidality remain a constant threat to the well-being of such victim children.

The well-known case of Amanda Todd, is just such an example. This 14-year-old girl shared one provocative image to a person that she thought was a peer within a romantic relationship. The adult offender threatened to place the image online if she did not produce more. When she was brave enough and strong enough to refuse, the offender put her image on an adult pornography site and sent the link to her family and friends on her social networking site. The subsequent horrendous cyberbullying, despite more than a year of parental protection efforts, lead eventually to her taking her own life. Her self-reported story remains on YouTube.com with more than 30 million visits.

Another way that Internet adult pornography harms children occurs when adults network and dialogue with like-minded individuals to access children for the purpose of re-enacting what is shown in adult images.

Unlike the above mentioned plan for action, this networking component further normalizes the cognitive distortions of offenders that children, as “little adults,” would like to be treated as do adult actors in the pornography industry and that though this type of thinking is not accepted by society overall, others are merely narrow minded and provincial. In investigations where children have been sexually abused and often videotaped or photographed, not only are adult videos

found in the offender's collection, but also chat and even online child sexual abuse grooming guides for the newly initiated who wish to access children. Organizations such as the North American Man Boy Love Association (NAMBLA) provide networking opportunities for such individuals.

Adult Internet pornography is the most common form of teen sex education in the US and because of the violent nature and lack of relationship depicted in this media, it has resulted in a remarkable increase in adolescent relationship abuse. The Centers for Disease Control and Injury Prevention (CDC) reports that teens receive messages about how to behave in dating relationships from friends, family and the media. Unfortunately the latter includes adult pornography which all too often links sexual contact with violence. The CDC tracks this form of injury and reports that 1 out of 10 youth surveyed had experienced both physical and sexual violence from a dating partner in the 12 months before they were surveyed (2013).

Another huge risk of harm for children is when teens view adult images, become sexually excited and disinhibited, and then act out abusive sexual acts on younger children. The easy access of adult pornography in the digital world has dramatically increased this dynamic in youth with problematic sexual behaviors. The brain and mind of youth are works in progress and research has revealed that the prefrontal cortex of the brain is not completely mature until 24-25 years of age. This part of the brain is the home of impulse control, good judgment, cognitive behaviors, and emotional stability. If we add to this brain immaturity, the reality of mirror neuron research, we are plunging children into a quicksand of potential sexual dysfunction. Mirror neurons first became known in 2007 when Italian scientists helped us to know that many parts of the brain process visual input – far beyond just the eyes and optic tracts. Mirror neurons cause us to believe that we are experiencing what we see. What does the future hold for boys who are watching adult Internet pornography with regularity, when it is already clear that research notes that adult exposure to these images has become the most common cause of erectile dysfunction in men less than 40.

It is so easy to understand that if adults become sexually excited by online videos (often of violent sexual assault), then a youth is even more vulnerable. It has become commonplace now, that therapists who treat children and adolescents with problematic sexual behaviors carefully explore exposure to adult Internet pornography as a major contributor to these behaviors.

Finally, children are harmed by adult Internet pornography when they begin the slippery slope of viewing this obscene content, and then begin to look for “someone who looks like me” content in the “barely legal” sites, finally ending in the more difficult to find peer-to-peer exchanges of online child abuse images. Once a youth has begun to download, trade and possess these illegal

images, their life can be forever changed into one of incarceration and sex offender registration.

Having evaluated and testified regarding children who have been so egregiously harmed in this manner, I cannot state more emphatically, that this multi-billion dollar industry must be harnessed. To protect our children from the harm of adult Internet pornography is one of the most important steps that we can and must take.

# Pornography, Prostitution, & Trafficking: Making the Connections

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Melissa Farley, Ph. D.

Executive Director, Prostitution Research & Education, San Francisco

Pornography is an act of prostitution. A survivor of prostitution explained, “Pornography is prostitution that is legalized as long as someone gets to take pictures.”

Pornography documents and facilitates trafficking.

