

Porn Use and Adolescent Health: A Collaborative Review

IN DEVELOPMENT

[On July 31, 2024, various people on the internet started posting inappropriate political memes on this page. Jon therefore changed this doc so that it is no longer open to anyone on the internet to just add comments. If you are a researcher and have comments, please request access, explain who you are, and we will grant commenting access]

An ongoing open-source literature review posted and curated by [Jonathan Haidt](#) and [Zach Rausch](#) (NYU-Stern).

This Google doc is a part of a larger series of documents exploring the mental health and wellbeing of adolescents in the U.S., and how are these changes related, if at all, to the mass migration of social life onto digital platforms since the early 2000's?

Because of the ubiquity and power of confirmation biases and motivated reasoning, we particularly welcome input from critics who can find evidence that online pornography is NOT harmful to adolescent mental health. Please add your comments to the text, or by highlighting text and then clicking the “add comment” button that appears in the right-hand margin. Add your name if you want us to credit you as a source. Links to empirical research or high quality journalism would be most appreciated. Feel free to add general comments as well.

We thank those researchers who put in the time to read this document and raise additional points and **counterpoints**, including...

Notes:

- The review contains comments added by other researchers: ...
- See our companion reviews:
 - [What is happening to boys? A collaborative review](#)
 - [Is there an increase in adolescent mood disorders, self-harm, and suicide since 2010 in the USA and UK? A review](#)
 - [Dating App Use and Mental Health: A Collaborative Review](#)
 - [Video Game Use and Adolescent Health: A Collaborative Review](#)
 - [Online Communities and Adolescent Health: A Collaborative Review](#)

- [Digital Gambling and Adolescent Health: A Collaborative Review](#)
- See also [additional Google docs](#) laying out evidence for trends in mental health and social media use in Australia, Canada, New Zealand, and other countries.
- You can cite this document as:
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QUESTION 1: WHAT TEENS ARE USING PORN (AND HOW MUCH)?

- 1.1 [Horner \(2020\)](#). Child and adolescent pornography exposure. *Journal of Pediatric Health Care*.

EXCERPT: It is impossible to determine the exact number of children and adolescents unintentionally and intentionally exposed to pornography. **The prevalence rate varies per study. The prevalence rates for unintentional adolescent pornography exposure range from 19% (Mitchell and Wells, 2007) to 32% (Hardy, Steelman, Coyne and Ridge, 2013). A nationally representative study of U.S. youth between the ages of 10 and 17 years indicated that 34% of the study population intentionally viewed pornography (Wolak, Mitchell and Finkelhor, 2007).** However, younger children in that study, aged 10 to 11 years were unlikely to seek pornography, with only 2% to 5% of boys and 1% of girls reporting intentional pornography viewing (Wolak, Mitchell and Finkelhor, 2007). Ybarra et al., 2011 found 15% of youth aged 12

to 17 years reported intentional pornography exposure in the past year. A U.S. study of nearly 1,000 adolescents reported that **66% of males and 39% of females had viewed online pornography (Short et al., 2012)**. Pornography exposure in children less than 10 years of age is relatively unexplored (Rothman et al., 2017).

However, both unintentional and intentional pornography viewing by children and adolescents increases with age and varies by gender (Mitchell and Wells, 2007; Tsaliki, 2011). Another study of online pornography use in the United States revealed that 42% of 10 to 17 year olds had seen pornography online, with 27% describing the use as intentional (Wright and Donnerstein, 2014). **Multiple studies report boys to be more likely to intentionally view pornography than girls** (Bleakley, Hennessy and Fishbein, 2011; Luder et al., 2011). Another study in the United States reported that **54% of boys and 17% of girls between the ages of 15 to 17 years reported intentional online pornography viewing**. However, a study of adolescent pornography use in the European Union found variability of gender-based pornography use differed by the social progressiveness of the country (Ševčíková, Šerek, Barbovski and Daneback, 2014). **The gender differences in pornography use were less distinct in more socially liberal countries when compared with more socially conservative ones.**

It is important to understand the trajectory of adolescent pornography use. Doornwaard et al., 2016 describe three trajectories of pornography use for boys: **nonuse or infrequent use, strongly increased use, occasional use, and decreasing use**. **Pornography use for girls followed three trajectories: stable nonuse or infrequent use, strongly increasing use, and stable occasional use**. Although prevalence rates vary among studies, national and international studies reveal that online pornography use is common among boys and not uncommon among girls (Collins et al., 2017).

1.2 [Porn in the digital age: New research reveals 10 trends](#). (2016). Barna Group.

EXCERPT: When looking closely at frequent porn users (those who seek out porn daily, weekly and monthly), we begin to see patterns emerge according to age, gender and faith practice. To begin with, men use porn more frequently than women by a wide margin. **Twice as many male teens and young adults use porn than female teens and young adults (67% compared to 33%), and four times as many male adults 25+ use porn than female adults (47% compared to 12%).** Practicing Christians are more than three times less likely to use porn than other teens and adults (13% compared to 42%), and young adults (57%) are much more likely than both teens (37%) or adults 25+ (29%) to be a frequent porn user.

...Among each of the generational groups, young adults 18-24 are the most frequent porn users. Almost six in 10 young adults (57%) seek out porn either daily, weekly or monthly. This is compared to a little over one-third of teens (37%), and almost 3 in 10 adults 25+ (29%). They are also the least likely to say that porn is very bad for society (14%). The next closest are Gen-Xers at 24 percent, but the largest gap is a 23 percent differential between young adults and Boomers (37% compared to 14%). Like teens (16%), young adults (17%) are also the least likely to say porn is “somewhat bad” for society.

1.3 Pornhub 2021 Stats ([Gender and age breakdown](#); [2021](#), [2019](#), [2017](#), [2015](#), [2013](#))

Category	Year	Stats	Notes
Total Visits	2013 2019	14.7 Billion 42 Billion	
% 18-24	2015 2019	31% 25%	
% Accessing from mobile phone	2013 2021	40% 83%	
% Accessing from desktop	2013 2021	51% 14%	
Average time spent watching per session	2013 2021	10 min 39 sec 9 min 55 sec	Average male spends between 40 - 70 min a week. Compulsive users watch about 110 min per week

EXCERPT FROM 2019 REPORT: **In 2019 there were over 42 Billion visits to Pornhub, which means there was an average of 115 million visits per day. One-Hundred-Fifteen Million – that’s the equivalent of the populations of Canada, Australia, Poland and the Netherlands all visiting in one day.**

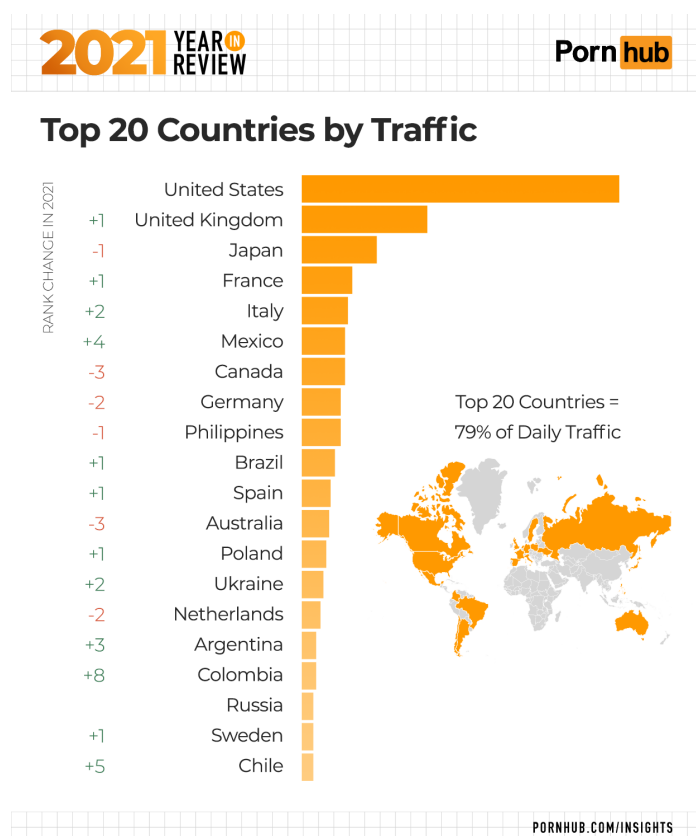
...There were over 39 billion searches performed, which is 8.7 billion more searches than last year. Celebrities, trending terms, and characters – if you can think it, it’s probably been searched for. In 2019 there was a record amount of video uploads, over 6.83 million new videos were uploaded to Pornhub. To put this in perspective – if you

strung all of 2019's new video content together and started watching them way back in 1850, you'd still be watching them today.

In 2019, Pornhub transferred 6597 petabytes of data, which was about 18,073 terabytes per day, and 209 gigabytes per second! To put this in perspective, **if you copied all of 2019's transferred data onto hard drives and stacked them, they would reach 100km high to the edge of space.**

This year more and more people continued to use Pornhub as a form of social media, as over 70 million messages were sent between Pornhub users and over 11.5 million comments were left on videos. Over 98,000 new models joined Pornhub, bringing the total number of verified models to more than 130,000.

Every minute, there was an average of 2.8 hours of content uploaded to Pornhub – that means that every 9 minutes or so, an entire days' worth of video was uploaded to Pornhub.



2021 YEAR IN REVIEW

Porn hub

United States Time Spent Per Visit

LONGEST

Wyoming	11 min 3 sec
Mississippi	10 min 51 sec
Alabama	10 min 46 sec
Arkansas	10 min 40 sec
Louisiana	10 min 39 sec
South Carolina	10 min 35 sec
Georgia	10 min 35 sec
Tennessee	10 min 34 sec
Missouri	10 min 29 sec
West Virginia	10 min 27 sec

9 min 44 sec

Average Visit Duration
in the United States

-23 sec

Decrease in 2021

**Largest Duration
Changes of 2021**

-36s	California
-29s	Colorado
-20s	Maryland
-18s	Nevada
-18s	Hawaii
-18s	Utah
-17s	Rhode Island
-17s	Mississippi
-16s	Arizona
-16s	New Mexico
-16s	Montana
-16s	Texas
-15s	South Dakota
-15s	D.C.
-15s	Kentucky
-15s	Oklahoma

SHORTEST

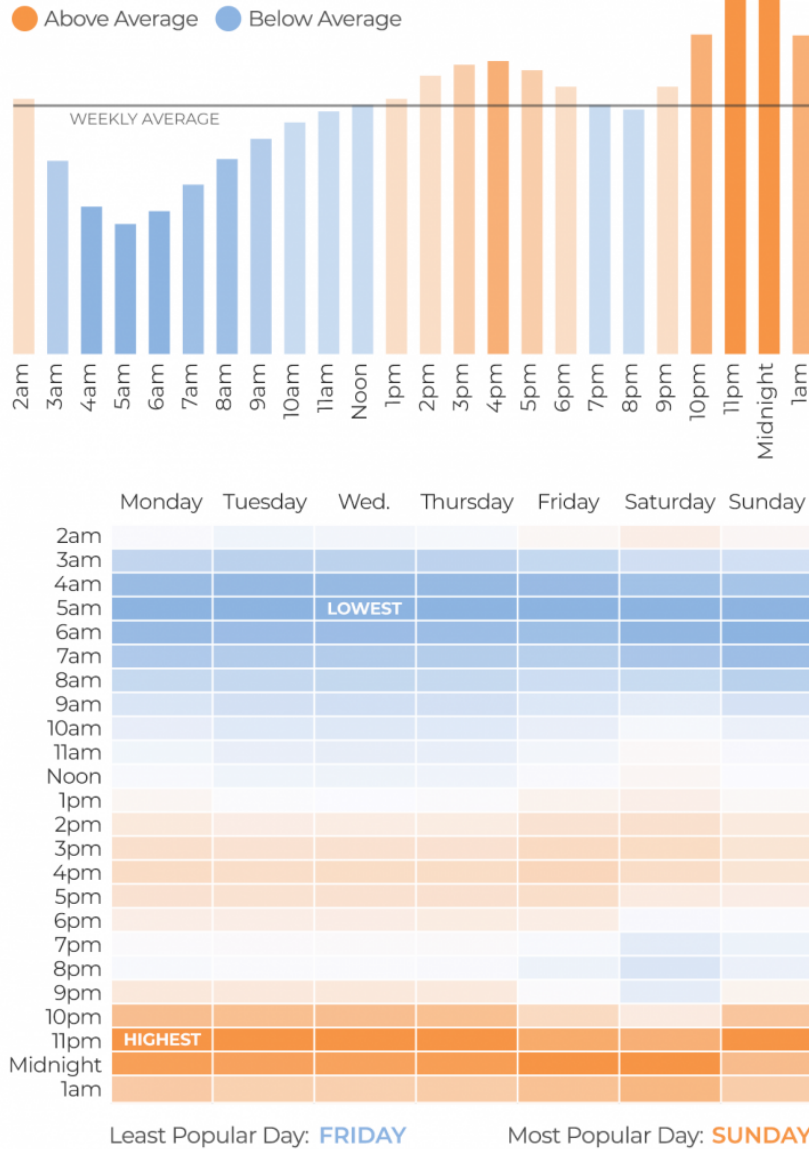
Colorado	8 min 51 sec
California	9 min 24 sec
Utah	9 min 34 sec
Massachusetts	9 min 38 sec
New York	9 min 57 sec
Connecticut	9 min 57 sec
Nebraska	9 min 58 sec
Kansas	9 min 58 sec
Utah	9 min 59 sec
Connecticut	10 min 2 sec

[PORNHUB.COM/INSIGHTS](https://pornhub.com/insights)

2021 YEAR IN REVIEW

Porn hub

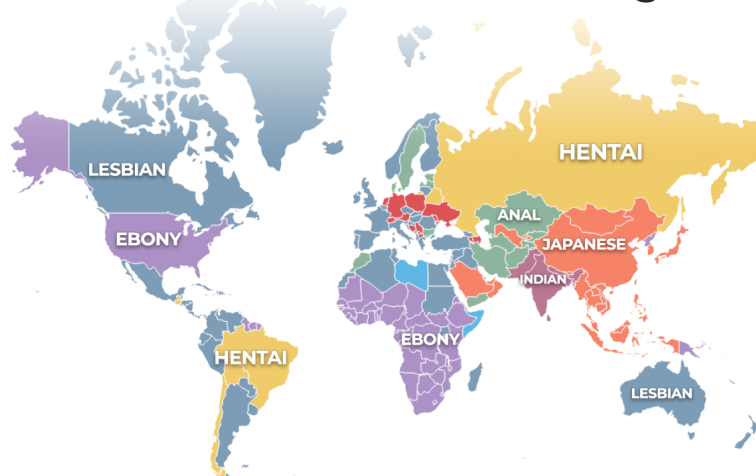
Favorite Times to Watch Porn



PORNHUB.COM/INSIGHTS

2021 YEAR IN REVIEWPorn **hub**

The World's Most Viewed Categories



- | | | | |
|------------|----------|--------|----------|
| ● Japanese | ● Ebony | ● MILF | ● Indian |
| ● Lesbian | ● Hentai | ● Anal | ● Arab |

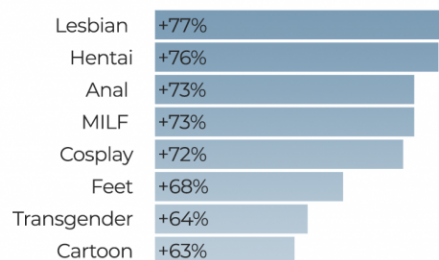
PORNHUB.COM/INSIGHTS

Top Relative Categories by Generation

Percent Difference in Popularity When Compared to All Other Ages

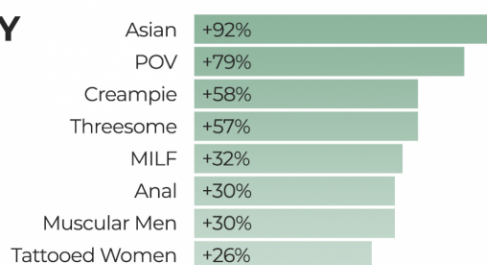
Gen Z

18-24



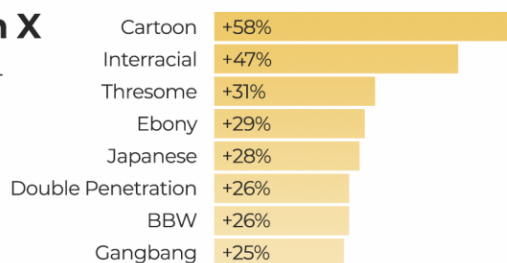
Gen Y

25-34



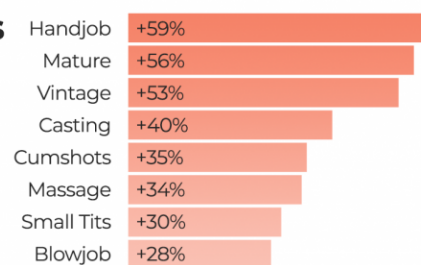
Gen X

35-54



Boomers

55+



2021 YEAR IN REVIEW

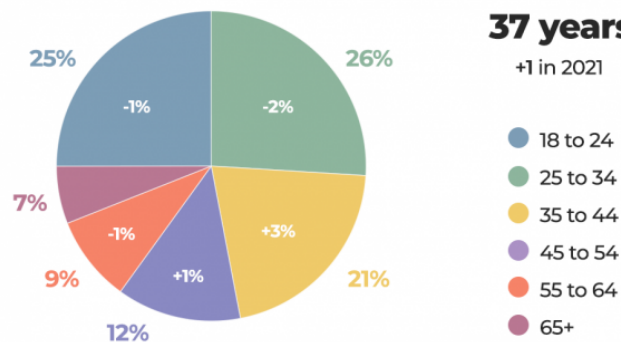
Pornhub

Visitor Demographics

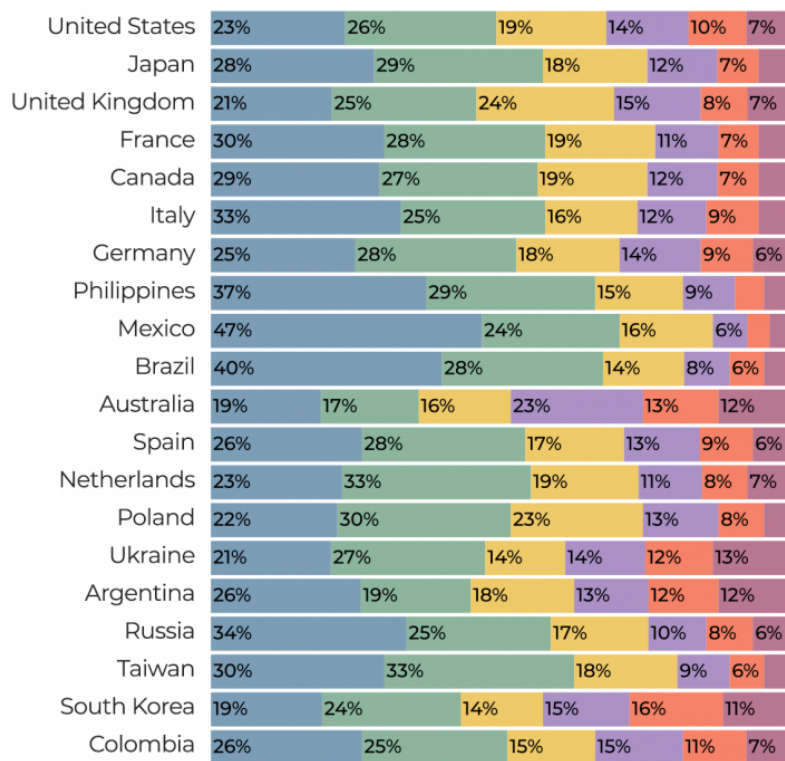
Average Age of Pornhub Visitors

37 years

+1 in 2021

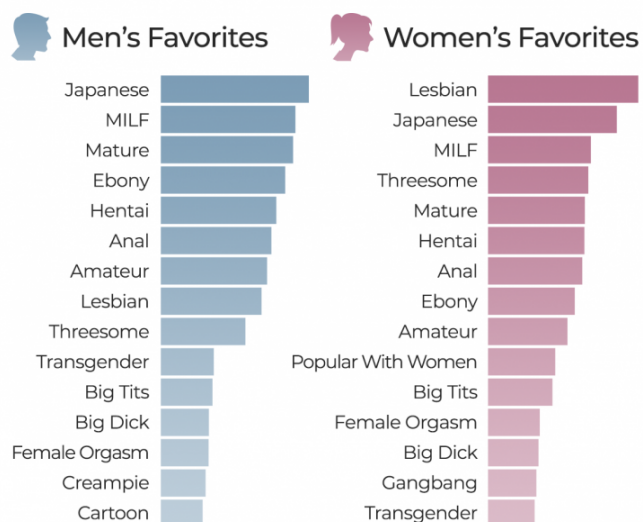


Proportions in Top 20 Countries

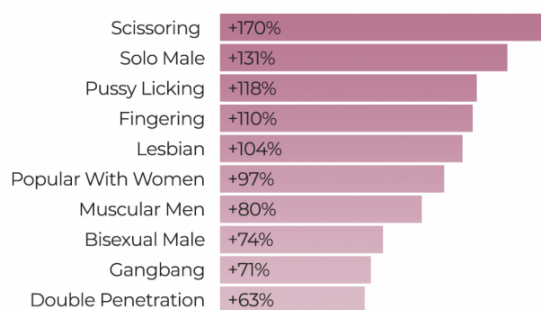


PORNHUB.COM/INSIGHTS

Most Viewed Categories by Gender



Viewed More by Women Compared to Men

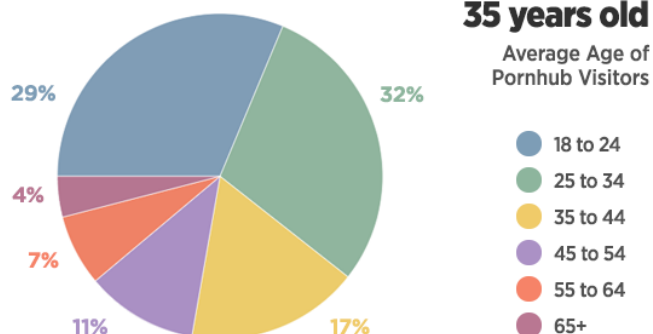


PORNHUB.COM/INSIGHTS

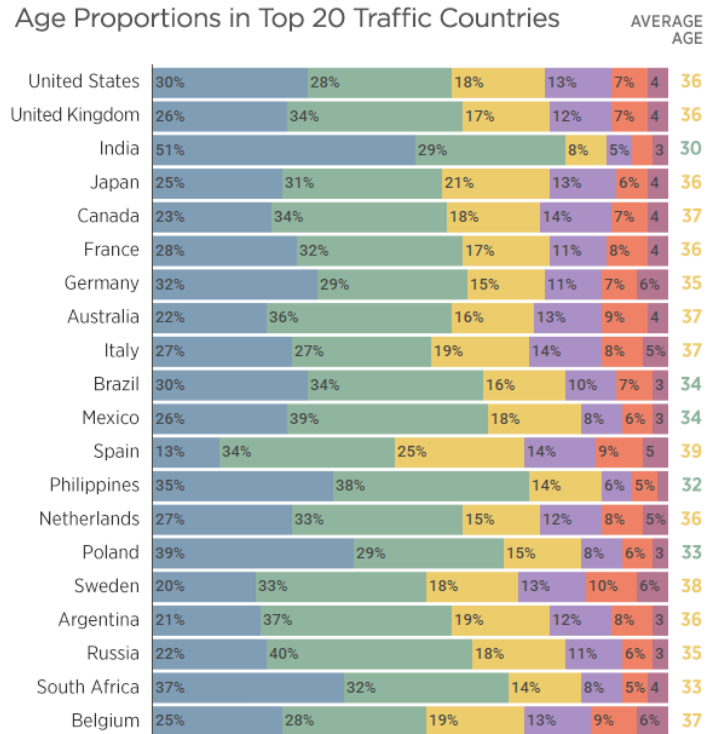
2017 STATS



Age of Pornhub Visitors



Age Proportions in Top 20 Traffic Countries



PORNHUB.COM/INSIGHTS

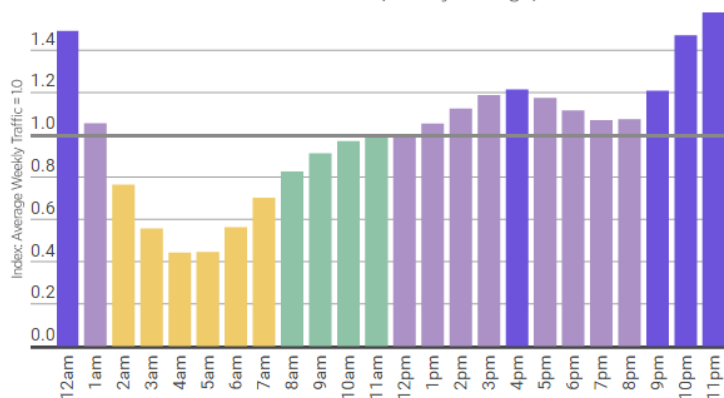
2015 Stats

2015 YEAR IN REVIEW

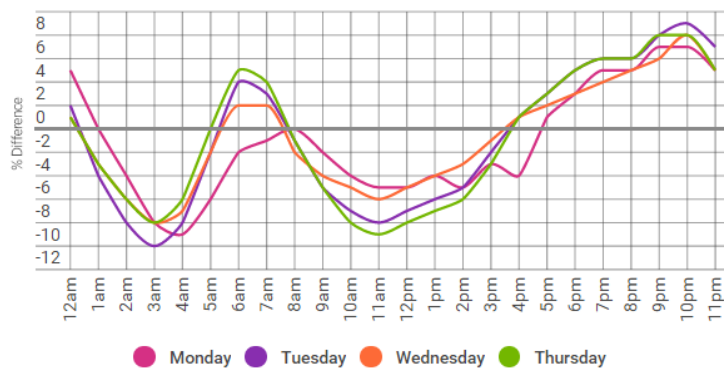
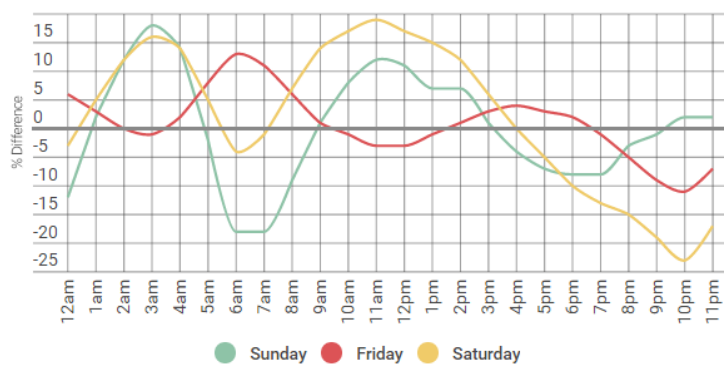
Hourly Traffic Worldwide

Pornhub

Favorite Times to Watch Porn (weekly average)



Percent Change in Traffic by Day (compared to weekly average)



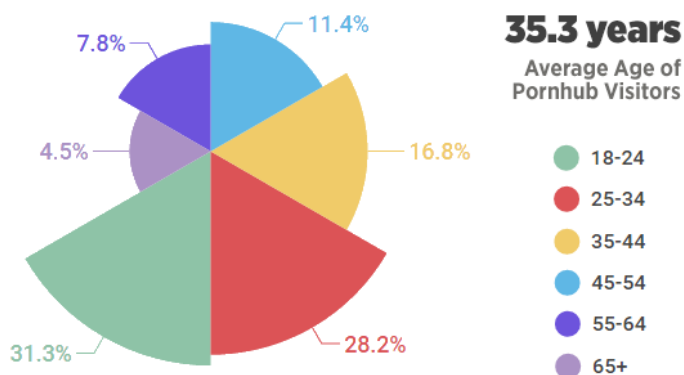
pornhub.com/insights

2015 YEAR IN REVIEW

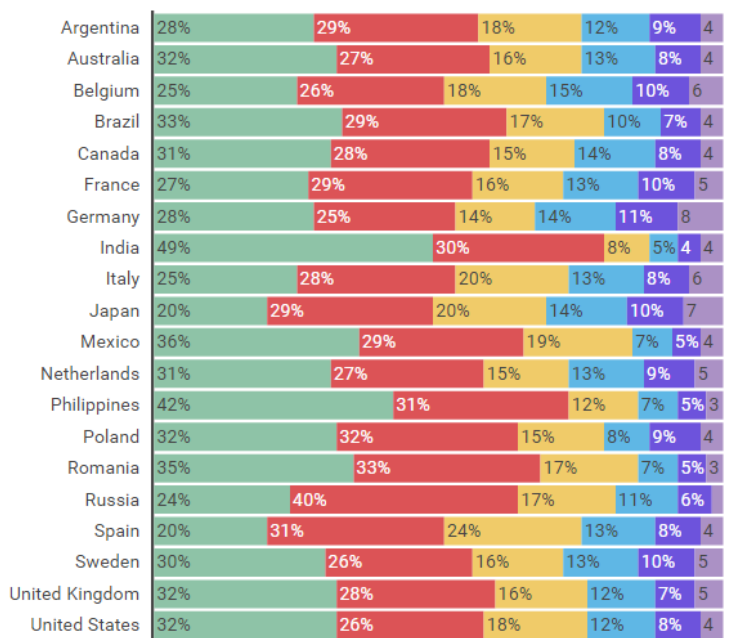
AGE DEMOGRAPHICS

Pornhub

Age Proportions Worldwide



Age Proportions in Top 20 Traffic Countries



pornhub.com/insights

- 1.4 [Donevan, Jonsson, Bladh, Priebe, Fredlund, & Svedin \(2022\)](#). Adolescents' use of pornography: Trends over a ten-year period in Sweden. *Archives of Sexual Behavior*.

ABSTRACT: Using survey data from three nationally representative surveys in 2004, 2009, and 2014 among senior high school students in Sweden, this study investigates trends in adolescents' lifetime prevalence of pornography use, frequency of pornography use, and type of pornography used over time. While almost all boys and a considerable proportion of girls used pornography across the three waves, the lifetime prevalence of pornography use decreased overall for both girls and boys. **The share of boys who use pornography frequently increased over the three survey cycles; those who reported using pornography daily increased from 11% in 2004 to 24% in 2014. In contrast, there was no change in girls who reported using pornography daily, while the proportion who never used pornography increased from 40% in 2004 to 51% in 2014.** Adolescents appear to use a narrower range of different pornography types over the survey cycles. Multiple logistic regression models were generated to investigate factors associated with pornography use over the 10-year period. The results suggest that rule-breaking behavior, having higher economic status and higher academic achievement were related to boy's pornography use, while rule-breaking behavior, early sexual debut and victimization were associated with girls' pornography use.

1.5 [Horvath, Alys, Massey, Pina, Scally, & Adler \(2013\).](#) Basically... porn is everywhere. *Children's Commissioner*.

FINDINGS: FINDING 1 (RQ1, P21): **A significant proportion of children and young people are exposed to or access pornography** but there are differences in the literature regarding the regularity of exposure and access (or the rate of recurrence) which highlight the importance of considering frequency as well as prevalence in order to obtain a full picture.

FINDING 2 (RQ1, P24): Children and young people's exposure and access to pornography occurs both online and offline. However, in recent years the most common methods of access have changed from magazines, videos, television and books, with the internet becoming more dominant. There is some evidence that children and young people consider pornography easy to access and culturally prevalent. Accessing pornography through one method appears to be positively related to accessing it through others.

FINDING 3 (RQ1, P23): Exposure and access to pornography appear to increase with age; there is greater risk of exposure with increasing age. Contradictory findings exist in relation to age of first exposure, with variations from 10 to 17 years old.

FINDING 4 (RQ1, P22): Exposure is more prevalent than (ostensibly) deliberate access. However, there is considerable variation in the rates of unwanted exposure and some studies report significant numbers of children and young people accessing pornography.

FINDING 5 (RQ1, P23): There are gender differences in exposure and access to pornography. **Young men and boys are more likely to be exposed to pornography than young women and girls. They are also more likely to access, seek or use pornography and are exposed to or access pornography more frequently.** These gender differences are also found in children and young people's attitudes towards pornography. Boys and young men generally view pornography more positively and state that they view it primarily out of curiosity while girls and young women generally report that it is unwelcome and socially distasteful and that they feel much more uncomfortable than boys and young men when viewing pornography.

1.6 [Wolak, Mitchell, & Finkelhor \(2007\)](#). Unwanted and wanted exposure to online pornography in a national sample of youth Internet users. *Pediatrics*.

ABSTRACT: OBJECTIVE: The goal was to assess the extent of unwanted and wanted exposure to online pornography among youth Internet users and associated risk factors. METHODS: A telephone survey of a nationally representative sample of 1500 youth Internet users aged 10 to 17 years was conducted between March and June 2005.

RESULTS: Forty-two percent of youth Internet users had been exposed to online pornography in the past year. Of those, 66% reported only unwanted exposure.

Multinomial logistic regression analysis was used to compare youth with unwanted exposure only or any wanted exposure with those with no exposure. Unwanted exposure was related to only 1 Internet activity, namely, using file-sharing programs to download images. Filtering and blocking software reduced the risk of unwanted exposure, as did attending an Internet safety presentation by law enforcement personnel. Unwanted exposure rates were higher for teens, youth who reported being harassed or sexually solicited online or interpersonally victimized offline, and youth who scored in the borderline or clinically significant range on the Child Behavior Checklist subscale for depression. **Wanted exposure rates were higher for teens, boys, and youth who used file-sharing programs to download images, talked online to unknown persons about sex, used the Internet at friends' homes, or scored in the borderline or clinically significant range on the Child Behavior Checklist subscale for rule-breaking.** Depression also could be a risk factor for some youth. Youth who used filtering and blocking software had lower odds of wanted exposure.

CONCLUSIONS: More research concerning the potential impact of Internet pornography on youth is warranted, given the high rate of exposure, the fact that much exposure is unwanted, and the fact that youth with certain vulnerabilities, such as depression, interpersonal victimization, and delinquent tendencies, have more exposure.

- 1.7 [Ševčíková, A., Barbovski, & Daneback \(2014\)](#). The Roles of Individual Characteristics and Liberalism in Intentional and Unintentional Exposure to Online Sexual Material Among European Youth: A Multilevel Approach. *Sexuality Research and Social Policy*.

ABSTRACT: The aim of this study was to examine how young people are intentionally or unintentionally exposed to sexual material on the internet. A sample from the EU Kids Online II project, including youth (N = 11,712, 11–16 years, 50 % girls) from 25 countries, was used to examine predictors of unintentional exposure to online sexual material (EOSM) via pop-up images and intentional EOSM on adult/X-rated websites. Using a multilevel analysis, we considered several individual-level predictors (psychosocial characteristics, patterns of internet use, and parental mediation), one country-level predictor (mean cultural liberalism of the country), and cross-level interactions. Except for gender, the study did not identify any specific patterns of individual-level predictors for unintentional and intentional EOSM: **age, sensation seeking, sexual intercourse, amount of time spent online, level of digital skills, and degree of restrictive mediation predicted both types of EOSM. Intentional EOSM was more often reported by boys, while unintentional EOSM occurred to a similar degree among boys and girls. Finally, living in a country with a stronger culture of liberalism predicted a greater likelihood of intentional but not unintentional EOSM and also was associated with smaller gender differences in intentional EOSM.**

- 1.8 [Bőthe, Vaillancourt-Morel, Dion, Paquette, Massé-Pfister, Tóth-Király, & Bergeron \(2022\)](#). A Longitudinal Study of Adolescents' Pornography Use Frequency, Motivations, and Problematic Use Before and During the COVID-19 Pandemic. *Archives of Sexual Behavior*.

ABSTRACT: **Since the beginning of the COVID-19 pandemic, an increase in pornography use has been reported based on cross-sectional findings, raising concerns about associated adverse outcomes, such as problematic pornography use (PPU).** The aims of the present study were to document potential changes in adolescents' pornography use frequency, motivations, and PPU before and during the COVID-19 pandemic. As part of an ongoing study on adolescents' sexual health, we used a large sample (NTime 1 = 1771; 47.6% girls, Mage = 15.42 years, SD = 0.59) to examine changes from baseline (before the COVID-19 pandemic) to one year later (during the COVID-19 pandemic) in adolescents' self-reported pornography use frequency, motivations, and PPU, using latent change models and examining potential gender differences. **No significant changes were observed in adolescents'**

pornography use frequency and pornography use motivations, and no gender differences were present in these trends. Although statistically significant, slight decrease was observed in boys' PPU levels, and a statistically significant, slight increase was observed in girls' PPU levels, these changes were very small, providing no practical or clinical relevance. In sum, despite previous propositions, concerns, and cross-sectional findings, longitudinal results suggest that adolescents' **pornography use characteristics were rather stable between November 2019 and June 2021, and the COVID-19 pandemic and related lockdowns might not have led to general increases in adolescents' pornography use as it was expected.**

1.9 [Price, Patterson, Regnerus, & Walley \(2016\)](#). How Much More XXX is Generation X Consuming? Evidence of Changing Attitudes and Behaviors Related to Pornography Since 1973. *The Journal of Sex Research*.