**Please don’t mystify the sex industry. Don’t assume it’s vastly different from other types of exploitation and human cruelty.**

*The real lives of those who are trafficked or prostituted or made into pornography are often indistinguishable from the real lives of victims of rape, incest, and intimate partner violence. The main difference is money. Profits turn sexual assault of children, rape, domestic violence, humiliation and sexual harassment, and pictures taken of those things into a business enterprise.*

*Like other global businesses, there are domestic and international sectors, marketing sectors, a range of physical locations out of which sex businesses operate. There are many different owners and managers, and the sex trafficking industry is constantly expanding as technology, law, and public opinion permit.*

**In the real world, from the perspective of the person in the sex trade—pornography, prostitution, and sex trafficking are the same.**

*More than 80% of the time, women in the sex industry are under pimp control—that is trafficking. Pornography meets the legal definition of trafficking if the pornographer recruits, entices, or obtains women for the purpose of photographing live commercial sex acts.*

**Women are coerced into pornography by deception, threats, or violence.**

*A survivor of pornography and prostitution explained that she had been pressured to do more extreme sex acts on film, was physically hurt, and was raped on film—just the way women in prostitution are pressured by pimps and sex buyers to perform more harmful and dangerous sex acts.*

**Pornographers are specialty pimps who use pornography to advertise prostitution and to traffic women.**

Backpage, which advertises and sells pornography, is owned by a Dutch company.

Last week the Massachusetts Attorney General said, “Most of the human trafficking cases that our office has prosecuted involve advertisements on Backpage.”

Here is an example of the links between pornography, prostitution and trafficking: Glenn Marcus ran a torture pornography website.

A woman was psychologically coerced by Marcus to permit pornography of her to be sold on Slavespace.com. She brought charges against Marcus who was her pimp/pornographer/trafficker—and torturer. At one point he stuffed a gag in her mouth, sewed her mouth shut and hung her on a wall.

Her attorneys used the following definition: ***Sex trafficking is coercing or selling a person into a situation of sexual exploitation, such as prostitution or pornography.***

On March 5, 2007, pornographer Marcus was convicted of sex trafficking. This legal decision reflects a deepening understanding of the ways in which pornography, prostitution, and trafficking are the same for the person who is being sexually coerced and exploited for profit.

Another example: The convergence of different arms of the sex industry can be seen in a law enforcement action in Las Vegas. A sex business that looked like an office complex from the street, blended pornography production and trafficking with escort and webcam prostitution. On a webcam site, the sex buyer pays to chat with women who prostitute on streaming video, performing in real time what masturbating sex buyers pay them to do.

In this case, the pimp/pornographer rented six offices that functioned as Internet pornography businesses, and as cyber-prostitution via webcam, and a place where women were pimped out to hotels and to a brothel. As you know, Nevada has legal pimping in *rurally zoned brothels*, but prostitution in Las Vegas is illegal, so when the women were pimped to Las Vegas hotels, that is trafficking.

**The same oppressive experiences channel women into pornography, prostitution, and trafficking.**

*Childhood abuse and neglect, a lack of quality education and job training opportunities, culturally mainstreamed misogyny, racism and poverty coerce women into the sex trade.*

**The same kinds of violence against women are perpetrated in pornography, prostitution, and trafficking.**

*Women in prostitution face a likelihood of **weekly rape**. A Canadian woman in prostitution said, “What is rape for others, is normal for us.” A woman at a Nevada legal brothel explained that legal prostitution was “like you sign a contract to be raped.”*

**The emotional consequences of prostitution and trafficking are the same** in widely varying cultures whether it's pornography or trafficking, high class or low class, legal or illegal, in a brothel, strip club, massage parlor, or the street.

Symptoms of emotional distress among those in sex businesses are off the charts: depression, suicidality, posttraumatic stress disorder, dissociation, substance abuse. Two-thirds of women, men and transgendered people in prostitution in nine countries met diagnostic criteria for posttraumatic stress disorder. This level of emotional distress is the same as the most emotionally traumatized people studied by psychologists—battered women, raped women, combat vets, and torture survivors.

**Why do sex industry advocates de-link pornography, prostitution and trafficking?**

*The answer is because it increases profits. Disconnecting trafficking from prostitution and pornography normalizes most of the sex industry. Here's how the de-linking works:*

**Every time an adjective is put in front of the word prostitution, pornography, or trafficking, it falsely carves out a group of human beings who we allow to be sold for sex.** *For example:*

- Forced vs. voluntary trafficking: It's assumed that some people volunteer to traffic themselves.
- Child vs. adult pornography: It's assumed to be normal and mainstreamed to make pornography of adults.

- Illegal vs. legal prostitution: It's assumed that legal prostitution reduces harm and thus it's acceptable.