ABSTRACT: We use data from the General Social Survey (GSS) over a 40-year period (1973–2012) to evaluate changes in attitudes about pornography and pornography consumption among American young adults. One of the major challenges in making comparisons across birth generations is separating the effect of birth cohort from age and period effects. **We use an intrinsic estimator to separately identify the effects of age, birth cohort, and time period using 40 years of repeated cross-section data. We find that, relative to the general population, young people's beliefs about whether pornography should be illegal have stayed relatively constant over this 40-year period and, if anything, have slightly increased.** We also find that **pornography consumption has been increasing across birth generations, though this increase has been smaller than would be inferred based on differences across generations** at a single point in time, due to a strong age component in consumption patterns.

1.10 [Böthe, Vaillancourt-Morel, Girouard, Štulhofer, Dion, & Bergeron \(2020\)](#). A Large-Scale Comparison of Canadian Sexual/Gender Minority and Heterosexual, Cisgender Adolescents' Pornography Use Characteristics. *The Journal of Sexual Medicine*.

ABSTRACT: BACKGROUND: The ease of access to pornography has made its use common among adolescents. Although sexual and gender minority (SGM) (eg, gay, transgender) adolescents may be more prone to use pornography owing to sexual orientation-related information seeking and/or scarcity of potential romantic or sexual partners, relatively little attention has been paid to their pornography use and to the

quantitative examination of the similarities and differences between heterosexual, cisgender (HC) and SGM adolescents' pornography use characteristics.

AIM: The aim of the present study was to compare SGM and HC adolescents' pornography use considering potential sex differences.

METHODS: We used a sample of 2,846 adolescents (52.5% girls; Mage = 14.5 years, SD = 0.6), which was collected as part of an ongoing longitudinal study on adolescents' sexual health. Data were analyzed with 5 groups: HC boys; HC girls; SGM boys; SGM girls; and SGM non-binary individuals.

OUTCOMES: Adolescents completed a self-report questionnaire about sexual and gender minority status and pornography use (ie, lifetime use, age at first exposure, and frequency of use in the past 3 months.)

RESULTS: Results indicated significant differences between all groups: **88.2% of HC boys, 78.2% of SGM boys, 54.2% of SGM girls, 39.4% of HC girls, and 29.4% of SGM non-binary individuals reported having ever viewed pornography by the age of 14 years. SGM girls indicated a significantly younger age at first pornography use than HC girls, but this difference was not significant among boys. SGM boys reported the highest (median: many times per week), whereas HC girls reported the lowest (median: less than once a month) frequency of pornography use.**

CLINICAL TRANSLATION: Results suggest that SGM and HC boys' pornography use characteristics are rather similar, whereas SGM and HC girls' pornography use patterns may be considered different presumably because of the varying underlying motivations (eg, using pornography to confirm sexual orientation).

STRENGTHS & LIMITATIONS: Self-report measures and cross-sectional designs have potential biases that should be considered. However, the present study involved a large sample of adolescents including SGM adolescents, a population group that is understudied.

CONCLUSION: Approximately two-thirds of teenagers had gained their first experience with pornography in the present sample, and **52.2% reported using it once a week or more often in the past 3 months, indicating that pornography use may play an important role in both HC and SGM adolescents' sexual development.**

Gender-based differences concerning pornography use seem to be robust regardless of SGM status.

1.11 [Peter & Valkenburg \(2016\)](#). Adolescents and pornography: A Review of 20 years of research. *Journal of Sex Research*.

ABSTRACT: The goal of this review was to systematize empirical research that was published in peer-reviewed English-language journals between 1995 and 2015 on the prevalence, predictors, and implications of adolescents' use of pornography. This

research showed that adolescents use pornography, but prevalence rates varied greatly. **Adolescents who used pornography more frequently were male, at a more advanced pubertal stage, sensation seekers, and had weak or troubled family relations.** Pornography use was associated with more permissive sexual attitudes and tended to be linked with stronger gender-stereotypical sexual beliefs. It also seemed to be related to the occurrence of sexual intercourse, greater experience with casual sex behavior, and more sexual aggression, both in terms of perpetration and victimization. The findings of this review need to be seen against the background of various methodological and theoretical shortcomings, as well as several biases in the literature, which currently precludes internally valid causal conclusions about effects of pornography on adolescents.

1.12 [Pizzol, Bertoldo, & Foresta \(2016\)](#). Adolescents and web porn: A new era of sexuality. *International Journal of Adolescent Medicine and Health*.

ABSTRACT: BACKGROUND: Pornography can affect the lifestyles of adolescents, especially in terms of their sexual habits and porn consumption, and may have a significant influence on their sexual attitudes and behaviors.

OBJECTIVE: The aim of this study was to understand and analyze the frequency, duration, and perception of web porn utilization by young Italians attending high school.

METHODS: A total of 1565 students attending the final year of high school were involved in the study, and 1492 have agreed to fill out an anonymous survey. The questions representing the content of this study were: 1) How often do you access the web? 2) How much time do you remain connected? 3) Do you connect to pornographic sites? 4) How often do you access pornographic sites? 5) How much time you spend on them? 6) How often do you masturbate? and 7) How do you rate the attendance of these sites? Statistical analysis was performed by Fischer's test.

RESULTS: All young people, on an almost daily basis, have access to Internet. **Among those surveyed, 1163 (77.9%) of Internet users admit to the consumption of pornographic material, and of these, 93 (8%) access pornographic websites daily, 686 (59%) boys accessing these sites perceive the consumption of pornography as always stimulating, 255 (21.9%) define it as habitual, 116 (10%) report that it reduces sexual interest towards potential real-life partners, and the remaining 106 (9.1%) report a kind of addiction. In addition, 19% of overall pornography consumers report an abnormal sexual response, while the percentage rose to 25.1% among regular consumers.**

CONCLUSION: It is necessary to educate web users, especially young users, to a safe and responsible use of the Internet and of its contents. Moreover, public education campaigns should be increased in number and frequency to help improve knowledge of Internet-related sexual issues both by adolescents and by parents.

1.13 [2022 Teens and Pornography \(2023\)](#). *Common Sense Media*.

EXCERPT: This report documents the results of a demographically representative national survey of more than 1,300 teens (age 13 to 17) in the United States. It was conducted from September 12 to September 22, 2022. The purpose of the report is to understand the role that online pornography plays in U.S. adolescent life and to establish a baseline for understanding U.S. teens' pornography use. For this report, online pornography includes any videos or photos viewed on websites, social media, or anywhere else on the internet that show nudity and sexual acts intended to entertain and sexually arouse the viewer. Pornography often features explicit pictures of body parts (such as the genitals) and sexual acts (including oral sex, masturbation, anal sex, etc.).

...This is a cross-sectional research study and, as such, it was not designed to answer causal questions. Instead, this study was designed to reveal answers to basic questions about the scale of pornography use among a sample of U.S. teens, and how teens themselves see the role of pornography in their lives.

FIGURES:

TABLE 2. Teens who have viewed pornography on the following at least once a week in the past year
(among teens who intentionally viewed pornography)

By demographic	TOTAL	Age 13 to 14	Age 15 to 17	Cis Boy	Cis Girl	Transgender/ Nonbinary*	LGBTQ+	Non-LGBTQ+
Porn websites (e.g., Pornhub, YouPorn, Xvideos, etc.)	44%	49%	42%	54%	33%	35%	47%	43%
Social media (e.g., TikTok, Instagram, Snapchat, Reddit, etc.)	38%	49%	32%	40%	35%	35%	39%	37%
Video sites/platforms (e.g., YouTube)	34%	45%	28%	40%	26%	35%	30%	36%
Subscription sites for user-generated content (e.g., OnlyFans)	16%	24%	12%	18%	14%	14%	17%	16%
Livestreaming or "cam" sites	18%	29%	13%	18%	20%	12%	19%	18%
Other	19%	29%	14%	19%	17%	28%	23%	18%

* Small base size; interpret with caution.

TABLE 3. Teens who viewed online pornography in the past week, by frequency

(among teens who intentionally viewed pornography)

By demographic	TOTAL	Age 13 to 14	Age 15 to 17	Cis Boy	Cis Girl	Transgender/ Nonbinary*	LGBTQ+	Non-LGBTQ+
Three or more days	34%	40%	30%	41%	23%	33%	39%	33%
One or two days	37%	35%	38%	35%	43%	23%	38%	37%
Total at least once	71%	75%	68%	76%	67%	55%	77%	70%

* Small base size; interpret with caution.

TABLE 5. Teens who agree with the following statements

(among teens who have ever viewed pornography)

By demographic	TOTAL	Age 13 to 14	Age 15 to 17	Cis Boy	Cis Girl	Transgender/ Nonbinary*	LGBTQ+	Non-LGBTQ+
I feel ok about the amount of online porn I view	67%	57%	73%	64%	69%	70%	72%	65%
I feel like I should watch less online porn than I do	25%	31%	21%	25%	25%	19%	20%	26%
I wish I could watch more online porn than I do	9%	12%	6%	11%	6%	11%	9%	9%

* Small base size; interpret with caution.

TABLE 6. Teens who say they have learned the following from online pornography

(among teens who have ever viewed pornography)

By demographic	TOTAL	Age 13 to 14	Age 15 to 17	Cis Boy	Cis Girl	Transgender/ Nonbinary*	LGBTQ+	Non-LGBTQ+
How to have sex	79%	78%	79%	85%	72%	81%	86%	77%
How to talk with partners	48%	48%	48%	51%	43%	51%	54%	46%
What types of partners I find attractive	72%	71%	72%	80%	61%	76%	80%	69%
What sexual behaviors I am interested in trying	72%	69%	75%	82%	61%	77%	81%	69%
About human bodies and anatomy	79%	78%	81%	83%	74%	87%	85%	78%
What types of sexual behaviors are likely to feel pleasurable to me	73%	70%	75%	82%	61%	78%	81%	70%
What types of sexual behaviors are likely to NOT feel pleasurable to me	64%	64%	64%	71%	55%	76%	75%	60%
What types of sexual behaviors are likely to feel pleasurable to a sexual partner	73%	70%	76%	82%	64%	78%	82%	71%
What types of sexual behaviors are likely to NOT feel pleasurable to a sexual partner	60%	60%	62%	68%	51%	72%	67%	60%

* Small base size; interpret with caution.

TABLE 9. Teens indicating that the following groups have taught them about sex (among all teens)

By demographic	TOTAL	Age 13 to 14	Age 15 to 17	Cis Boy	Cis Girl	Transgender/ Nonbinary*	LGBTQ+	Non-LGBTQ+
A parent, caregiver, or other trusted adult	47%	42%	50%	46%	49%	37%	41%	48%
Friends	41%	39%	43%	40%	41%	49%	48%	39%
Sex education in school	32%	30%	32%	30%	34%	30%	32%	31%
Online pornography	27%	28%	26%	30%	22%	35%	36%	25%
TV or movies (non-pornographic)	25%	26%	24%	27%	23%	21%	25%	25%
Sex education videos on sites like YouTube, TikTok, or other apps or websites	21%	20%	22%	22%	20%	20%	25%	20%
Books or other things I've read	20%	20%	20%	17%	22%	33%	30%	18%
School or teachers at school	16%	19%	14%	15%	17%	15%	13%	17%
Sibling or cousin	15%	15%	16%	16%	15%	8%	15%	16%
A doctor	13%	14%	12%	14%	13%	10%	11%	13%
My pastor or religious leader	9%	11%	7%	10%	8%	5%	6%	9%

* Small base size; interpret with caution.

1.14 [Ševčíková, & Daneback \(2014\)](#). Online pornography use in adolescence: Age and gender differences. *European Journal of Developmental Psychology*.

ABSTRACT: The aim of this study was to investigate age and gender patterns in how adolescents use online pornography and with whom, their reason for using online pornography and how and to whom they communicate their experiences. The sample comprised 2950 adolescents aged 11–17 (Mage = 14.08, 53.3% girls). Data were collected in primary and secondary schools in the Czech Republic. **For girls, the results showed that the likelihood of using and discussing online pornography in mixed-gender peer settings increased with age. Romantic relationships were an important setting for these activities, especially among older girls. For boys, using online pornography to become sexually aroused was the only reason that increased with age.** One-third of the respondents accessed online pornography in order to learn something about sex. The results suggest that adolescents use online pornography in line with their psychosexual development, and this finding needs to be taken into consideration when providing sex education in schools. This suggestion might be challenging, since this study also showed that adolescents were reluctant to talk about online pornography use with adults.

[Other studies? What have we missed?]

* * * * *

QUESTION 2: IS THERE AN ASSOCIATION BETWEEN PORNOGRAPHY USE AND MENTAL HEALTH OUTCOMES (INCLUDES AGGRESSION AND RISKY BEHAVIOR)?

2.1 STUDIES INDICATING AN NEGATIVE ASSOCIATION

2.1.1 [Camilleri, Perry, & Sammut \(2021\)](#). Compulsive internet pornography use and mental health: A cross-sectional study in a sample of university students in the United States. *Frontiers in Psychology*. **DV: Depression, Anxiety, Stress**

ABSTRACT: BACKGROUND: The sustained rise in negative mental health reports among university students is a source of continued global concern, and investigation continues into potential contributors to this rise. This includes the increased prevalence of risky sexual behaviors. Related is the increased prevalence of pornography use. Our study sought to explore the potential relationship between compulsive use of pornography and mental health in university students.

METHODS: Our sample consisted of university students (N = 1031; 34% male, 66% female) from Franciscan University of Steubenville, Steubenville, Ohio. An anonymous survey was sent to all students at the university over the age of 18. The survey was comprised of the following: (1) demographic questions, (2) questions on pornography use and perception, (3) a modified version of the Compulsive Internet Use Scale (mCIUS) assessing various factors associated with compulsive internet pornography use, (4) questions assessing emotional and sexual states relative to pornography use (EmSS), and (5) the 21-question version of the Depression, Anxiety and Stress Scale (DASS-21).

RESULTS: **Our results indicate that 56.6% of those surveyed reported lifetime pornography use, with a significantly higher proportion of males than females reporting such use. The majority of students reported accessing pornography through internet-related technologies. Additionally, 17.0, 20.4, and 13.5% of students reported severe or extremely severe levels of depression, anxiety and stress, respectively, with compulsive pornography use significantly affecting all three mental health parameters in both sexes.** Exploratory Factor Analysis identified three factors suggesting emotional coping, dependence and preoccupation for the mCIUS items and three factors reflecting interoceptive, impotent, and extrinsic characteristics for the EmSS items. Regression analysis indicated that various demographics, items pertaining to reduced control and social impairment, and other

variables pertaining to pornography use predicted mental health outcomes. Faith, morals and personal motivation were the primary variables reported to help reduce pornography use.

CONCLUSION: Our analyses indicate a **significant relationship between mental health and pornography use, including behaviors reflecting behavioral addictions**, highlighting the necessity for a better understanding and consideration of the potential contribution of internet pornography to negative mental health among university students.

FIGURE:

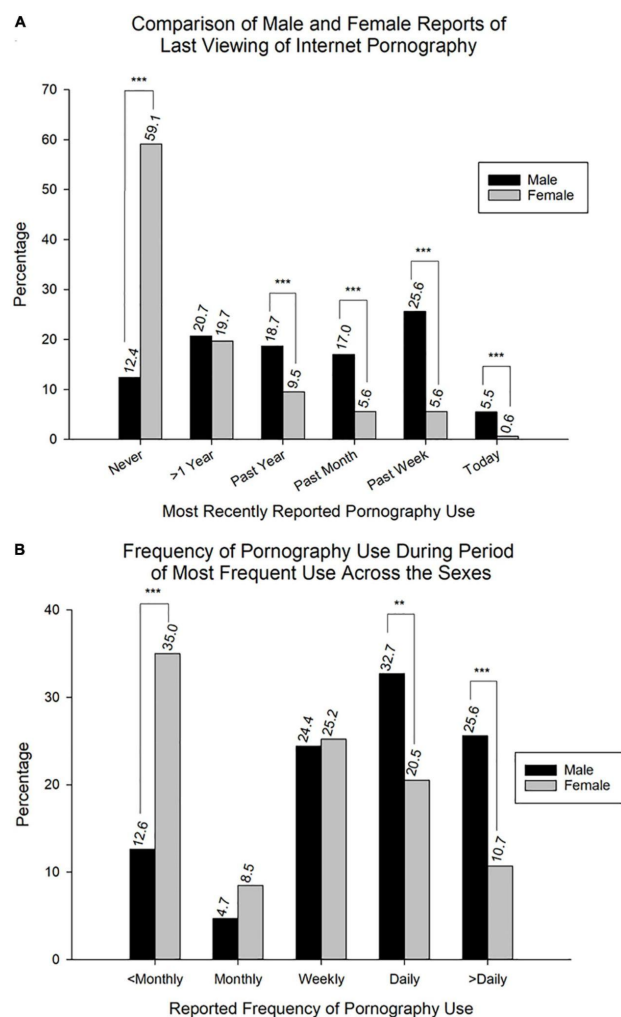


FIGURE 2:

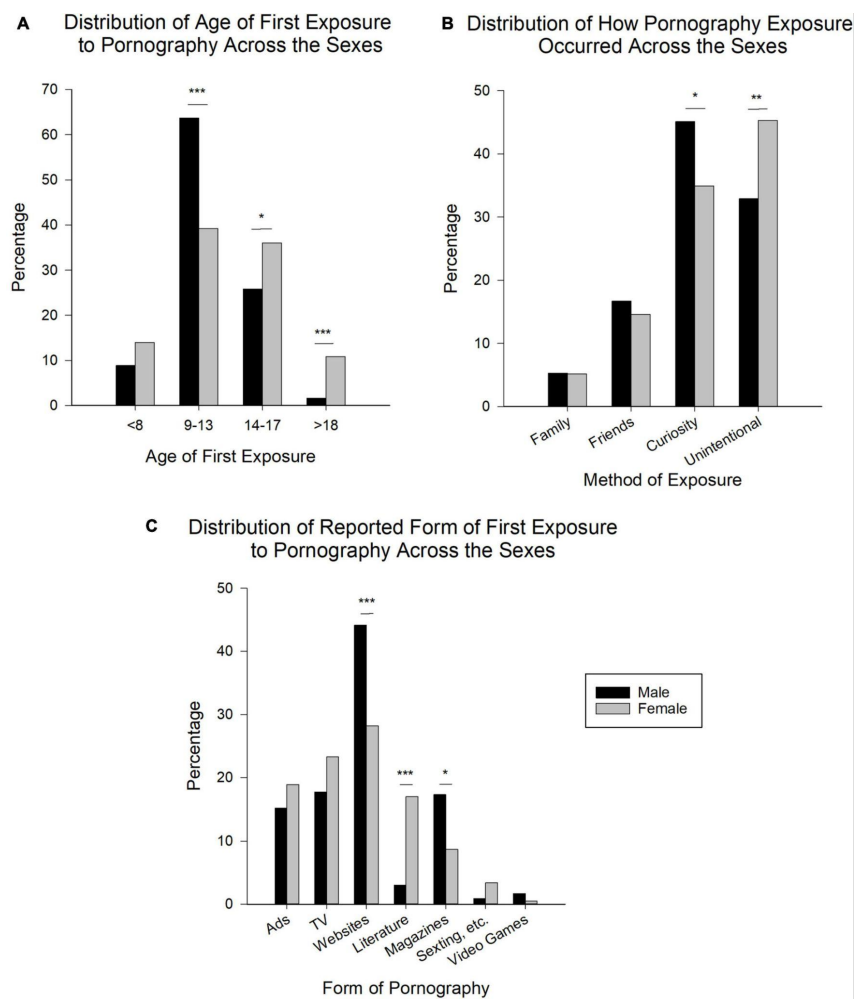


FIGURE 3:

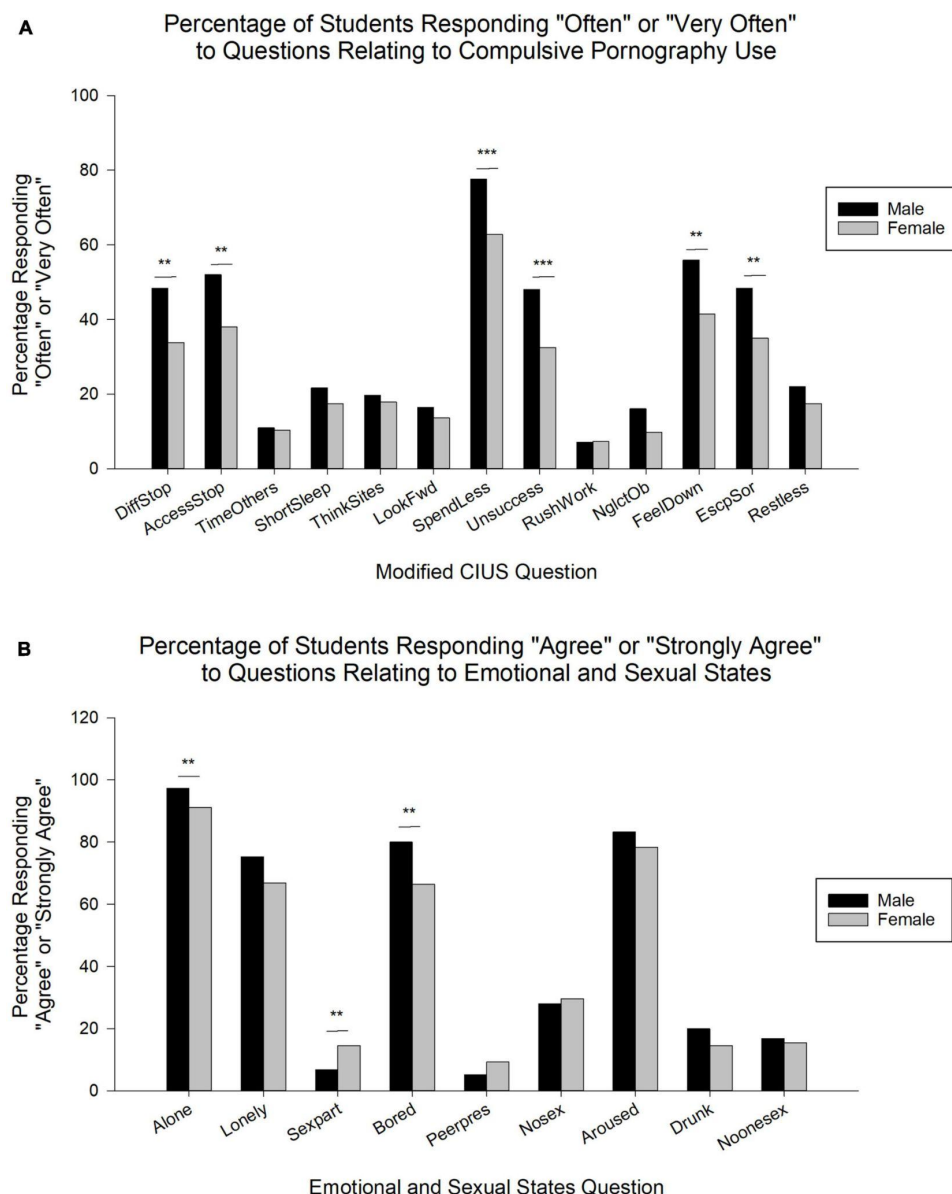
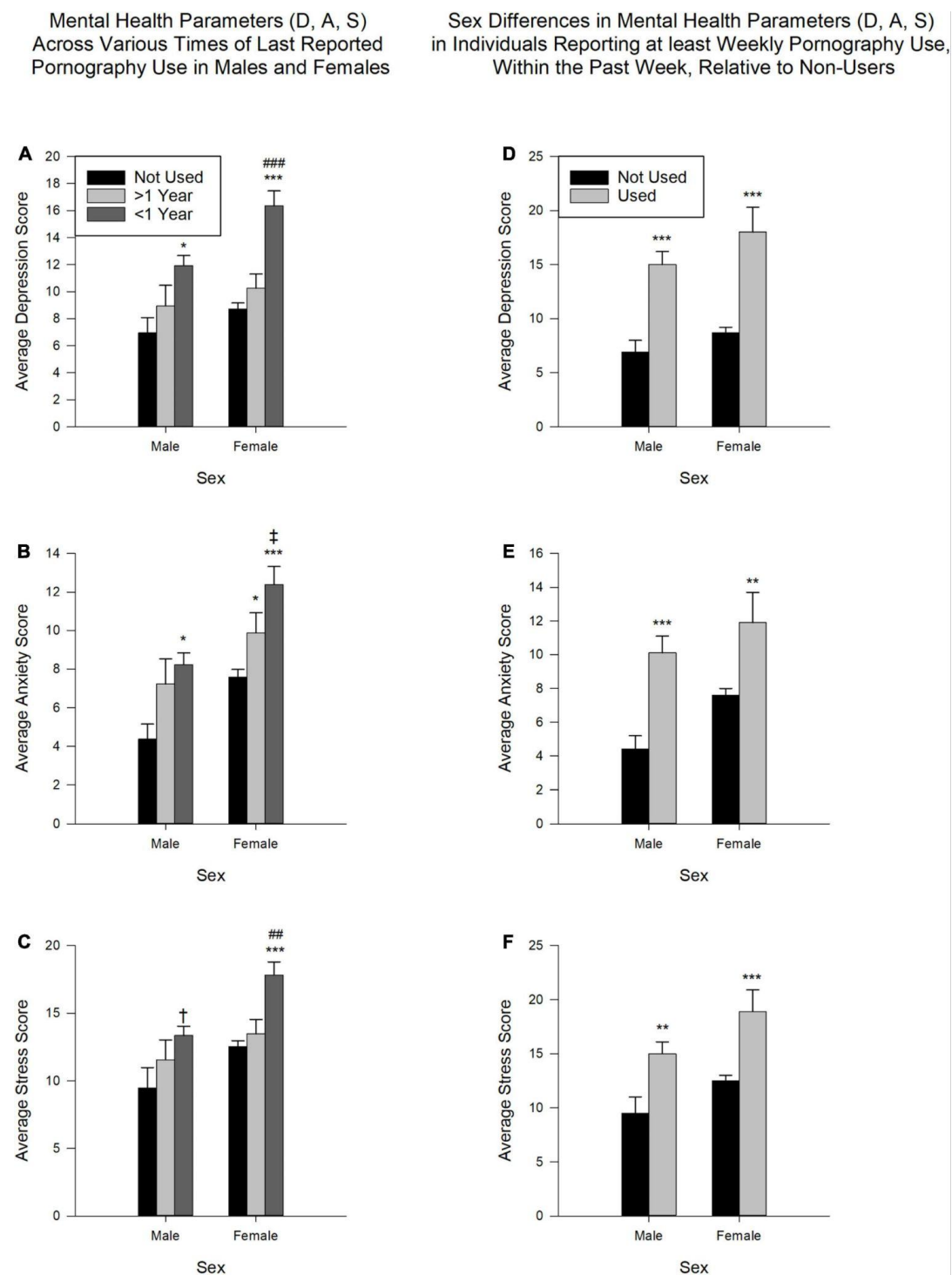


FIGURE: (A) Percentage of males and females responding "Often" or "Very Often" to items of the modified Compulsive Internet Use Scale related to pornography use. DiffStop, difficulty to stop accessing pornography websites; AccessStop, access despite intention to stop; TimeOthers, access pornography over spending time with others; ShortSleep, short of sleep due to pornography use; ThinkSites, think about websites when not online; LookFwd, look forward to next session of use; SpendLess, think it is necessary to spend less time; Unsuccess, unsuccessful at spending less time; RushWork, rush work to view pornography; NgltOb, neglect obligations due to pornography; FeelDown, use pornography when feeling down; EscpSor, use pornography to escape negative feelings; Restless, restless/frustrated/irritated when unable to view pornography. Data is expressed as percentage of respondents indicating "Often" or "Very Often" (N = 488; Male: n = 254; Female: n = 234). (B) Distribution of participants responding "Agree" or "Strongly Agree" to the items related to emotional and sexual states relative to pornography use across the sexes, indicating that they were more likely to view Internet pornography when by themselves (Alone), feeling lonely (Lonely), with a sexual partner (Sexpart), feeling bored (Bored), peer pressured (Peerpres), not having had sex in a while (Nosex), feeling sexually aroused (Aroused), drunk or under effects of drugs (Drunk), and unable to find someone to have sex with

(Noone sex). Data is expressed as percentage of respondents indicating “Agree” or “Strongly Agree” (N = 476; Male: n = 250; Female: n = 226). **p < 0.01, ***p < 0.001.

FIGURE 4:



- 2.1.2 [Wright, Paul, B., & Herbenick \(2021\)](#). Preliminary insights from a U.S. probability sample on adolescents' pornography exposure, media psychology, and sexual aggression. *Journal of Health Communication*. **DV: Sexual aggression**

ABSTRACT: Sexual aggression is now widely recognized as a public health crisis. Using the sexual script acquisition, activation, application model (3AM) as a guide, this paper reports findings on U.S. teenagers' exposure to pornography, motivation for viewing pornography, perceptions of pornography's realism, identification with pornographic actors, and sexual aggression risk from the National Survey of Porn Use, Relationships, and Sexual Socialization (NSPRSS), a U.S. population-based probability study. Sexual aggression was operationalized as pressuring another person into having sex despite their explicit declaration of nonconsent. **Having been exposed to pornography and perceiving pornography as realistic were associated with increased sexual aggression risk. A stronger level of identification with pornographic actors was associated with an increased probability of sexual aggression for males, but not females.** A motivation to learn about others' sexual expectations from pornography was unrelated to sexual aggression. Results interpretation and discussion focus on the need for additional theoretical nuance and measurement specificity in the media psychology literature on pornography and sexual aggression.

- 2.1.3 [Ybarra & Mitchell \(2005\)](#). Exposure to internet pornography among children and adolescents: A national survey. *Cyberpsychology & Behavior: The Impact of the Internet, Multimedia and Virtual Reality on Behavior and Society*. **DV: Substance use, delinquency, depression**

ABSTRACT: Estimates suggest that up to 90% or more youth between 12 and 18 years have access to the Internet. Concern has been raised that this increased accessibility may lead to a rise in pornography seeking among children and adolescents, with potentially serious ramifications for child and adolescent sexual development. Using data from the Youth Internet Safety Survey, a nationally representative, cross-sectional telephone survey of 1501 children and adolescents (ages 10-17 years), characteristics associated with self-reported pornography seeking behavior, both on the Internet and using traditional methods (e.g., magazines), are identified. **Seekers of pornography, both online and offline, are significantly more likely to be male, with only 5% of self-identified seekers being female.** The vast majority (87%) of youth who report looking for sexual images online are 14 years of age or older, when it is developmentally appropriate to be sexually curious. Children under the age of 14 who have intentionally looked at pornography are more likely to report traditional exposures, such as magazines or movies. Concerns about a large group of young children exposing

themselves to pornography on the Internet may be overstated. **Those who report intentional exposure to pornography, irrespective of source, are significantly more likely to cross-sectionally report delinquent behavior and substance use in the previous year.** Further, online seekers versus offline seekers are more likely to report **clinical features associated with depression and lower levels of emotional bonding with their caregiver.** Results of the current investigation raise important questions for further inquiry. Findings from these cross-sectional data provide justification for longitudinal studies aimed at parsing out temporal sequencing of psychosocial experiences.

2.1.4 [Albright \(2008\)](#). Sex in America online: An exploration of sex, marital status, and sexual identity in internet sex seeking and its impacts. *The Journal of Sex Research*. DV: Body-image, perception of partner attractiveness, interest in sex [adult sample]

ABSTRACT: This was an exploratory study of sex and relationship seeking on the Internet, based on a survey of 15,246 respondents in the United States **Seventy-five percent of men and 41% of women had intentionally viewed or downloaded porn.** Men and gays/lesbians were more likely to access porn or engage in other sex-seeking behaviors online compared with straights or women. **A symmetrical relationship was revealed between men and women as a result of viewing pornography, with women reporting more negative consequences, including lowered body image, partner critical of their body, increased pressure to perform acts seen in pornographic films, and less actual sex, while men reported being more critical of their partners' body and less interested in actual sex.** Marrieds and divorced were more likely than singles to go online seeking a serious relationship. Only 2% of users met the threshold of compulsive use established by previous studies.

found that many of the couples who experience congruence or a similar pattern of use between partners are those in which both abstain from using pornography. While these differences may have little or no practical significance for some couples, emerging research suggests that discrepancies in pornography use at the couple level are related to negative couple outcomes. Specifically, as noted previously, Willoughby and colleagues (2016) found that pornography differences may harm specific couple interaction processes such as communication and sexual desire, which, in turn, may negatively influence relationship satisfaction and stability.

- 2.1.5 [Butler, Pereyra, Draper, Leonhardt, & Skinner \(2018\)](#). Pornography use and loneliness: a bidirectional recursive model and pilot investigation. *J. Sex Mar. Ther.* **DV: Loneliness**

ABSTRACT: Sexuality is presumptively and observably a powerful core element of the human pair-bond relationship. Technological advances of the last half-century have made media a dominant cultural and developmental presence, including scripting sexual relationship attitudes and behavior. Theoretically and empirically, we examine loneliness as it relates to pornography use in terms of pornography's relational scripting and its addictive potential. Empirically, we examine the associative nature between pornography use and loneliness using a measurement model and two structural equation models where pornography use and loneliness are regressed on each other, respectively. Survey data were collected from a sample of 1,247 participants, who completed an online questionnaire containing questions on pornography use, the University of California-Los Angeles Loneliness Scale (UCLALS), and other demographic variables. Results from our analyses revealed **significant and positive associations between pornography use and loneliness for all three models. Findings provide grounds for possible future bidirectional, recursive modeling of the relation between pornography use and loneliness.**

- 2.1.6 [Bridges & Morokoff \(2011\)](#). Sexual media use and relational satisfaction in heterosexual couples. *Personal Relationships*. **DV: Relationship and sexual satisfaction**

ABSTRACT: This study assessed how sexual media use by one or both members of a romantic dyad relates to relationship and sexual satisfaction. A total of 217 heterosexual couples completed an Internet survey that assessed sexual media use, relationship and sexual satisfaction, and demographic variables. **Results revealed that a higher frequency of men's sexual media use related to negative satisfaction in men, while a higher frequency of women's sexual media use related to positive satisfaction in male partners.** Reasons for sexual media use differed by gender: **Men reported primarily using sexual media for masturbation, while women reported primarily using sexual media as part of lovemaking with their partners. Shared sexual media use was associated with higher relational satisfaction compared to solitary sexual media use.**

...Specifically, there is a notable gap in reported use levels with women being about twice as likely to report that they never use pornography compared with men of similar

relationship status. This pornography gap is particularly clear when frequency of pornography use is examined—with men being far more likely to report weekly or more often patterns of use compared with their female partners. In the heterosexual relationship context, these findings suggest that many women are partnered with men who regularly use pornography while they report little or no use.

2.1.7 [Sun, Bridges, Johnson, & Ezzell \(2016\)](#). Pornography and the Male Sexual Script: An Analysis of Consumption and Sexual Relations. *Archives of Sexual Behavior*. **DV: Sexual arousal, body-image, sexual enjoyment**

ABSTRACT: Pornography has become a primary source of sexual education. At the same time, mainstream commercial pornography has coalesced around a relatively homogenous script involving violence and female degradation. Yet, little work has been done exploring the associations between pornography and dyadic sexual encounters: What role does pornography play inside real-world sexual encounters between a man and a woman? Cognitive script theory argues media scripts create a readily accessible heuristic model for decision-making. The more a user watches a particular media script, the more embedded those codes of behavior become in their worldview and the more likely they are to use those scripts to act upon real life experiences. We argue pornography creates a sexual script that then guides sexual experiences. To test this, we surveyed 487 college men (ages 18-29 years) in the United States to compare their rate of pornography use with sexual preferences and concerns. **Results showed the more pornography a man watches, the more likely he was to use it during sex, request particular pornographic sex acts of his partner, deliberately conjure images of pornography during sex to maintain arousal, and have concerns over his own sexual performance and body image. Further, higher pornography use was negatively associated with enjoying sexually intimate behaviors with a partner.** We conclude that pornography provides a powerful heuristic model which is implicated in men's expectations and behaviors during sexual encounters.

1.1.8 [Horvath, Alys, Massey, Pina, Scally, & Adler \(2013\)](#). Basically... porn is everywhere. *Children's Commissioner*. **DV: Risky sexual behavior, sexual aggression**

FINDING 7 (RQ2, P36): Access and exposure to pornography are linked to children and young people's engagement in "risky behaviours" (e.g. engagement in sexual practices from a younger age, engaging in riskier sexual behaviours such as unprotected anal or oral sex, and the involvement of drugs and alcohol in sex). For

example, young people who used pornography were more likely to report having had anal sex, sex with multiple partners and using alcohol and drugs during sex (Braun-Courville & Rojas, 2009). However, the majority of the research that has found this is cross-sectional and/or correlational, therefore causal relationships cannot be established. “Sexting” (which should be considered as comprising a range of activities) has recently emerged as another “risky behaviour” because it can lead to various negative outcomes for children and young people, including through its potential use within bullying and exploitation. The majority of the harassment that is a consequence of sexting is directed by young men towards young women (Ringrose et al., 2012).