Did we de-link child from adult slavery? Did abolitionists focus on saving child slaves, leaving their parents behind? No we did not. Do we de-link various injuries in situations of domestic violence? Do advocates focus on only the most extreme cases and leave behind the woman who "only" has bruises but no broken bones? No we do not. Yes, pornography is a public health crisis. It's time to start linking all arms of the hydra-headed sex industry, and understand that yes, individuals who are pornographized and trafficked and prostituted are harmed. And the sex industry also harms the rest of us. Sex business entrepreneurs count on our tolerance for social injustice. Your presence here tells me they made a mistake.

# **Sexual Obesity: Research on the Public Health Crisis of Pornography**

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Mary Anne Layden, PhD

Director, Sexual Trauma and Psychopathology Program  
Center for Cognitive Therapy, Department of Psychiatry  
University of Pennsylvania

## **Introduction**

Most people say that the hardest thing you will ever do is raise children. It is parent's job to teach children how to be happy, healthy adults. Children need to learn the social rules about how and when to interact with others and with whom they should interact. They need to learn how to play and work and eat and take care of their health among a million other things. Parents are the first and the main source of teaching attitudes and behaviors and children are always watching and learning. It has been noted that children will not do what you say: they will do what you do. Children first watch their parents and then they watch their friends and then they watch the whole world. Media can bring that world to them. So children learn to do what they see and they learn to do what they see others get rewarded for. Whatever they practice they get good at.

But how do they learn about sexuality? Parents have an uncomfortable time discussing the topic with their children. In addition, for good reasons, children rarely observe the actual behavior. There are few sources of information about healthy attitudes, healthy behaviors, and the psychological and moral aspects of sexuality. Children and young adults naturally have an interest in learning about sexuality and someone will be teaching them. Who? What?

With the birth of the Internet and the almost universal exposure of children and young adults to Internet pornography this has become an overwhelmingly potent source of information about sex. It is potent because it comes in images: a picture is worth a thousand words. It is potent because it is arousing and we learn more deeply information that we are given when we are aroused. It is potent because there are role models showing the actual behavior that we almost never see in real life and it is potent because we see these people enjoying these behaviors and getting rewarded for them. Often the viewer is also rewarded by his or her own orgasm. Internet pornography is an almost perfectly designed teaching and learning model. There is just one flaw in this almost perfect

teaching and learning model and that is that close to 100% of what it teaches is a lie. Internet pornography shows behaviors that are toxic, hurtful, narcissistic, traumatizing, boundary crossing and untrue and shows them in a way that makes them totally believable, enticing and with no negative consequences.

The Internet tells the story about sexuality that makes you think that you can never have too much sex. It shows sex that is not about intimacy, caring, love or respect; not about marriage or having children. Internet pornography portrays sex as recreational, adversarial, non-intimate and anonymous. In Internet pornography you don't need to know your partner and sex with strangers is portrayed as the best and most intense kind of sex. None of this is true about healthy sexuality, of course, but it seems true to the viewer because they have seen it with their own eyes in highly stimulating and physically rewarding pictures.

In addition, seeing others act sexually in these ways gives permission for the viewer to act these ways as well. Permission-giving beliefs are beliefs that make a person say what I am doing is normal, that everyone is doing it and since it doesn't hurt anyone, I don't need to stop or change my behavior. These permission-giving beliefs become releasers of the behaviors that we have seen.

So Internet pornography fills the vacuum of missing information about sexuality and exposes almost the entire population of children and young adults to massively potent misinformation about sexuality and then spreads permission-giving beliefs, which release the viewer to behave in a toxic and narcissistic way. No wonder psychologists call Internet pornography the new crack cocaine.

We have seen other societal problems arise in similar ways. The universal availability of cigarettes with smokers portrayed in media as popular, sexy, and having fun combined with the addictive nature of nicotine produced a public health crisis involving the deaths of 450,000 a year and a tobacco industry that made money by selling a product that killed people.

The universal availability of junk food mixed with media that showed happy, healthy, slim people enjoying fast food, or processed food with unhealthy ingredients, contributed to the public health crises of massive obesity.

Unhealthy products combined with stimulating and dishonest media targeting children and young adults by industries that care only about making money produce problems too large for any one individual to fix and impossible for any one family to protect their loved ones from these problems. Sometimes families or the society will focus on repairing the symptoms and outcomes rather

than focusing on the primary causes. You cannot fix these problems by pulling victims out of the river one at a time; sometimes, you have to go upstream and see who is pushing them in.

Internet pornography is sexual junk food and has made us sexually obese and the consequences are as varied and damaging and as impossible to contain as physical obesity.

## **Research on the Impact of Pornography**

### **MALES: ATTITUDES**

Research shows the impact of pornography on attitudes. Research finds that males who have been exposed to pornography are more likely to think that women enjoy rape, that she “got what she wanted” when she was raped, and that women make false accusations of rape. These males show more acceptance of the rape myth, which is a set of untrue beliefs about rape. Horrifyingly, these males are more accepting of violence against women and they begin to believe that rapists deserve less time in prison. Could it be that they no longer think that rape is a heinous crime?

Not surprisingly then, these males use more sexual terms to describe women, see women as sex objects and have reduced support for the women’s liberation movement. In addition, it affects their attitudes toward marriage, family, and raising children. Men who view pornography rate their partners as less attractive and they are less satisfied with their partner’s sexual performance. They have a greater desire for sex without emotional involvement. They have more sexually callous beliefs, have a greater acceptance of sex before marriage, and have a greater acceptance of sex outside of marriage for married individuals. What happens to marriages when partners begin to accept and expect that they will cheat?

It also dramatically shifts responses and reactions to and about children. Males who view pornography are less child centered during marriage, less desiring of having female children, more willing to have sex with thirteen to fourteen year olds, more sexually attracted to children, and less likely to think pornography needs to be restricted from children.

Even though I was aware of the many research findings showing diverse negative outcomes on male attitudes from the viewing of pornography, I was still surprised when my own research with young adult males showed that males who

had increasing use of pornography had higher psychopath scores. What happens to a society when all of our young adult males are exposed to material that has the potential to teach them to think and act like psychopaths?

## **MALES: BEHAVIORS**

Research indicates that pornography not only produces these significant attitudes; it affects behavior as well. The permission-giving beliefs that pornography produces become releasers of attitudes to become behaviors. The underlying message of pornography that others are having fun, exciting, mind blowing, and consequence-free sex and that you are entitled to that as well is challenged by the research of sexual dysfunction. Those who use pornography are more likely to have erectile dysfunction, premature ejaculation and retarded ejaculation. Rather than making the male's sex lives spectacular, these males are on the super highway to sexual crashing. In one study, 58% of male pornography users (average age twenty-five) had erectile dysfunction with women but not with pornography. Internet pornography is making a generation of men who can only have sex with pixels but not with people. They may have a greater desire for sex but they have a reduced ability to engage in sex in a healthy way.

Along with sexual dysfunction effects, research has also shown brain differences in males who use pornography. Less gray matter, less brain sensitivity to sexual stimuli, and less connectivity are all seen in male pornography users. In some functions, the brains of these adult pornography users resemble the brain reactions of teen brains with impulsive brain centers being more active than the more rational and "executive" brain centers.

Research on attitudes shows that male pornography users had attitudes that were more accepting of sex outside of marriage for married individuals. The behavioral research shows the comparable effect. Males who use pornography are more likely to have affairs if they are married. In addition, they are more likely to go to prostitutes adding an illegal aspect to their behavioral responses. In my own research, I found that almost 25% of nineteen to twenty-one-year-old males said that they had either gone to a prostitute already or planned to in the future. The more pornography these males used the more likely they were to have gone to a prostitute or say they would in the future. I also found that men who use pornography are more likely to go to strip clubs and men who go to strip clubs are more likely to engage in non-consenting sex than men who do not go to strip clubs.

Sexual violence is significantly connected to the use of pornography. In one research study, males who were exposed to a single media presentation of a mixture of sex with violence later used violent sexual fantasies to get them aroused. Pornography users are more likely to sexually harass women, sexually abuse partners whom they have battered, and engage in date rape, stranger rape

and marital rape. They are more likely to verbally coerce sex, physically coerce sex, and use drugs and alcohol to coerce sex. In my own research, I found that the earlier male children are exposed to pornography, the more likely they are to engage in non-consensual sex as young adults.

Malamuth has identified three factors that are connected to sexual violence: hostility toward women; beliefs that sex is a casual, non-intimate, recreational, adversarial behavior; and the use of pornography. It is my contention that all three of these factors are connected to pornography use. Pornography increases hostility toward women and spreads the beliefs that sex is casual, non-intimate, recreational and adversarial. The use of pornography produces the other two factors.

Statistics on sexual violence show it affects millions of people. One in five women are raped in their lifetime, which translates to almost 22 million women. On college campuses, 25% of women experience either a rape or an attempted rape during their four years in college. By the time a female is eighteen years old, 38 % have been sexually molested. The vast majority of these crimes go unreported to authorities.