FINDING 8 (RQ3, P47): Considering sexualised and violent imagery more broadly, we can conclude that exposure to sexualised and violent imagery affects children and young people; however, the ways in which they may be affected and how long-lasting the effects may be are debatable. There are links between violent attitudes and violent media; specifically, children and young people who hold more violent attitudes access more violent media. One study found that exposure to sexualised material was related to the likelihood of young people engaging in more sexualised behaviour because they perceived more social pressure to have sex (Bleakley et al., 2011b). There is more contradictory evidence concerning other issues. These issues are nonetheless important to note.

2.1.9 [Andrie, Sakou, Tzavela, Richardson, & Tsitska \(2021\)](#). Adolescent online pornography exposure and its relationship to sociodemographic and psychopathological correlates: A cross-sectional study in six European countries. *Children*. **DV: Externalizing behaviors**

ABSTRACT: The aim of the study was to assess the prevalence of online exposure to pornography in European adolescents and its relationship to sociodemographic and psychopathological correlates. **A cross-sectional school-based survey of 10,930 adolescents (5211 males/5719 females)**, aged 14–17 years old (mean age 15.8 ± 0.7) was carried out in six European countries (Greece, Spain, Poland, Romania, the Netherlands, and Iceland). Anonymous self-completed questionnaires covered exposure to pornography, internet use and dysfunctional internet behavior, and psychopathological syndromes (measured by Achenbach’s Youth Self-Report). **The prevalence of any online exposure to pornography was 59% overall and 24% for exposure at least once a week.** The likelihood of online exposure to pornography was greater in male adolescents, heavier internet users, and those who displayed dysfunctional internet behavior. Country-specific analyses confirmed that the gender effect existed in every country, although its strength varied, from an odds ratio of 1.88 in

Poland to 14.9 in Greece. **Online exposure to pornography was shown to be associated with externalizing problem scale scores, especially rule-breaking and aggressive behavior, but also associated with higher scores in competences, namely activities and social competence. Exposure to pornography is ubiquitous, more relevant to boys, and is associated with both positive qualities/competences and externalizing behavioral problems.**

2.1.10 [Wright, Herbenick, & Paul \(2020\)](#). Adolescent Condom Use, Parent-adolescent Sexual Health Communication, and Pornography: Findings from a U.S. Probability Sample. *Health Communication*.

ABSTRACT: Sexual scripts in pornography rarely include condoms. Many teenagers in the U.S. are exposed to pornography and have unprotected sex. Despite this, only a few studies have investigated whether greater pornography exposure is associated with condomless sex among U.S. teenagers, and these were conducted using clinical, convenience samples, many years ago, with data collections at a single location. This paper reports contemporary results on U.S. teenagers' exposure to pornography, parent-adolescent sexual health communication, and condom use from the National Survey of Porn Use, Relationships, and Sexual Socialization (NSPRSS), a U.S. population-based probability study. **Although the correlations were in the expected direction, neither pornography exposure nor parent-adolescent sexual health communication were related at the bivariate level to teenagers' use of condoms.** However, consistent with the sexual script acquisition, activation, application model (3AM) of sexual media socialization, **pornography exposure interacted with parent-adolescent sexual health communication to predict condomless sex. Pornography exposure was associated with an increased probability of condomless sex only when parents engaged in little to no sexual health communication with their children. When parent-adolescent sexual health communication was high, pornography use was unrelated to teenagers' engagement in condomless sex.** These results are consistent with the public health position that pornography can be a risk factor for condomless sex, the theoretical position that the socializing impact of sexual media depends on consumers' existing sexual scripts, and the pedagogical position that parent-adolescent sexual health communication can buffer youth against detrimental effects of sexual media.

2.1.11 [Grubbs, Volk, Exline, & Pargament \(2015\)](#). Internet Pornography Use: Perceived Addiction, Psychological Distress, and the Validation of a Brief Measure. *Journal of Sex & Marital Therapy*.

ABSTRACT: The authors aimed to validate a brief measure of perceived addiction to Internet pornography refined from the 32-item Cyber Pornography Use Inventory, report its psychometric properties, and examine how the notion of perceived addiction to Internet pornography might be related to other domains of psychological functioning. To accomplish this, 3 studies were conducted using a sample of undergraduate psychology students, a web-based adult sample, and a sample of college students seeking counseling at a university's counseling center. The authors developed and refined a short 9-item measure of perceived addiction to Internet pornography, confirmed its structure in multiple samples, **examined its relatedness to hypersexuality more broadly, and demonstrated that the notion of perceived addiction to Internet pornography is very robustly related to various measures of psychological distress. Furthermore, the relation between psychological distress and the new measure persisted, even when other potential contributors (e.g., neuroticism, self-control, amount of time spent viewing pornography) were controlled for statistically**, indicating the clinical relevance of assessing perceived addiction to Internet pornography.

2.1.12 [Tsitsika, Critselis, Kormas, Konstantoulaki, Constantopoulos, & Kafetzis \(2009\).](#)

Adolescent pornographic internet site use: A multivariate regression analysis of the predictive factors of use and psychosocial implications. *Cyberpsychology & Behavior: The Impact of the Internet, Multimedia and Virtual Reality on Behavior and Society*. **DV: Abnormal conduct problems**

ABSTRACT: The study objectives were to evaluate the prevalence, predictors, and implications of pornographic Internet site (PIS) use among Greek adolescents. A cross-sectional study was conducted among 529 randomly selected Greek high school students. The prevalence of overall PIS use was 19.47% (n = 96). Among PIS users, 55 (57.29%) reported infrequent and 41 (42.71%) reported frequent PIS use. The predictors of infrequent PIS use included male gender (adjusted odds ratio [AOR] = 8.33; 95% confidence interval [CI] = 3.52-19.61), Internet use for sexual education (AOR = 5.26; 95% CI = 1.78-15.55), chat rooms (AOR = 2.95; 95% CI = 1.48-5.91), and purchases (AOR = 3.06; 95% CI = 1.22-7.67). The predictors of frequent PIS use were male gender (AOR = 19.61; 95% CI = 4.46-83.33), Internet use for sexual education (AOR = 7.39; 95% CI = 2.37-23.00), and less than 10 hours per week Internet use (AOR = 1.32; 95% CI = 1.10-1.59). **Compared to non-PIS users, infrequent PIS users were twice as likely to have abnormal conduct problems (odds ratio [OR] = 2.74; 95% CI = 1.19-6.28); frequent PIS users were significantly more likely to have abnormal conduct problems (OR = 4.05; 95% CI = 1.57-10.46) and borderline**

prosocial score (OR = 4.22; 95% CI = 1.64-10.85). **Thus, both infrequent and frequent PIS use are prevalent and significantly associated with social maladjustment among Greek adolescents.**

2.1.13 [Baer, Kohut, Fisher \(2015\)](#). Is pornography use associated with anti-woman sexual aggression? Re-examining the Confluence Model with third variable considerations. *Can J Hum Sex*. **DV: Hostile masculinity**

ABSTRACT: The Confluence Model of sexual aggression (Malamuth, Addison, & Koss, 2000) states that pornography use, thought to promote sexual coercion of women through presentation of submissive female imagery, works in conjunction with sexual promiscuity (SP) and hostile masculinity (HM), proposed sexual aggression risk factors, to produce anti-woman sexual aggression. An Internet based survey (N=183 adult males) replicated results of previous Confluence Model research, such that **men who were high in HM and SP were more likely to report sexual coercion when they frequently, rather than infrequently, used pornography.** Exploring new ground, this study also found that **HM and SP together were strong predictors of consumption of violent sexual media, in comparison to non-violent sexual media, which suggests that men at high risk of sexual aggression consume different types of sexual material than men at low risk.** Further, individual differences in sex drive were found to account for the effects previously attributed to pornography use in statistical tests of the Confluence Model. In the light of third variable considerations, these findings warrant a careful reappraisal of the Confluence Model's assertion that pornography use is a causal determinant of anti-woman sexual aggression.

2.1.14 [Rasmussen, & Bierman \(2018\)](#). Risk or Release?: Porn Use Trajectories and the Accumulation of Sexual Partners. *Social Currents*. **DV: Risky sexual behavior**

ABSTRACT: A central question in the study of pornography consumption is whether consumption influences risky sexual behavior. In this research, we focus on one key aspect of risky sexual behavior, the accumulation of sexual partners. Using longitudinal latent class analysis of a nationally representative sample, we determine distinct trajectories of pornography consumption. We then use hurdle models to relate membership in these trajectories to the initiation of sexual activity and accumulation of sexual partners. **Even with controls for likely confounds (such as risk-taking propensity and relationship formation), we find that adolescents with a trajectory of early and regular pornography use are more likely to report the initiation of sexual activity and nearly double the number of sexual partners as those with a**

low-use trajectory. This research is of sociological interest because pornography consumption is becoming increasingly common well before adulthood, suggesting that recent cohorts of emerging adults may be more likely to engage in risky sexual behavior through the accumulation of multiple sexual partners.

2.1.15 [Wallner.... & Behr, B. \(2022\).](#) Digital Media Play a Key Role in Influencing Female Breast Perception. *Cyberpsychology, Behavior, and Social Networking*.

ABSTRACT: The female breast is a symbol of femininity and plays a key role in the female body image. However, factors influencing the preferences for different breast shapes and sizes are still not elucidated. In particular, the role of the emerging social media in breast perception has not been analyzed yet. A representative cohort of 1,049 adults completed a web-based questionnaire containing hyperrealistic 3D models of the female breast in the United States. A machine-learning algorithm (Classification and Regression Tree [CART]) was implemented to identify the most influential factors. The study was able to identify the frequency of pornographic and social media consumption as the most influencing factor for altered breast preferences. Although digital media exposure did not alter satisfaction with the own breast among female participants, **the tendency to undergo or history of conducted aesthetic surgery correlated with higher access frequency to digital media. Taken together, the overpowering impact of social media and pornographic consumption on the own body image was shown in preference alterations for different anatomical aspects of the breast in the whole population and distorted self-perception about the breast in female participants.**

2.1.16 [Bates \(2017\).](#) Revenge Porn and Mental Health: A Qualitative Analysis of the Mental Health Effects of Revenge Porn on Female Survivors. *Feminist Criminology*.

ABSTRACT: This study examines the emotional and mental health effects revenge porn has on female survivors. To date, no other academic studies have exclusively focused on mental health effects in revenge porn cases. In-depth qualitative interviews were conducted between February 2014 and January 2015 with 18 female revenge porn survivors, and **inductive analysis revealed participants' experiences of trust issues, posttraumatic stress disorder (PTSD), anxiety, depression, suicidal thoughts, and several other mental health effects.** These findings reveal the seriousness of revenge porn, the devastating impacts it has on survivors' mental health, and similarities between revenge porn and sexual assault.

2.1.17 [Branch, Hilinski-Rosick, Johnson, & Solano \(2017\)](#). Revenge Porn Victimization Of College Students In The United States: *An Exploratory Analysis*. *International Journal of Cyber Criminology*.

ABSTRACT: Over the past several decades, there has been an increased focus on various forms of sexual violence and sexually aggressive behaviors (e.g., stalking, harassment). Technology has provided new opportunities for sexually aggressive behavior and involvement in sexting and revenge porn. To date, there is limited empirical research that exists on revenge porn- sending or posting sexually suggestive or explicit materials of a former lover, without the subject's consent, in an attempt to humiliate, harass, or punish the victim. In the present exploratory study, we surveyed 470 college freshmen about their practices and perceptions about revenge porn. **Findings revealed that approximately 10% of the current sample had a private photo shared beyond the intended recipient and those male students and female students had different experiences. Specifically, victims of revenge porn were predominantly female, freshman, and 18 years of age and the majority of private pictures that were forwarded to others beyond the intended recipient were sent by a current or former boyfriend.** Implications of these findings for the college community are discussed.

[Other studies? What have we missed?]

2.2 STUDIES INDICATING A POSITIVE ASSOCIATION

[Other studies? What have we missed?]

2.3 STUDIES INDICATING LITTLE OR NO ASSOCIATIONS

[Other studies? What have we missed?]

2.4 STUDIES INDICATING MIXED EVIDENCE

2.4.1 [Perry \(2018\)](#). Pornography use and depressive symptoms: Examining the role of moral incongruence. *Society and Mental Health*. **DV: Depression**

ABSTRACT: While studies have consistently observed an association between pornography use and depressive symptoms, data limitations have precluded understanding the nature of this relationship. Drawing on data from a representative panel study of American adults and building on insights from stress process theory, this article demonstrates that the connection between **pornography use and depressive symptoms hinges on the (1) (in)congruence between Americans' moral beliefs about pornography and their viewing practices and (2) gender**. Cross-sectional and longitudinal analyses reveal that **American men (not women) who believe viewing pornography is always immoral but watch it anyway are more likely to experience depressive symptoms compared to others who do not report this incongruence**. Results also suggest the connection between viewing pornography and depressive symptoms is bidirectional, contingent on men's moral evaluation of its use. **For male porn users who morally reject it, pornography use predicts depressive symptoms at low frequencies, likely stemming from cognitive stress or dissonance. For those who do not morally reject porn, however, only viewing it at the highest frequencies is associated with higher levels of depressive symptoms**, which suggests reverse causation—depressed men likely view higher levels of pornography as a coping aid, especially when they do not view it as immoral.

FIGURE:

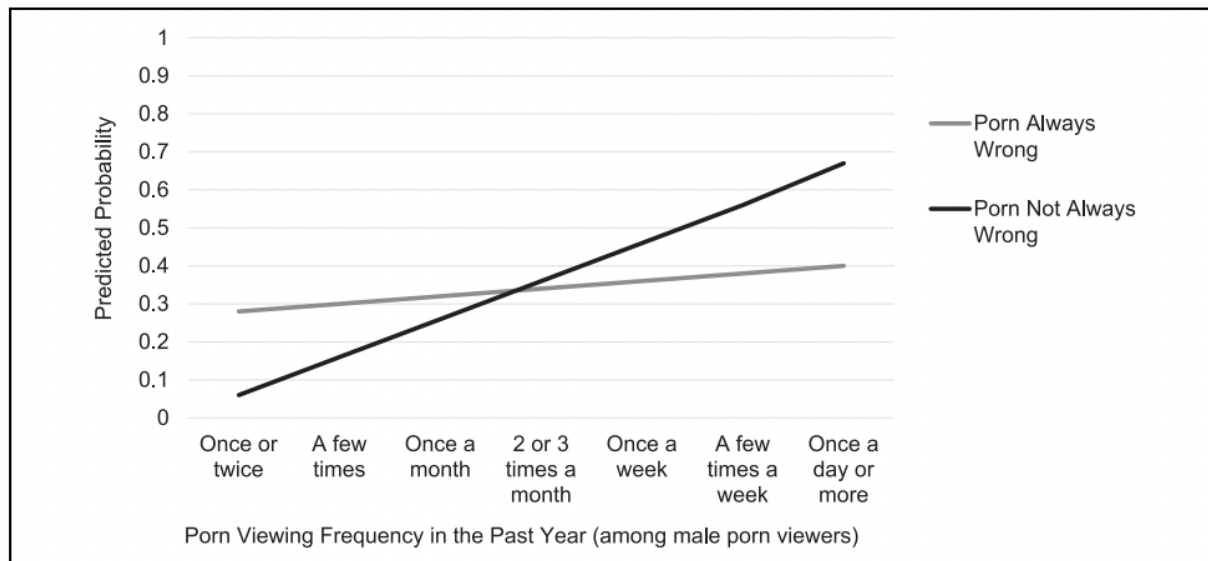


Figure 3. Predicted probability of experiencing depressive symptoms by porn viewing frequency and believing pornography is always morally wrong (men only).

2.4.2 [Willoughby, Carroll, Nelson, & Padilla-Walker \(2014\)](#). Associations between relational sexual behaviour, pornography use, and pornography acceptance among US college students. *Cult. Health Sex.* **DV: Risk taking, Depression, Self-worth**

ABSTRACT: Pornography use among emerging adults in the USA has increased in recent decades, as has the acceptance of such consumption. While previous research has linked pornography use to both positive and negative outcomes in emerging adult populations, few studies have investigated how attitudes toward pornography may alter these associations, or how examining pornography use together with other sexual behaviours may offer unique insights into the outcomes associated with pornography use. Using a sample of 792 emerging adults, the present study explored how the combined examination of pornography use, acceptance, and sexual behaviour within a relationship might offer insight into emerging adults' development. **Results suggested clear gender differences in both pornography use and acceptance patterns. High male pornography use tended to be associated with high engagement in sex within a relationship and was associated with elevated risk-taking behaviours. High female pornography use was not associated with engagement in sexual behaviours within a relationship and was general associated with negative mental health outcomes.**

ADDITIONAL EXCERPT: Women who engaged in high levels of relational sex reported the most positive mental health outcomes (higher self-worth and lower depressive symptoms), while women with high use and acceptance of pornography, but less relational sexual behaviour, reported the lowest mental health outcomes. Depression has been linked among emerging adults women with less interest and engagement in relational sexual behaviour and results here raise the interesting **possibility that women who report more depressive symptoms may disengage from relational sexual behaviour but may turn to pornography use as a means of sexual expression... Relational sex may elevate women's self-worth and lower depressive symptoms by providing a means of emotional and physical connection while pornography use may lower these same mental health attributes.**

[Other studies? What have we missed?]

<https://www.mdpi.com/1660-4601/18/17/8924>

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QUESTION 3: DOES PORNOGRAPHY USE AT TIME 1 PREDICT ANYTHING ABOUT MENTAL HEALTH OUTCOMES (INCLUDES AGGRESSION AND RISKY BEHAVIOR) AT TIME 2?

3.1 STUDIES INDICATING A NEGATIVE EFFECT AT T2

3.1.1 [Ybarra, Mitchell, Hamburger, Diener-West, & Leaf \(2011\)](#). X-rated material and perpetration of sexually aggressive behavior among children and adolescents: Is there a link? *Aggress Behav.* **DV: Sexual aggression**

ABSTRACT: Longitudinal linkages between intentional exposure to x-rated material and sexually aggressive behavior were examined among youth 10-15 year olds surveyed nationally in the United States. At Wave 1 in 2006, participants (n = 1,588) were queried

about these exposures and outcomes in the preceding 12 months. Wave 2 data (n = 1,206) were collected approximately 12 months after Wave 1 and Wave 3 data (n = 1,159) were collected approximately 24 months after Wave 1. Thus, data for this project represent a 36-month time frame. A marginal model with generalized estimating equations was used to represent the population-average odds of sexually aggressive behavior over the 36 months as a function of exposure to x-rated material over the same time and to account for clustering in the data within person over time. An average of 5% of youth reported perpetrating sexually aggressive behavior and 23% of youth reported intentional exposure to x-rated material. After adjusting for other potentially influential proximal (i.e., sexual aggression victimization) and distal characteristics (e.g., substance use), we found that **intentional exposure to violent x-rated material over time predicted an almost 6-fold increase in the odds of self-reported sexually aggressive behavior (aOR: 5.8, 95% CI: 3.2, 10.5), whereas exposure to nonviolent x-rated material was not statistically significantly related (aOR: 1.7, 95% CI: 0.94, 2.9). Associations were similar for boys and girls** (boys nonviolent x-rated material aOR = 2.0, 95% CI: 0.8, 4.7; violent x-rated material aOR = 6.5, 95% CI: 2.7, 15.3; girls nonviolent x-rated material aOR = 1.2, 95% CI: 0.5, 3.2; violent x-rated material aOR = 6.1, 95% CI: 2.5, 14.8).