In addition, most males who engage in non-consenting sex do so repeatedly. Looking at both a college sample and a military sample found that 63–71% of males who perpetrated non-consenting sex had perpetrated multiple times.

## **FEMALES: ATTITUDES AND BEHAVIOR**

It is not just males who are affected by pornography. There is less research on females but many of the outcomes seen in females are either similar to the outcomes seen in males or are the flip side.

Females who were exposed to pornography as children are more likely to accept the rape myth and are more likely to have sexual fantasies that involve rape. Adult females who have been exposed to pornography were more negative about their bodies and think their partners are more critical of their bodies. Females, similar to the males, have reduced support for the women's liberation movement. Also similar to the males, females think rapists deserve less time in prison. In my own research, I found that the more pornography young adult females use the more likely they are to become victims of non-consensual sex.

## **CHILDREN: ATTITUDES AND BEHAVIOR**

Minors who have been exposed to sexualized media (both pornographic and mildly sexualized media) show numerous negative outcomes and many of them are similar to the adult effects. It affects their attitudes and they have higher sexual permissiveness scores. It affects their sexual behaviors including earlier initiation of their first sexual experience, having sexual activity more

frequently, having more sex partners, and having multiple lifetime sexual partners. They are more likely to have engaged in sexual intercourse, oral sex, and anal sex. This increased sexual activity is combined with a more negative attitude about contraception and a reduced use as well. Research indicates that minors exposed to sexualized media have a more negative attitude toward using condoms, have not used contraception during the last intercourse, and have not used contraception in the past six months. Instead they are more likely to have used alcohol or other substances at last sexual encounter. In addition, they are more likely to test positive for chlamydia. It changes their point of view on pregnancy and they have a stronger desire to conceive and unfortunately, they are more likely to become pregnant.

It changes their point of view on women and they have less progressive gender role attitudes and are more likely to see women as sex objects. Finally and tragically, it affects sexual violence behaviors in these minors. They are more accepting of sexual harassment and are more likely to engage in it. They are more likely to engage in forced sex and more likely to be a juvenile sex offender. Are there any effects of pornography that we were hoping for our children?

## **Public Health Crisis**

The glut of Internet pornography sends the message that you can never have too much sex; there is no toxic sex, no damaging sex, no traumatic sex. It tells us that the sexual activity that we consume with our eyes on the Internet is normal, hurts no one, and is done by everyone. This produces permission-giving beliefs that move our attitudes into behavior. The research tells a different story. Research indicates that exposure to Internet pornography has a massive impact on attitudes and then on behaviors in the areas of marriage, family, children, sexual violence, and other crimes like prostitution.

In addition, the number of people who are exposed is massive. In some age groups there is nearly universal exposure to this potent toxin. According to the last census there were 33 million males between the ages of ten to twenty-four. It is my belief that we are approaching nearly 100% exposure of that group. However, these 33 million are just a portion of those who are exposed because it does not include young adult females or the majority of older adult males who are also massively exposed.

Parents on their own cannot protect their children. Even if they could decide to avoid their own personal exposure and effectively implement that, even if they could make a decision to protect their children and effectively implement that, they still would not be protected. The others who choose to expose themselves to this toxin become carriers of these attitudes and behaviors. They carry

this contamination back into their homes, onto their jobs, onto the street, into the schoolyard.

The sexual exploitation industry is making money from pornographic websites on the Internet that hurt men, women and children. They make money by teaching our boys to think and act like psychopaths. They make money by turning our girls into victims. They are serving men, women and children the sexual junk food. They will not easily be convinced to stop.

This means that this Internet contamination cannot be neutralized on the individual level. This is a problem that must be confronted on the societal level. Sexual obesity is a true public health crisis.

## Finally

The philosopher Roger Scruton has described the problems caused by pornography in a more poetic way. He said that the real problem with pornography is that “it threatens the loss of love in a world where only love brings happiness.” We have eaten the sexual junk food, have become sexually obese and we have missed the feast that sex was supposed to be. Love is the feast. Don't miss the feast.

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## **Sexual Exploitation: Connecting the Dots in Real Life**

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Ed Smart

Activist and father of kidnap victim, Elizabeth Smart  
President of The Surviving Parents Coalition  
Director of Prevention and Rehabilitation,  
Operation Underground Railroad

I am here today testifying as a father, President of the Surviving Parents Coalition and as the Director of Prevention and Rehabilitation for Operation Underground Railroad.