[Other studies? What have we missed?]

3.2 STUDIES INDICATING A POSITIVE EFFECT AT T2

[Other studies? What have we missed?]

3.3 STUDIES INDICATING LITTLE OR NO EFFECT AT T2

3.4 STUDIES INDICATING MIXED EVIDENCE

3.4.1 [Dalby, Kohut, & Štulhofer \(2018\)](#). Is pornography use a risk for adolescent well-being? An examination of temporal relationships in two independent panel samples. *PLoS One*. **DV: self-esteem, depression, subjective well-being**

ABSTRACT: Cross-sectional evidence suggests that pornography use is related to lower mental well-being among adolescents but it remains unclear if changes in

well-being are related to the dynamics of pornography use within this population. We examined the relationship between pornography use, subjective well-being, symptoms of depressions and anxiety, and self-esteem in two independent panel samples ($N = 455$; $N = 858$) of Croatian adolescents using cross-lagged path analysis and lagged linear mixed models. After controlling for impulsiveness and family environment—factors that are unlikely to be influenced by pornography use—earlier levels of pornography use were not significantly associated with subsequent decreases in subjective well-being across gender and panel. However, **pornography use was associated with increases in both self-esteem and symptoms of depression and anxiety, albeit only among adolescent women in one of the two panels.** In addition, **low subjective well-being was associated with a subsequent increase in pornography use, but only in female adolescents in one panel.** This study's results are not consistent with concerns about pornography use negatively contributing to male adolescents' psychological well-being, but suggest potential antagonistic links between pornography use and specific facets of mental well-being in adolescent women. Such links should be considered tentative until verified with further research.

EXCERPT: Despite common public concerns that surround adolescent use of sexual media, **the results of this first longitudinal assessment of the relationship between pornography use and adolescents' subjective well-being provide no evidence that pornography use contributes to decreased subjective well-being in adolescent men. We found, however, limited evidence of the contradictory contribution of pornography use to female adolescents' dysregulated mood and self-evaluation.**

[Other studies? What have we missed?]

3.5 UNCLASSIFIED

3.5.1 [Matković, Cohen, & Štulhofer \(2018\)](#). The Use of Sexually Explicit Material and Its Relationship to Adolescent Sexual Activity. *Journal of Adolescent Health*. **DV: Sexual Activity**

PURPOSE: There is growing concern that sexually explicit material (SEM) may influence young people's sexual activity. The present study aimed to assess the longitudinal association between frequency of SEM use and adolescent sexual debut.
Method

The present study used two independent panel samples of Croatian adolescents (with four and five data collection waves, respectively). We employed discrete-time event

history approach and propensity matching score analysis to explore the target association.

RESULTS: A consistent lack of significant association between SEM use and sexual debut was observed among male adolescents. Among female adolescents, the findings were inconclusive. We also found some evidence for the role of timing of first exposure to SEM.

CONCLUSIONS: Our findings are relevant for educational and adolescent health specialists, as well as concerned parents. Considering that this study focused on middle adolescence, future research should address a potential link between SEM use and early sexual debut.

[Other studies? What have we missed?]

* * * * *

QUESTION 4: HOW DOES PORNOGRAPHY AFFECT SEXUAL ATTITUDES/EXPECTATIONS/ATTRACTION?

4.1 STUDIES INDICATING AN EFFECT

4.1.1 [Wright \(2013b\)](#). U.S. males and pornography, 1973-2010: consumption, predictors, correlates. *J. Sex. Res.*

ABSTRACT: Although both storied and extensive, social scientific research on the effects of pornography consumption on males has primarily focused on testing the feminist contention that pornography contributes to sexual aggression against females. Other parties have expressed concern about males' use of pornography, however. "Moralists" (Linz & Malamuth, 1993) have argued that pornography promotes a permissive approach to sexual relations. Public health researchers have hypothesized that pornography encourages epidemiologically risky sexual behavior. This study used cross-sectional General Social Survey data gathered between 1973 and 2010 to assess these claims for empirical support. In line with moralists' contentions, **pornography consumption was associated with having more positive attitudes toward teenage sex, adult premarital sex, and extramarital sex. Pornography consumption was also positively related to actually engaging in extramarital sex.** In line with public

health researchers' concerns, **pornography consumption was associated with having more sexual partners and engaging in paid sex behavior.** Additional longitudinal and experimental research is needed to determine the directionality of these associations and to rule out possible third-variable confounds, such as erotophilia or hypersexuality. Regarding consumption, the percentage of adult U.S. males who consume pornography appears to have increased only slightly over time.

4.1.2 [Lo, Neilan, Sun, & Chiang \(1999\).](#) Exposure of Taiwanese adolescents to pornographic media and its impact on sexual attitudes and behaviour. *Asian Journal of Communication*.

ABSTRACT: This article examines the use of pornographic media by Taiwanese high school students, and explores the effects of exposure to such on their attitudes and behaviour in terms of sexual permissiveness.

The results of this research indicate that more than 90 per cent of the students interviewed had at least some exposure to a variety of pornography, with males reporting significantly higher exposure frequencies than females. **The results also show that exposure to pornographic media has significant effects on high school students' sexual permissiveness and nonexclusive sexual attitudes and behaviour.**

ADDITIONAL EXCERPT: The most important finding of this study is that exposure to pornographic media does have a significant effect on the sexual permissiveness and nonexclusive sexual attitudes and behaviour of high school students. Also, the exposure effects that were obtained apply to both males and females. Such a finding is consistent with previous experimental studies by Zillmann and Bryant (1988, 1989).

4.1.3 [Field \(2020\).](#) Adolescent pornography: A narrative review. *International Journal of Psychological Research and Reviews*.

ABSTRACT: This narrative review is based on a literature search on PsycINFO and PubMed that involved entering the terms adolescent pornography. Following exclusion criteria, 31 papers could be classified as adolescent pornography studies including research on the prevalence, effects and risk factors for pornography. **Most of the studies have been conducted in other countries where the prevalence of adolescent pornography has ranged from 8%- 22% for habitual use.** The effects of pornography have included legal problems, permissive attitudes and unrealistic

expectations regarding sex as well as problematic behaviors including victimization and assault. The predictor or risk variables have included male gender, family dysfunction and sensation-seeking. Like other literature on adolescent problems, this research is limited by primarily deriving from self-report and parent report and by the absence of longitudinal data that might inform whether the data being reported are effects of or risk factors for adolescent pornography and the need for prevention/intervention research.

4.1.4 [Horvath, Alys, Massey, Pina, Scally, & Adler \(2013\)](#). Basically... porn is everywhere. *Children's Commissioner*.

FINDING 6 (RQ2, P34): Access and exposure to pornography affect children and young people's sexual beliefs. For example, pornography has been linked to unrealistic attitudes about sex; maladaptive attitudes about relationships; more sexually permissive attitudes; greater acceptance of casual sex; beliefs that women are sex objects; more frequent thoughts about sex; sexual uncertainty (e.g. the extent to which children and young people are unclear about their sexual beliefs and values); and less progressive gender role attitudes (e.g. male dominance and female submission). Children and young people learn from and may change their behaviour due to exposure and access to pornography.

4.1.5 [Carroll, Padilla-Walker, Nelson, Olson, Barry, & Madsen, \(2008\)](#). Generation XXX—pornography acceptance and use among emerging adults. *J. Adolesc. Res.*

ABSTRACT: This study examined correlates of pornography acceptance and use within a normative (nonclinical) population of emerging adults (individuals aged 18—26). Participants included 813 university students (500 women; M age = 20 years) recruited from six college sites across the United States. Participants completed online questionnaires regarding their acceptance and use of pornography, as well as their sexual values and activity, substance use, and family formation values. Results revealed that **roughly two thirds (67%) of young men and one half (49%) of young women agree that viewing pornography is acceptable, whereas nearly 9 out of 10 (87%) young men and nearly one third (31%) of young women reported using pornography. Results also revealed associations between pornography acceptance and use and emerging adults' risky sexual attitudes and behaviors, substance use patterns, and nonmarital cohabitation values.** The discussion considers the implications of pornography use during the transition to adulthood.

FIGURE:

Table 3
Correlations and Group Comparisons Between Pornography Variables and Emerging Adult Factors

	Emerging Adult Men (<i>n</i> = 313)						Emerging Adult Women (<i>n</i> = 500)				
	Pornography Use						Pornography Use				
	Accept (<i>r</i>)	Use (<i>r</i>)	None (= <i>a</i>)	Seldom (= <i>b</i>)	Monthly (= <i>c</i>)	Weekly (= <i>d</i>)	Daily (= <i>e</i>)	Accept (<i>r</i>)	Use (<i>r</i>)	No (= <i>a</i>)	Yes (= <i>b</i>)
	Sexual values										
Sexual permissiveness	.61***	.34***	2.64 ^{bcd}	3.59 ^{ade}	3.92 ^{ac}	4.23 ^{ab}	4.68 ^{abc}	.55***	.15**	3.23 ^b	4.12 ^a
Extramarital sexuality	.08	.15**	1.07 ^c	1.27	1.34	1.50	1.45 ^a	.13**	.05	1.20	1.24
	Sexual behavior: With how many partners have you had sexual intercourse?										
“With how many . . .”	.09	.11*	1.30 ^c	2.37 ^c	4.25	1.96	5.28 ^{ab}	.19***	.17***	1.89 ^b	3.75 ^a
None			58.1%	28.8	23.1	41.7	22.7			46.4	22.9
3 or more partners			9.3%	25.0	33.4	25.0	40.9			26.9	46.4
	With how many partners have you had sexual intercourse in the past 12 months?										
“With how many . . .”	.02	.06	.63 ^{cc}	1.04	1.14	1.26	.15	.22***	.09*	.85 ^b	1.22 ^a
None			67.4%	30.8	27.7	46.4	28.8			50.6	24.2
3 or more partners			2.3%	9.6	15.4	9.5	22.7			7.7	11.1
	Substance use										
Substance Use Scale	.15*	.20***	.35 ^{bcd}	1.14 ^a	1.42 ^a	1.30 ^a	1.38 ^a	.28***	.16***	.77 ^b	1.08 ^a
Alcohol use											
None			51.2%	19.2	3.1	13.1	7.6			22.4	8.5
Weekly or more			18.6%	46.2	69.2	60.7	60.6			38.8	47.1
Binge drinking											
None			69.8%	26.9	15.4	27.4	22.7			46.2	24.8
Weekly or more			11.6%	32.7	49.2	46.4	51.5			22.9	29.4

Note: Controlling for age, dating status, religiosity, and impulsivity. Alphabetic superscripts indicate significant group mean differences at the $p < .05$ level.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 2
Correlations Between Pornography Variables and Control Variables

Control Variables	Emerging Adult Men (<i>n</i> = 313)		Emerging Adult Women (<i>n</i> = 500)	
	Pornography acceptance	Pornography use	Pornography acceptance	Pornography use
Age	.02	.06	.13**	.08
Current dating status ^a	.01	-.02	.11**	.18***
Religiosity ^b	-.39***	-.30***	-.44***	-.20***
Impulsivity ^c	.22***	-.19***	.06	.04

a. Current dating status: 1 = *not dating at all*, 2 = *casual/occasional dating*, 3 = *have a boy/girlfriend (in an exclusive relationship)*, 4 = *engaged, or committed to marry*.

b. Religiosity ("My religious faith is extremely important to me"): 1 = *very strongly disagree*, 2 = *strongly disagree*, 3 = *disagree*, 4 = *agree*, 5 = *strongly agree*, 6 = *very strongly disagree*.

c. Impulsivity (two-item scale; emerging adult men, $\alpha = .77$; emerging adult women, $\alpha = .68$; "Fight with others/lose temper," "Easily irritated or mad"): 1 = *never*, 2 = *seldom*, 3 = *sometimes*, 4 = *often*, 5 = *very often*.

p* < .01. *p* < .001.

4.1.6 [Wright \(2020\)](#). Pornography and Sexual Behavior: Do Sexual Attitudes Mediate or Confound? *Communication Research*.

ABSTRACT: Using four separate national probability metasamples of adults in the United States, two measures of pornography consumption, two measures of sexual attitudes, and two measures of sexual behavior, this article pits two macrotheories on pornography and its behavioral effects against each other in competing, falsifiable hypothesis tests. Specifically, the article compares the libertarian theory of pornography's hypothesis that sexual attitudes are a confound of the pornography consumption—sexual behavior relationship, with the sexual scripting theory of pornography's hypothesis that sexual attitudes are a mediator of the pornography consumption—sexual behavior relationship. **No evidence was found to support the argument that pornography consumption—sexual behavior relationships are spurious and due to preexisting sexual attitudes. Alternatively, analyses uniformly supported the conceptualization of sexual attitudes as a mediating link between pornography consumption and sexual behavior.**

ADDITIONAL EXCERPT: The overarching question driving the present investigation was whether sexual attitudes are better conceptualized as a mediator or a confound of

the relationship between pornography consumption and the engagement in sexual behaviors paralleling pornography's presentation of sex. Sexual script theorizing conceptualizes sexual attitudes as a mediator. Specifically, from a **sexual script theory perspective, viewing particular sex acts and relationships in pornography affects an attitude change more favorable toward those acts and relationships and a heightened probability of actually engaging in those acts and relationships.** The libertarian theory of pornography conceptualizes sexual attitudes as a confound. Specifically, **from a libertarian theory of pornography perspective, sexual attitudes already inhering in individuals lead them to view or avoid pornography and engage or not engage in sexual acts and relationships such as those depicted in pornography.** Using national probability data sets from the United States, results across four metasamples of adults found **evidence for mediation but not confounding.** In partial correlation analyses involving unmarried participants, associations between pornographic movie and Internet pornography viewing and premarital sex behavior maintained after premarital sex attitudes were controlled. Alternatively, in mediation analyses, indirect effects of movie and Internet pornography viewing on premarital sex behavior through premarital sex attitudes were found. In partial correlation analyses involving participants who were or had been married, associations between pornographic movie and Internet pornography viewing and extramarital sex behavior maintained after extramarital sex attitudes were controlled. Alternatively, in mediation analyses, indirect effects of movie and Internet pornography viewing on extramarital sex behavior through extramarital sex attitudes were found. **These results are uniformly consistent with sexual script theory's hypothesis that sexual attitudes are a mediating link between the consumption of pornography and the engagement in sexual behavior corresponding to scripts for sex in pornography.** Alternatively, they are in uniform opposition to the libertarian theory of pornography's position that the reason why people who consume pornography are more likely to engage in sexual behavior similar to that in pornography is because they prepossess sexual outlooks that cause them to do both. On the face, it would seem that the primary implication of these results for communication theory is that the sexual script theory position on the role of sexual attitudes should be adopted while the libertarian theory position on the role of sexual attitudes should be abandoned. It is cautioned, however, that the present effort can be expanded upon in several ways. First, additional categories of sexual attitudes and sexual behaviors could be studied. As one example, although studies have correlated pornography viewing with sexually aggressive attitudes (Hald, Malamuth, & Yuen, 2010) and sexually aggressive behavior (Wright, Tokunaga, & Kraus, 2016), the question of whether sexually aggressive attitudes confound or mediate the relationship between pornography viewing and sexually aggressive behavior is in need of investigation. As another example, although studies have tested whether pornography viewing correlates with gendered attitudes (J.

D. Brown & L'Engle, 2009; Garcia, 1986) and predicts nonsexual gendered behavior (McKenzie-Mohr & Zanna, 1990; Mulac, Jansma, & Linz, 2002), the question of whether gendered attitudes confound or mediate the relationship between pornography viewing and gendered sexual behavior (e.g., Sun et al., 2017; Wright et al., 2015) is in need of address. Confidence in the role of attitudes as a confound or mediator will be bolstered if results converge across a variety of sociosexual contexts.

4.1.7 [Pirrone, Zondervan-Zwijnenburg, Reitz, van den Eijnden, & ter Bogt \(2022\).](#)

Pornography Use Profiles and the Emergence of Sexual Behaviors in Adolescence. *Archives of Sexual Behavior*.

ABSTRACT: This research longitudinally explored adolescent pornography (porn) consumption and its association with sexual development in early and middle adolescence. A four-wave design with half-year intervals investigated pornography consumption and different (sexual) activities, such as masturbation, French kissing, petting, giving/receiving manual and oral sex, and intercourse, among 630 respondents (47.9% female, mean age 13.7 years; SD = 0.48) years at T1). A latent growth mixture analysis of pornography consumption revealed two groups with relatively low pornography (LP; 51.8% of the boys, 91.4% of the girls) versus high pornography (HP; 48.2% of the boys; 8.6% of the girls) consumption across time. **At T1, HP boys on average watched pornography less than once a month, but more than once a year at T1. At T4, their average pornography use had increased to almost one to two times a week.** LP boys never watched pornography at T1. At T4, their average pornography use was still less than once a year. **At T1, HP girls never watched pornography, but consumption increased to almost one to three times a month at T4.** Across waves of the study, LP girls (almost) never watched pornography. A discrete-time survival mixture analysis of sexual developmental patterning indicated that, compared to their LP peers, **both girls and boys in the HP groups showed accelerated development of masturbation, petting, and receiving manual sex. Girls in the HP group were also more inclined to receive oral sex, whereas boys in the HP group also showed earlier and more frequent manual sex and intercourse.** Thus, whereas the HP group of boys was substantially larger compared to that of girls, **pornography consumption was related to accelerated development of sexual activities for both genders across early and middle adolescence.** The discussion deliberates on pornography as a driving force in adolescent sexual development versus pornography as a medium of choice for sexually advanced adolescents.

4.1.8 [Baams, Overbeek, Dubas, Doornwaard, Rommes, & van Aken \(2015\)](#). Perceived Realism Moderates the Relation Between Sexualized Media Consumption and Permissive Sexual Attitudes in Dutch Adolescents.