Brian David Mitchell my daughter's captor grew up in a middle class family. At a young age he was exposed to pornography by his father. He told Elizabeth that his father loved pornography and had enjoyed it his entire life. Mitchell said that he loved it too. His father didn't seem to think there was anything wrong with a little healthy exposure for his son. At such a young age it appeared to have piqued his interest beginning the slippery slope that pushed him to take the next step to experiment. It resulted in a complaint filed against him for molestation of the girl next door. The juvenile court found him another troubled youth.

He shared with Elizabeth that during his senior year in high school he stuck his hand down a girl's shirt. He was always excited to see what he could get away with; it was a challenge. The girl didn't report it and he was never reprimanded.

Pornography appeared to have encouraged further experimentation. The use of pornography followed him into his married life, accusations of abuse and pornography by his stepchildren and children were made. Law enforcement attributed the accusations to a bad divorce. Further investigation confirmed such abuse had occurred substantiated by a clinical exam. What reconfirmed the issue of pornography was his stepdaughter's testimony during the trial of our daughter's kidnapping. His stepdaughter testified of him exposing her to pornography in bed. Was it just exposure? Or was it an effort to normalize his behavior, to desensitize his victims, and to make them feel that this is a normal activity of life, no harm done.

His insatiable appetite for sex called for multiple partners and, of course, his excuse became belabored with, “God wants me to experience all” and “you must experience the worst to enjoy the best”. The night he abducted Elizabeth he told her, “I have a knife at your throat. Don’t say a word or I will kill you and your family.” Is this the end result of an innocent exposure to pornography? Did this desire lead him to break into our home in the middle of the night when everyone was at home? Who would take such a risk and why? It seemed inconceivable to me.

Elizabeth was a fourteen-year-old girl when she was kidnapped. During the time she was gone she was repeatedly raped, molested, abused, tortured, terrified, threatened, tormented, lied to, cabled between two trees withholding the basic necessities of life, and forced to look at pornography as both an example of what he wanted and also a way to normalize his actions. She had to do many things against her will and beliefs. Elizabeth said that she “felt like the dirt on the ground, broken and of little worth.” It made her question her self-worth and how people would look at her and treat her. “Who could love me after that?” she had thought. After thinking about it she determined her family would love her, regardless of anyone else. She decided that she would do whatever was necessary to survive.

Mitchell used many of the typical tactics of predators: vulnerability, manipulation, coercion, and grooming.

During our family’s nine-month ordeal, my wife Lois and I learned many things. Some of them we didn’t particularly want to know, especially when it came to thinking about what our daughter might be going through. We learned that one of the main reasons children are abducted is for sexual exploitation whether abducted for one person’s sexual exploitation or trafficked for multiple persons’ exploitation.

During her captivity Elizabeth was repeatedly exposed to his pornography on a regular basis. She said Mitchell loved it and couldn’t get enough.

She recounted another experience while they were in California just outside of Lakeside. As they were hiking up a mountain side trying to find a new camp they came across a cave like crevice that might act as a shelter. He had Elizabeth crawl into it. As she got into it, she found a pornographic magazine and crawled right back out. Because of her concerned excitement he wanted to know what the problem was. She told him that she had found a pornographic magazine and she wanted out. She said he hurried back in there and brought it out. For days

he devoured it. The use of pornography appeared to have had profound affect upon Brian David Mitchell.

The build up of the excitement from viewing this pornographic material put him on the prowl once again for his next victim. This greed and lust resulted in an unsuccessful attempt when he was almost caught, sending him on an alcoholic binge to console his failure.

Elizabeth has commented many times that what would have been even worse than being raped is the thought that it might be recorded in the virtual world for everyone to view.

This feeling has been confirmed by many other survivors of abduction who have experienced the nightmare of not knowing where or when their picture or video would pop up and further victimize them.

Alicia Kozakiewicz is another outstanding survivor/advocate stated: "Before the trial the FBI needed me to identify myself in the videos. I had to watch myself being tortured. Being abused is indescribable, but to see it through the eyes of your abuser is another thing entirely. That's why I now fight so hard against child exploitation. I know how it feels to have people watch your suffering and enjoy it."

Families are torn apart by pornography which has become unfortunately far too common, especially with the use of their own children as the new pornography. Two crimes are then being committed: First, the child being raped and second, posting the rape on the Internet.

One of my other good friends came home to find the FBI besieging her home. Unaware of the abuse her daughter had been put through by her father, he would then post it on the Internet, leaving an almost eternal trail of sexual exploitation. The devastation and destruction of the family is unbelievable.

Being in charge of prevention and rehabilitation at Operation Underground Railroad has given me a unique opportunity of hearing about the use of pornography in trafficking on a global basis. It is such an integral part of trafficking being used from both the supply and demand sides. Many of our operation missions occur under the disguise of being a sex party focusing on the youngest of children or virgins if possible.

We had a number of missions down in Columbia this past year and had invited five of our partners to Salt Lake. Two of them were women that deal with the children. Part of their job is to conduct prosecutorial interviews and

assessments to collect information. I asked them, “What role does pornography play in pimping of sexual trafficking victims?” One woman said, “It comes up as having been viewed by all the children in every case. Once again it is used to instruct the kids on what to do for the clients and also to desensitize the children so that the children aren’t as traumatized by what they’re forced to do. Pornography drives the demand side [i.e., individual sexual exploiters and commercial sex buyers] to experiment further. No longer are they satisfied just looking, but must experience what they have seen.”

OUR is currently furthering the development of software used for tracking those who are trading child pornography. The commonality of these experiences is that pornography provides the slippery slope to take the next step to abuse and exploitation.

# Why Finding A Solution Is So Difficult

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Ernie Allen

Allen Global Consulting, LLC

Former President & CEO, National Center  
for Missing & Exploited Children

Former President & CEO, International Centre  
for Missing & Exploited Children

The brains of young children are being bombarded with graphic, extreme Internet pornography, causing significant harm. The average age of first exposure to Internet pornography is twelve years old and is declining. By age ten, 32% of children have been exposed to pornography. Also, 53% of boys and 28% of girls ages 12–15 use sexually explicit pornography via the Internet.

This situation is exacerbated by the fact that on today's Internet, and so-called "soft porn" has largely disappeared. Today, the content is increasingly extreme, graphic, often violent, and degrades and humiliates females in particular. A recent study found that 88% of top-rated porn scenes contain physical aggression and 49% verbal aggression, with 94% of the targets of that aggression being female.

This phenomenon is also fueled by the explosion of free porn sites, which serve as pathways to the commercial pornography industry. New York Magazine reported that ten years ago total daily adult site traffic averaged less than 1 million unique visitors on the entire Internet; today, the free pornography tube sites alone get 42 million unique visitors every day.

This is a particular problem today when the Internet is no longer tethered to a PC on a desk at home. Today, children carry the Internet around in their hands via mobile devices. A recent Cisco report estimated that mobile data traffic will increase 11-fold between today and 2018.

Thirty years ago, we could zone pornography off, regulate it, deny access to children, require that plain brown wrappers cover material, and cover the windows to prevent inadvertent display. In the Internet era, we can't do that anymore.

Today, you will hear from some of the leading scholars, researchers and experts in this field regarding what we know, what the challenges are and how significant the damage is that is being done to our children.

But my question for Congress is, “Why is finding a solution so difficult?” My answer is threefold:

1. **Our laws have failed.** Congress tried to address this problem at least three times: Through the 1996 Communications Decency Act; the 1998 Child Online Protection Act; and the 1999 Children’s Internet Pornography Act. Yet, most of that legislation was struck down by the courts as an unconstitutional infringement on free speech.
2. **Our efforts to educate parents on ways to protect their children from this kind of content have failed.** Internet companies and NGOs have tried to educate parents and persuade them to use the tools that are readily available today. Yet, just 28% of parents have installed filtering software, just 17% on mobile devices, and only 15% on gaming consoles. Over the past twenty years we have made great progress in educating children and families in how to use the Internet safely and responsibly. However, in the area of protecting children from exposure to graphic, extreme content, we have failed miserably.
3. **Obscenity prosecutions have declined dramatically.** With the advent of the Internet, we have seen a marked decline in obscenity prosecutions. Obscenity is not protected speech, but in order to be deemed “obscene,” content must be adjudicated. The Supreme Court established a three-part obscenity test in the 1973 case, *Miller v. California*:
  - Whether “the average person, applying contemporary community standards” would find that the work, taken as a whole, appeals to the prurient interest;
  - Whether the work depicts or describes, in a patently offensive way, sexual conduct or excretory functions specifically defined by applicable state law; and
  - Whether the work, taken as a whole, lacks serious literary, artistic, political or scientific value.