ABSTRACT: This study examined whether the development of sexualized media consumption and permissive sexual attitudes would be more strongly interrelated when adolescents perceived sexualized media images as highly realistic. We used data from a three-wave longitudinal sample of 444 Dutch adolescents aged 13–16 years at baseline. Results from parallel process latent growth modeling multigroup analyses showed that higher initial levels of sexualized media consumption were associated with higher initial level of permissive sexual attitudes. Moreover, **increases of sexualized media consumption over time were associated with increases of permissive sexual attitudes over time**. Considering the moderation by perceived realism, we found these effects only for those who perceived sexualized media as more realistic. Findings for male and female adolescents were similar except for the relations between initial levels and subsequent development. **Among male adolescents who perceived sexualized media images to be realistic, higher initial levels of permissive sexual attitudes were related to subsequent less rapid development of sexualized media consumption. For male adolescents who perceived sexualized media to be less realistic, higher initial levels of sexualized media consumption were related to a subsequent less rapid development of permissive sexual attitudes.** These relations were not found for female adolescents. Overall, our results suggest that, in male and female adolescents, those with a high level of perceived realism showed a correlated development of sexualized media consumption and permissive sexual attitudes. These findings point to a need for extended information on how to guide adolescents in interpreting and handling sexualized media in everyday life.

4.1.9 [Braun-Courville & Rojas \(2009\)](#). Exposure to sexually explicit web sites and adolescent sexual attitudes and behaviors. *Journal of Adolescent Health*.

ABSTRACT: PURPOSE: Mass media play an important role in the socialization of youth. Given its expanding nature and accessibility, the Internet may be at the forefront of this education. However, the extent of the Internet's impact on adolescent sexual attitudes and behaviors is not yet known.

METHODS: A total of 433 adolescents completed an anonymous survey at a health center in New York City. The cross-sectional survey assessed Internet accessibility, exposure to sexually explicit Web sites (SEWs), sexual behaviors, and sexually permissive attitudes.

RESULTS: Of the participants, 96% had Internet access, and 55.4% reported ever visiting a SEW. **Logistic regression analyses revealed that adolescents exposed to SEWs were more likely to have multiple lifetime sexual partners (OR = 1.8, CI = 1.2, 2.9), to have had more than one sexual partner in the last 3 months (OR = 1.8, CI = 1.1, 3.1), to have used alcohol or other substances at last sexual encounter (OR = 2.8, CI = 1.5, 5.2), and to have engaged in anal sex (OR = 2.0, CI = 1.2, 3.4). Adolescents who visit SEWs display higher sexual permissiveness scores compared with those who have never been exposed (2.3 vs. 1.9, $p \leq .001$), indicating a more permissive attitude.**

CONCLUSIONS: Exposure to Internet pornography has potential implications for adolescent sexual relationships, such as number of partners and substance use. SEWs can serve an educational purpose and create an opportunity for adults to engage adolescents in discussions about sexual health and consumption of Internet material. Longitudinal research is needed to evaluate how exposure to SEWs influences youth attitudes and sexual behaviors.

4.1.10 [Sculley, & Watkins \(2022\)](#). The Great Porn Experiment V2.0: Sexual Arousal Reduces the Salience of Familiar Women When Heterosexual Men Judge Their Attractiveness. *Archives of Sexual Behavior*.

ABSTRACT: Pornography has become widely accessible in recent years due to its integration with the Internet, generating social scientific and moralistic debate on potential “media effects,” given correlations between consumption and various sexual traits and behaviors. One popular public debate (Wilson, 2012) claimed that exposure to Internet pornography has addictive qualities that could impact men’s sexual relationships, underpinned by the “Coolidge effect,” where males are sexually motivated by the presence of novel mates. As claims about Internet and sexual addictions are scientifically controversial, we provide a direct experimental test of his proposal. Adapting a paradigm used to examine “Coolidge-like” effects in men, we examined the extent to which exposure to images of pornographic actresses altered men’s attractiveness ratings of (1) familiar faces/bodies on second viewing and (2) familiar versus novel women’s faces/bodies. Independent of slideshow content (pornographic versus clothed versions of same actress), heterosexual men were less attracted to familiar bodies, and homosexual men were less attracted to familiar women (faces and bodies), suggesting that mere visual exposure to attractive women moderated men’s preferences. However, consistent with one of our preregistered predictions, heterosexual but not homosexual men’s preferences for familiar versus novel women were moderated by slideshow content such that familiar women were less salient on the attractiveness dimension compared to novel women when sexual arousal was greater

(pornographic versus clothed slideshows). In sum, our findings demonstrate that visual exposure/sexual arousal moderates attractiveness perceptions, albeit that much greater nuance is required considering earlier claims.

- 4.1.11 [Grubbs, Wright, Braden, Wilt, & Kraus \(2019\)](#). Internet pornography use and sexual motivation: A systematic review and integration. *Annals of the International Communication Association*.

ABSTRACT: Pornography use is a common activity in the developed world. This work consolidates research about pornography use into an organizational structure that is relevant to sexual motivation more broadly. To accomplish this, a comprehensive review of research is conducted, examining personality, emotional, and attitudinal associates and predictors of pornography use, as well as behaviours, attitudes, and motivations that are associated with or predicted by pornography use. Reviewing over 130 studies, the present work **demonstrates that pornography is most often consumed for pleasure-seeking purposes, that it associated with increases in casual or impersonal approaches to sexuality, and that it predicts more pleasure-oriented approaches to sexual behaviour. The implications of these findings are discussed.**

[Other studies? What have we missed?]

4.2 STUDIES INDICATING LITTLE OR NO EFFECT

- 4.2.1 [Milas, Wright, & Štulhofer \(2020\)](#). Longitudinal Assessment of the Association Between Pornography Use and Sexual Satisfaction in Adolescence. *The Journal of Sex Research*.

ABSTRACT: Pornography has been theorized to affect sexual satisfaction for decades, yet only two prospective studies, both conducted in the Netherlands, have explored this link among adolescents. Given the unprecedented availability of (online) sexually explicit content and the potential importance of its relationship to sexual satisfaction for young people, we have revisited the association between these variables in a less sexually permissive society. Using a panel sample of 775 female and 514 male Croatian high school students (Mage at baseline = 15.9 years, SD = 0.52) and latent growth curve modeling with six observation points, **we did not find a significant association**

between changes in the frequency of adolescents' pornography use over time and their sexual satisfaction at wave six. The association between the initial levels of pornography use and sexual satisfaction, which, if present, would have indicated a possible relationship during middle adolescence, was also null. These patterns were similar across genders. Possible explanations for the difference between our results and the results of the previous studies are discussed.

[Other studies? What have we missed?]

* * * * *

QUESTION 5: HOW DOES PORNOGRAPHY AFFECT ROMANTIC RELATIONSHIPS?

5.1 STUDIES INDICATING A NEGATIVE EFFECT

5.1.1 [Carroll, Busby, Willoughby, & Brown \(2016\)](#). The porn gap: differences in Men's and Women's pornography patterns in couple relationships. *J. Couple Relationship Ther.*

ABSTRACT: Perhaps the most notable finding of pornography research to date is the sizeable gender gap that exists between men and women when it comes to their personal use and acceptance of pornography. This disparity raises a number of questions about couple formation patterns and the relationship dynamics that arise between men and women related to pornography use. In this study, the authors used both a nationally representative weighted data set of individuals who are in committed heterosexual couple relationships (n = 21,555) and a subset of matched heterosexual couples (n = 2,972 individuals; 1,486 couples) to examine romantic partners' pornography use rates, patterns of viewing pornography alone or together, relationship boundaries related to pornography acceptance, and pornography-related conflict. The authors found that there is indeed a notable **“pornography gap” between many partners and that for some opposite-sex couples there is significant conflict related to pornography. These findings highlight the importance of studying pornography as a couple issue that is contextualized by partners' relationship scripts and negotiated boundaries related to sexuality, compatibility, and fidelity.**

TABLE:

Pornography Acceptance and Conflict

Pornography acceptance was measured by averaging five items assessing different values related to pornography use in a couple context (see Table 1, responses: 1 =

Table 1. Percentages of males and females in couple relationships reporting pornography use, acceptance of pornography, and conflict about pornography in their relationship.

Variable	Casual Dating		Seriously Dating		Engaged		Married	
	Males	Females	Males	Females	Males	Females	Males	Females
Personal pornography use								
None	25.0	56.9	24.5	59.5	38.0	61.1	36.5	64.7
Once a month or less	10.7	38.2	31.0	26.1	26.4	28.2	26.2	27.2
2 or 3 days a month	14.3	3.7	13.6	8.4	15.2	7.7	17.7	5.2
1 or 2 days a week	7.1	1.2	20.1	3.9	13.9	2.0	10.6	1.8
3 to 5 days a week	28.6	0.0	7.1	1.4	4.3	0.7	6.2	1.0
Almost every day	14.3	0.0	3.8	0.6	2.1	0.3	2.8	0.1
Partner's pornography use								
None	94.1	47.9	65.4	34.0	68.3	43.5	63.9	48.0
Once a month or less	5.9	43.9	19.3	22.1	22.6	27.3	21.0	24.9
2 or 3 days a month	0.0	4.4	11.3	12.3	4.3	12.7	9.8	14.5
1 or 2 days a week	0.0	3.8	2.7	18.6	3.9	9.8	3.3	5.8
3 to 5 days a week	0.0	0.0	0.9	7.0	0.8	5.0	1.8	2.9
Almost every day	0.0	0.0	0.4	5.9	0.1	1.7	0.2	4.0
Porn acceptable for singles								
% Disagree	35.3	25.5	30.4	40.6	39.4	44.8	40.2	45.4
% Agree	53.6	36.1	45.0	32.6	34.3	31.3	34.1	27.7
Porn acceptable for marrieds								
% Disagree	37.1	33.9	33.2	45.6	44.0	50.4	40.3	47.1
% Agree	46.6	29.6	30.9	25.7	23.2	24.2	26.8	23.6
Porn acceptable only when viewed together								
% Disagree	44.2	37.8	50.9	50.6	52.0	52.7	55.6	51.3
% Agree	40.9	31.7	21.1	20.5	18.8	21.3	15.0	24.8
Porn objectifies and degrades								
% Disagree	36.6	20.1	39.2	32.3	34.2	28.5	32.5	29.2
% Agree	52.3	48.4	34.6	39.3	36.7	43.4	40.9	41.3
Porn is marital infidelity								
% Disagree	40.8	26.9	52.2	42.3	47.4	42.1	53.7	39.0
% Agree	48.6	39.1	20.9	31.8	28.0	31.4	21.0	32.9
Porn is source of conflict								
% Disagree	55.2	57.0	83.3	83.0	89.5	81.4	79.0	72.8
% Agree	44.6	18.7	7.9	9.2	6.4	11.9	13.7	18.0

Note. % Disagree = disagree and strongly disagree; % Agree = agree and strongly agree.

5.1.2 [Szymanski, & Stewart-Richardson \(2014\)](#). Psychological, Relational, and Sexual Correlates of Pornography Use on Young Adult Heterosexual Men in Romantic Relationships. *The Journal of Men's Studies*.

ABSTRACT: Pornography is both prevalent and normative in United States' culture; however, little is known about the psychological and relational affects that it can have on men in romantic relationships. Thus, the purpose of this study was to examine theorized antecedents (i.e., gender role conflict and attachment styles) and consequences (i.e., poorer relationship quality and sexual satisfaction) of men's pornography use among 373 young adult heterosexual men. **Findings revealed that both frequency of pornography use and problematic pornography use were related to greater gender role conflict, more avoidant and anxious attachment styles, poorer relationship quality, and less sexual satisfaction.** In addition, the findings provided support for a theorized mediated model in which gender role conflict was linked to relational outcomes both directly and indirectly via attachment styles and pornography use. Finally, psychometric support for the Pornography Use Scale developed for this study is provided.

5.1.3 [Perry, & Davis \(2017\)](#). Are Pornography Users More Likely to Experience a Romantic Breakup? Evidence from Longitudinal Data. *Sexuality & Culture*.

ABSTRACT: Previous research suggests that pornography use, under certain circumstances, may negatively influence the quality of romantic relationships. Yet we still know relatively little about whether watching pornography is associated with the stability of romantic relationships later on. This study examined whether Americans who use pornography, either at all or more frequently, are more prone to report experiencing a romantic breakup over time. Longitudinal data were taken from the 2006 and 2012 waves of the nationally representative Portraits of American Life Study (N = 969). **Binary logistic regression analyses demonstrated that Americans 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, even after controlling for relevant factors such as 2006 relationship status and other sociodemographic correlates. This association was considerably stronger for men than for women and for unmarried Americans than for married Americans. Analyses also showed a linear relationship between how frequently Americans viewed pornography in 2006 and their odds of experiencing a breakup by 2012.** The findings affirm that earlier pornography use is associated with lower stability within Americans' romantic relationships, especially for men and the unmarried. Data limitations and implications for future research are discussed.

- 5.1.4 [Lambert, Negash, Stillman, Olmstead, & Fincham \(2012\)](#). A Love That Doesn't Last: Pornography Consumption and Weakened Commitment to One's Romantic Partner. *Journal of Social and Clinical Psychology*.

ABSTRACT: We examined whether the consumption of pornography affects romantic relationships, with the expectation that higher levels of pornography consumption would correspond to weakened commitment in young adult romantic relationships. **Study 1 (n = 367) found that higher pornography consumption was related to lower commitment, and Study 2 (n = 34) replicated this finding using observational data. Study 3 (n = 20) participants were randomly assigned to either refrain from viewing pornography or to a self-control task. Those who continued using pornography reported lower levels of commitment than control participants. In Study 4 (n = 67), participants consuming higher levels of pornography flirted more with an extradyadic partner during an online chat. Study 5 (n = 240) found that pornography consumption was positively related to infidelity and this association was mediated by commitment.** Overall, a consistent pattern of results was found using a variety of approaches including cross-sectional (Study 1), observational (Study 2), experimental (Study 3), and behavioral (Studies 4 and 5) data.

- 5.1.5 [Szymanski, & Stewart-Richardson \(2014\)](#). Psychological, Relational, and Sexual Correlates of Pornography Use on Young Adult Heterosexual Men in Romantic Relationships. *The Journal of Men's Studies*.

ABSTRACT: Pornography is both prevalent and normative in United States' culture; however, little is known about the psychological and relational affects that it can have on men in romantic relationships. Thus, the purpose of this study was to examine theorized antecedents (i.e., gender role conflict and attachment styles) and consequences (i.e., poorer relationship quality and sexual satisfaction) of men's pornography use among 373 young adult heterosexual men. **Findings revealed that both frequency of pornography use and problematic pornography use were related to greater gender role conflict, more avoidant and anxious attachment styles, poorer relationship quality, and less sexual satisfaction.** In addition, the findings provided support for a theorized mediated model in which gender role conflict was linked to relational outcomes both directly and indirectly via attachment styles and pornography use. Finally, psychometric support for the Pornography Use Scale developed for this study is provided.

5.1.6 [Huntington, Willoughby, & Rhoades \(2022\)](#). Associations of Adolescents' Pornography Viewing with their Romantic Relationship Skills and Behaviors. *The Journal of Sex Research*.

ABSTRACT: Research into adolescent pornography use has identified numerous individual-level behavioral and attitudinal correlates. However, associations between adolescents' pornography viewing and their romantic relationships remain understudied. Furthermore, very little is known about adolescents' watching pornography with their romantic partners (i.e., joint pornography use). The present study of adolescents ($n = 755$, 59.9% girls, M age = 15.72 years old [$SD = 1.34$]) is among the first attempts to link adolescents' pornography viewing behaviors to their romantic relationship attitudes and behaviors. We hypothesized that adolescents' viewing would be associated with poorer self-reported relationship skills, more negative relationship behaviors, and increased involvement in sexual activity, such as sexting. Partial support for these hypotheses was found. **Frequency of overall viewing was associated with lower relationship and refusal skills. Lifetime joint pornography viewing was associated with higher rates of dating violence victimization and perpetration in the past six months and with more abusive behaviors from one's partner and more verbal conflict in the current dating relationship.** Results, though cross-sectional, suggest that pornography viewing in adolescence is associated with poorer romantic outcomes. Implications for adolescent development and for healthcare providers and educators are discussed.

[Other studies? What have we missed?]

5.2 STUDIES INDICATING A POSITIVE EFFECT

[Other studies? What have we missed?]

5.3 STUDIES INDICATING LITTLE OR NO EFFECT

5.3.1 [Štulhofer, Buško, & Schmidt \(2012\)](#). Adolescent exposure to pornography and relationship intimacy in young adulthood. *Psychology & Sexuality*.

ABSTRACT: The hypothesis on the role of exposure to pornography during adolescence in predicting intimacy among young adults was tested using a sample of 544 Croatian college students (aged 18–25 years) who were surveyed online. Respondents provided information about pornography use at ages 14 and 17, perceived realism of pornographic depictions of sexual activities, attitudes towards recreational sex and relationship intimacy. Significant gender differences in pornography exposure, perceived realism of pornographic contents and attitudes towards recreational sex were found. **No direct relationship was found between adolescent exposure to pornography and relationship intimacy in young adulthood. As hypothesised, the realism of pornography was related both to exposure and intimacy, but only among female participants. Furthermore, the association between the appraisal of pornographic realism and intimacy was shown to be mediated by attitudes towards recreational sex.** In light of contemporary concerns over the normalisation of pornography use, particularly among young people, our findings do not support the view that adolescent exposure to sexually explicit materials is a determinant of relationship intimacy among young Croatian adults.

5.3.2 [Vaillancourt-Morel, Rosen, Willoughby, Leonhardt, & Bergeron \(2020\).](#)

Pornography use and romantic relationships: A dyadic daily diary study. *Journal of Social and Personal Relationships*.

ABSTRACT: Pornography use is now considered a normative sexual activity, including for partnered individuals. Although there are documented positive and negative effects of pornography use on romantic relationships, studies to date suffer from key limitations, narrowing their clinical relevance. Most rely on vague recall measurement that may inadequately capture actual pornography use, and all are exclusively based on mixed-sex couples. This study used a 35-day dyadic daily diary design to examine the associations between an individual's daily pornography use and their own and their partner's relationship satisfaction, partnered sexual desire, and probability of partnered sexual activity in mixed-sex and same-sex couples (N = 217 couples). **For women, regardless of partner's sex, using pornography was associated with their own and their partner's higher sexual desire and with higher odds of partnered sexual activity. For men, regardless of partner's sex, using pornography was associated with their partner's lower sexual desire; for men coupled with women, with lower odds of partnered sexual activity, and for men coupled with men, with higher odds of partnered sexual activity. For all participants, pornography use was unrelated to relationship satisfaction. The current study demonstrated that an**

individual's pornography use is associated with same-day couple's sexual dynamics, with different associations according to users' and their partners' sex.

5.3.3 [Perry \(2020\)](#). Is the Link Between Pornography Use and Relational Happiness Really More About Masturbation? Results From Two National Surveys. *The Journal of Sex Research*.