Today, in this era of the Internet, some question whether community standards mean the same for Internet distribution as for distribution by other

means and whether in light of the extreme, dehumanizing content that appears regularly on Internet sites, anything can be held to be “obscene.” Given the public health crisis we are discussing today and the emergence of content far beyond what used to be prosecuted under obscenity law, my hope is that public officials at all levels will reexamine the use of obscenity prosecutions as at least one element of a comprehensive strategy.

However, even in light of the challenges we face, I am convinced that there are other options we should explore. Let me suggest one:

## Default Filtering

On July 22, 2013, UK Prime Minister David Cameron spoke about an issue that is “hard for our society to confront, that is frankly difficult for politicians to talk about, but that I believe we need to address as a matter of urgency.” Prime Minister Cameron explained that the issue is “the Internet, the impact it is having on the innocence of our children and **how online pornography is corroding childhood.**”

He called upon British Internet companies to take voluntary action to provide default filtering for all users. He approached this not as a limitation on free speech—those who want to access pornography can still get it. But instead of depending on parents to adopt and implement available filtering tools, he urged the Internet companies to provide these tools for them automatically, unless users opt out of receiving them.

Today, the four major British ISPs—British Telecom, BSkyB, Talk Talk, and Virgin—are implementing default-filtering. British households are being contacted by their Internet service provider to specify whether they want to activate the “family friendly filters.” For those who do not state a preference, the filters are automatically switched on by their service provider.

In January 2015, Sky Broadband switched on its “Shield” filter for every one of its 5.3 million users, with those wishing to access pornography needing to explicitly “opt-out” of the filter. Thus, the UK does not deny access to adults who seek to access the content; it only seeks to deny it to children.

The UK initiative is not without critics. Recently, the Council of the European Union proposed measures to stop mobile phone and Internet providers from being able to automatically block pornography. Thus, in all likelihood this battle has only just begun.

Nonetheless, recognizing the experience of the past twenty years, it is inescapable that educating parents is not enough and will not work, and that congressional action may not meet the test of constitutionality. Thus, a voluntary, industry-driven initiative like the British model would seem to have potential for the United States and other countries.

As Internet pornography has become more extreme, we are seeing growing demand for action from all parts of the political and philosophical spectrum. We hear it from feminist leaders who see extreme porn as an assault on women and their rights, and have concerns that the content affects the way boys (soon-to-be men) view women, relationships and sexuality. And we hear similar concerns from the anti-obscenity, family values community.

We all embrace the ideal of free speech and a free, unfettered Internet. Yet, there are limits. Unless we better protect our children, we will see future generations of damaged adults and societal disruption. One prominent researcher called the inundation of young children with extreme Internet pornography as “the single, largest unregulated social experiment in history.” We have to confront this emerging reality and develop real solutions that maximize individual freedom but better protect our children.

My message to Congress today is that we need leadership and we need action. The British model offers one creative option that does not require a statutory mandate and that engages industry in finding a solution that will work. But if that is not the best solution, we must find another one.

The use of the Internet is changing, the challenges are increasing, and the children of America and the world are at greater risk than ever before. We need to take action.

# Take Action

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## Members of Congress

1. Recognize that there is a public health crisis.
2. Request and organize Congressional Hearings on this topic.
3. Encourage vigorous enforcement of all laws prohibiting sexual exploitation, including adult obscenity laws which prohibit distribution of hard-core pornography on the Internet, on cable/satellite TV, in hotels/motels, in retail shops and by common carrier.
4. Issue a public statement about pornography as a public health crisis, or as a factor driving other forms of sexual exploitation.
  - Ideas include: Give NCSE a quote to share, write an op-ed, include in a speech, make a short video statement
5. Keep these facts in mind as new legislation is created. Try to work in the issue of pornography in efforts to curb demand for sex trafficking and other forms of sexual exploitation.
6. Explore the “opt-in” option in the framework of U.S. law and encourage U.S. Internet providers to adopt such policies.

## Press

Investigate how pornography effects and influences sexual violence, child sexual abuse, sex trafficking, and other forms of sexual exploitation when covering these issues.

## Public

1. Contact your elected representatives in Congress to request a hearing on this issue.
2. Write and submit letters to the editor of your local newspapers about this issue, mentioning the need for a Congressional hearing.
3. Urge that laws prohibiting sexual exploitation be enforced.





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NATIONAL  
CENTER ON  
SEXUAL  
EXPLOITATION

Washington, DC 20001  
202.393.7245  
[public@ncose.com](mailto:public@ncose.com)  
[EndSexualExploitation.org](http://EndSexualExploitation.org)