ABSTRACT: Numerous studies have observed a persistent and most often negative association between pornography use and romantic relationship quality. While various theories have been suggested to explain this association, studies have yet to empirically examine whether the observed link between pornography consumption and relationship outcomes has more to do with solo masturbation than actually watching pornography. The current study drew on two nationally representative data sets with nearly identical measures to test whether taking masturbation practice into account reduces or nullifies the association between pornography use and relational happiness. Controls are included for sex frequency and satisfaction, depressive symptoms, and other relevant correlates. Results from both the 2012 New Family Structures Study (NFSS; N = 1,977) and the 2014 Relationships in America survey (RIA; Ng = 10,106) **show that masturbation is negatively associated with relational happiness for men and women, while pornography use is either unassociated or becomes unassociated with relational happiness once masturbation is included.** Indeed, evidence points to a slight positive association between pornography use and relational happiness once masturbation and gender differences are accounted for. Findings suggest that future studies on this topic should include measures of masturbation practice along with pornography use and that modifications to theories connecting pornography use to relationship outcomes should be considered.

[NOTE From Nicole Prause responding to ZR comment on why you would control for masturbation: Masturbation is 1:1 with porn. If you don't control for it, [you didn't study](#) porn. 99% of "porn" studies make that error.]

[Other studies? What have we missed?]

5.4 STUDIES INDICATING MIXED EFFECT

5.4.1 [Huntington, Markman, & Rhoades \(2021\)](#). Watching Pornography Alone or Together: Longitudinal Associations With Romantic Relationship Quality. *Journal of Sex & Marital Therapy*.

ABSTRACT: Pornography viewing has been cross-sectionally and longitudinally linked to poorer romantic relationship quality. However, only a few studies have looked at (1) the associations of changes in pornography viewing over time with relationship characteristics, (2) differential impacts of watching alone and watching with one's partner, and (3) how gender moderates these associations. The current study utilizes multilevel modeling to assess for between- and within-subject effects of watching pornography alone versus together on romantic relationship quality over time. A random national sample of 1,234 individuals, who began the study in unmarried heterosexual romantic relationships of at least 2 months' duration, completed five waves of mail-in surveys over a 20-month period. **Watching pornography alone was generally associated with poorer relationship quality for men (e.g., lower relationship adjustment and commitment, less emotional intimacy), but better relationship quality for women.** People who reported watching more pornography with their partner reported more relationship intimacy and increases in watching together over time were associated with increases in sexual intimacy. Both watching alone and watching together were related to higher levels of psychological aggression between partners, with few differences by gender. Implications for sex education, relationship education, and couples therapy will be discussed.

5.4.2 [Campbell & Kohut \(2017\)](#). The use and effects of pornography in romantic relationships. *Current Opinion in Psychology*.

ABSTRACT: In this article we discuss associations between pornography use by one or both romantic partners and the well-being of the relationship. We highlight several shortcomings of existing empirical research that limit conclusions that can be made about the negative, neutral or positive effects of pornography use on relationship processes. Lastly, we review extant dyadic research on pornography use in a relationship context, and propose the Antecedents-Context-Effects (ACE) model as a guide for future research on this important topic.

5.4.3 [Olmstead, Negash, Pasley, & Fincham \(2013\)](#). Emerging Adults' Expectations for Pornography Use in the Context of Future Committed Romantic Relationships: A Qualitative Study. *Archives of Sexual Behavior*.

ABSTRACT: Using qualitative content analysis from the written comments of 404 primarily heterosexual college students, we examined (1) their expectations for pornography use while married or in a committed long-term relationship and (2) variations by gender. Four prominent groups emerged. A **majority of men (70.8 %) and almost half of women (45.5 %) reported circumstances (alone or with their partners) wherein pornography use was acceptable in a relationship and several conditions for, and consequences associated with, such use also emerged.** Another group (22.3 % men; 26.2 % women) viewed pornography use as unacceptable because of being in a committed relationship whereas a third group (5.4 % men; 12.9 % women) reported that pornography use was unacceptable in any context or circumstance. A final group emerged of a few women (10.4 %) who stated that a partner's use of pornography was acceptable, but they did not expect to use it personally. Implications for relationship education among emerging adults and future research on pornography use within the context of romantic relationships are discussed.

5.4.4 [Vaillancourt-Morel, Rosen, Willoughby, Leonhardt, & Bergeron \(2020\)](#). Pornography use and romantic relationships: A dyadic daily diary study. *Journal of Social and Personal Relationships*.

ABSTRACT: Pornography use is now considered a normative sexual activity, including for partnered individuals. Although there are documented positive and negative effects of pornography use on romantic relationships, studies to date suffer from key limitations, narrowing their clinical relevance. Most rely on vague recall measurement that may inadequately capture actual pornography use, and all are exclusively based on mixed-sex couples. This study used a 35-day dyadic daily diary design to examine the associations between an individual's daily pornography use and their own and their partner's relationship satisfaction, partnered sexual desire, and probability of partnered sexual activity in mixed-sex and same-sex couples (N = 217 couples). **For women, regardless of partner's sex, using pornography was associated with their own and their partner's higher sexual desire and with higher odds of partnered sexual activity. For men, regardless of partner's sex, using pornography was associated with their partner's lower sexual desire; for men coupled with women, with lower odds of partnered sexual activity, and for men coupled with men, with higher odds of partnered sexual activity.** For all participants, **pornography use was unrelated to relationship satisfaction.** The current study demonstrated that an

individual's pornography use is associated with same-day couple's sexual dynamics, with different associations according to users' and their partners' sex.

[Other studies? What have we missed?]

* * * * *

QUESTION 6: WHAT DO TEENS SAY ABOUT PORN AND MENTAL HEALTH (INCLUDES SEXUAL HEALTH)?

[This section includes both qualitative and quantitative data. We are trying to answer two related questions: A) do teens generally see pornography as a net positive for their own mental health, or as a net negative? And B) Do teens think that pornography is, or is not, a major contributor to mental illness in their generation?]

6.1: STUDIES SHOWING THAT TEENS BLAME PORNOGRAPHY

6.1.1 [Sniewski & Farvid \(2020\)](#). Hidden in shame: Heterosexual men's experiences of self-perceived problematic pornography use. *Psychology of Men & Masculinities*.
SAMPLE: Adult men

ABSTRACT: The rapid rise in the availability of pornography has given the world instant access to a vast and diverse supply of pornographic material. Although it is possible for both genders to experience a problematic relationship with pornography, the large majority of online pornography consumers who identify as addicted to pornography are heterosexual men. This article aims to examine the experiences of adult heterosexual men with problematic pornography use in New Zealand. A total of 15 heterosexual men were recruited via advertising, social media outreach, and word of mouth to take part in interviews about their self-perceived problematic pornography consumption habits. A data-driven inductive thematic analysis was conducted to explore the different ways

men talked about their problematic pornography use. **The primary reason men kept their viewing hidden from the world was because of the accompanying experiences of guilt and shame that would inevitably follow most—if not all—viewing sessions or attempts at opening up about their use.** Pornography began eroding their sense of autonomy when men experienced a loss of control over their use, which underpinned the core aspect of their problematic use. **Over time, the men perceived that pornography had resulted in having unrealistic expectations when it came to sex and sexuality, the way they viewed women, and led to diminished sexual function.** Further work is needed in using strategies that could offer alternatives to problematic pornographic use or interventions that help the individual learn how to productively respond to the affective triggers of discomfort that trigger use.

6.1.2 [Johansson, & Hammarén \(2007\)](#). Hegemonic Masculinity and Pornography: Young People's Attitudes toward and Relations to Pornography. *The Journal of Men's Studies*. **DV: Attitudes toward porn**

ABSTRACT: This article explores young people's attitudes toward pornographic material. How do young people in general relate to and view pornography? Are there any clear gender differences? On the basis of empirical results from an extensive Swedish survey study, we discuss and analyze how gender differences are articulated. We are specifically interested in what kinds of attitudes young men and young women develop. **A common conception of gender and the consumption of pornography is that men and boys are generally the consumers, whereas women dislike pornography. Results from the present study partly support these claims.** However, we argue that it is important to analyze differences within the categories "men" and "women." Here, **we find that many young men are actually hold negative attitudes toward pornography, whereas some young women are positively disposed toward and enjoy pornography.** These findings are discussed within the framework of gender theory and theories of masculinity.

CHARTS:

Table 1
"Have you ever read a porno magazine?"

	No	Yes
Young men (<i>n</i> = 625)	13.4%	86.6%
Young women (<i>n</i> = 658)	54.6%	45.4%

Note: $p < 0.000$

Table 2

“Have you ever watched a porno film?” Responses Presented as a Function of School Level and Sex

	No	Yes
Junior High		
Young men ($n = 329$)	8.5%	91.5%
Young women ($n = 312$)	42.6%	57.4%
High School		
Young men ($n = 280$)	6.4%	93.6%
Young women ($n = 345$)	26.4%	73.6%

Note: p -value within the category young men: $p < 0.333$; p -value within the category young women: $p < 0.000$

Table 3

“Pornography is sexually exciting.”

	1	2	3	4	5
Young men ($n = 624$)	27.4%	23.7%	25.8%	9.6%	13.5%
Young women ($n = 667$)	6.3%	7.8%	19.0%	17.5%	49.4%

Note: $p < 0.000$. 1 = Agrees completely; 2 = Agrees fairly well; 3 = Agrees to some degree; 4 = Agrees rather poorly; 5 = Doesn't agree at all.

Table 4
 “What is your attitude toward pornography?”

	1	2	3	4	5
Young men ($n = 622$)	19.0%	21.7%	36.7%	16.2%	6.4%
Young women ($n = 656$)	2.7%	7.6%	18.1%	37.0%	34.6%

Note: $p < 0.000$. 1 = Very positive; 2 = Positive; 3 = Fairly positive; 4 = Fairly negative; 5 = Very negative.

Table 5
 “Pornography is degrading.”

	1	2	3	4	5
Young men ($n = 628$)	18.9%	18.1%	28.0%	14.6%	20.4%
Young women ($n = 665$)	48.0%	20.6%	20.3%	5.1%	6.0%

Note: $p < 0.000$. 1 = Agrees completely; 2 = Agrees fairly well; 3 = Agrees to some degree; 4 = Agrees rather poorly; 5 = Doesn’t agree at all.

Table 10

Proportion of Young Men and Women Who Have Watched (or Not Watched) a Porno Film and Who Have Had Sexual Intercourse

	Watched porno film	Had Sexual intercourse
Young men ($n = 615$)	No	14.9%
	Yes	48.8%
Young women ($n = 657$)	No	28.9%
	Yes	62.0%

Note: p -value within the category young men: $p < 0.000$; p -value within the category young women: $p < 0.000$

Table 11

Proportion of Young men and Women Who Have Watched (or Not Watched) a Porno Film and Who Have Had Oral Sex.

	Watched porno film	Had oral sex
Young men ($n = 615$)	No	10.6%
	Yes	46.1%
Young women ($n = 654$)	No	25.6%
	Yes	60.3%

Note: p -value within the category young men: $p < 0.000$; p -value within the category young women: $p < 0.000$

Table 7

“Do you become sexually excited when you read erotic stories?”

	1	2	3	4
Young men ($n = 578$)	10.4%	36.0%	33.6%	20.0%
Young women ($n = 589$)	5.4%	36.0%	35.0%	23.6%

Note: $p < 0.012$. 1 = Very excited; 2 = Rather excited; 3 = Not particularly excited; 4 = Not at all excited.

Table 8

“Do you become sexually excited when you watch porno films?”

	1	2	3	4
Young men ($n = 609$)	36.0%	38.4%	17.4%	8.2%
Young women ($n = 558$)	7.9%	24.7%	26.7%	40.7%

Note: $p < 0.000$. 1 = Very excited; 2 = Rather excited; 3 = Not particularly excited; 4 = Not at all excited.

Table 9

“Are you ashamed of watching porno films?”

	1	2	3	4	5
Young men ($n = 593$)	5.4%	6.9%	23.6%	28.0%	36.1%
Young women ($n = 451$)	14.6%	13.3%	24.4%	22.2%	25.5%

Note: $p < 0.000$. 1 = Yes, always; 2 = Yes, often; 3 = Sometimes; 4 = Seldom; 5 = Never.

Table 10

Proportion of Young Men and Women Who Have Watched (or Not Watched) a Porno Film and Who Have Had Sexual Intercourse

	Watched porno film	Had Sexual intercourse
Young men ($n = 615$)	No	14.9%
	Yes	48.8%
Young women ($n = 657$)	No	28.9%
	Yes	62.0%

Note: p -value within the category young men: $p < 0.000$; p -value within the category young women: $p < 0.000$

Table 11

Proportion of Young men and Women Who Have Watched (or Not Watched) a Porno Film and Who Have Had Oral Sex.

	Watched porno film	Had oral sex
Young men ($n = 615$)	No	10.6%
	Yes	46.1%
Young women ($n = 654$)	No	25.6%
	Yes	60.3%

Note: p -value within the category young men: $p < 0.000$; p -value within the category young women: $p < 0.000$

Table 12

Proportion of Young men and Women Who Have Watched (or Not Watched) a Porno Film and Who Have Had Anal Sex

	Watched porno film	Had anal sex
Young men ($n = 616$)	No	2.1%
	Yes	11.8%
Young women ($n = 655$)	No	3.1%
	Yes	13.4%

Note: p -value within the category young men: $p < 0.043$; p -value within the category young women: $p < 0.000$

[Other studies? What have we missed?]

6.2: STUDIES SHOWING THAT TEENS CREDIT PORNOGRAPHY WITH IMPROVING MENTAL HEALTH

[Other studies? What have we missed?]

6.3: STUDIES SHOWING MIXED EVIDENCE

5.3.1 [Löfgren-Mårtenson, & Månsson \(2010\)](#). Lust, Love, and Life: A Qualitative Study of Swedish Adolescents' Perceptions and Experiences with Pornography. *The Journal of Sex Research*.

ABSTRACT: There is a widespread concern in Western society about the visibility of pornography in public places and on the Internet. What are the consequences for young men and women, and how do they think about gender, sexuality, and pornography? Data was collected, through 22 individual interviews and seven focus groups, from 51 participants (36 women and 37 men aged 14–20 years) in Sweden. **The results indicated a process of both normalization and ambivalence. Pornography was used as a form of social intercourse, a source of information, and a stimulus for sexual arousal.** Pornography consumption was more common among the young men than among the women. For both the young men and women, the pornographic script functioned as a frame of reference in relation to bodily ideals and sexual performances. Most of the participants had acquired the necessary skills of how to deal with the exposure to pornography in a sensible and reflective manner.

EXCERPTS:

“Girls are Getting the Wrong Picture of Us Guys”: Gendered Aspects of Pornography

The young men spoke openly in the groups about their experiences of pornography. Their statements were without shame, embarrassment, or hesitancy, and the atmosphere was playful and humorous. The general opinion was that everyone, especially young men, was in contact with pornography from a very young age. However, they sometimes disagreed about the age young men usually first experienced pornography:

R: How old were you when you first got in contact with porn?

M2*: I don't remember. Seven years or something [laughing]! (Everyone starts laughing)

M2: No, but 13–14 maybe ...

M3: I was 10–11.

M8: It depends if you had it [porn] at home or not.

M1: Or when you discovered your “dick”!

R: When did you do that then?

M4: He has not done it yet [laughing]! (Male focus group, aged 17–20 years)

The discussion in the female focus groups was more hesitant and negative toward pornography consumption. However, if a participant expressed a contrary opinion, the general view might shift and new, different statements surfaced in the groups. Some argued that women do not like pornography because **“it is not allowed in society” for women to do so. Others claimed that it is because pornography is produced in a way that does not attract women (e.g., porn is made by men, for men). Many ambivalent feelings and opinions were expressed:**

F1: I think that a lot of girls do get turned on by porn ...

F2: But I have never felt that! Actually, I have never seen a porn movie. I saw the movie *Language of Love*, but I didn’t like it. (Female focus group, aged 14–16 years)

In addition, some of the female participants maintained that pornography consumption among young women depended on the context. **in the company of somebody they liked and felt secure with, most often a boyfriend or a girlfriend, some of them would consider viewing pornography.** Among our participants, only a minority of those between 17 and 20 years of age said that they had watched pornography together with a partner. No participants in the 14- to 16-year-old groups reported this experience. Nevertheless, this was discussed in the female focus groups. **Some pointed out that they thought that love and sexuality belong together and that this was a reason they did not like pornography. Pornography was perceived as sexuality without emotions and too “rough”:**

F2: It [porn] should be nicer, kind of.

F1: With lit candles.

F3: Yes, less hard, quite simply!

F2: Yes, they almost hit the girls in the porn movies. (Female focus group, aged 17–20 years)

...On the other hand, feelings of doubt and insecurity were expressed among the young women. **Looking at pornography together with a partner, when one was lacking in sexual experience, might lead to unfulfilled expectations. Some of the participants were also afraid that their potential partner would be disappointed:**

You might be a virgin, and then having sex together after watching porn. It might be better in the porn movie then... . (Female interview, aged 15 years)

The young men who did consume pornography stated that they regarded these experiences as something completely different from sexuality experienced in more conventional situations and relationships. They discussed the subject more thoughtfully in the individual interviews than in the focus groups. In addition, several of the young men stated that they were tired of pornography and also of the portrayals of the stereotypical female body. This was confirmed by experiences reported by the young women: There are guys that are sick and tired of silicone breasts and do get tired of all this plastic (in porn movies). (Female interview, aged 18 years)

EXCERPT 2: Pornography as a form of social intercourse.

Looking at pornography together with friends, either on the computer or in movies on television, was a common experience, according to the focus group discussions. Sometimes these situations occurred during meetings for computer games, a so-called local area network:

M1: Half of the guys were playing games... half were looking at porn.

M7: I have never seen as much porn as then! (Male focus group, aged 17–20 years)

These situations were, for the most part, not discussed as involving sexual arousal. **Instead, the young men described these shared experiences as a way of testing one's own and others' reactions to the actors' and actresses' behaviors, appearances, and bodies. The jokes, laughs, and sighs became a normative guideline for the young and perhaps sexually inexperienced viewer.** This phenomenon was recognized and discussed in the female focus groups as well: F

1: They probably sit on the sofa, making fun of the women in the porn movie.

F2: Yes, (say the other girl) even if the guy hits the woman they say: "well, she likes it!" (Female focus group, aged 17–20 years)

EXCERPT 3: A topic of heated discussion in the male focus groups was that in pornographic movies, it seemed as if men were always sexually willing and able to perform sexually for hours. How was this possible? How can one stay aroused and erect for so long? The explanations put forward varied:

M1: Usually the male porn actors are gay.

R: So?

M1: That is why they can go on for hours. They don't feel horny with women.
(Male focus group, aged 17–20 years)

We were confronted with two parallel, intersecting discourses in the interviews: one that critically described the physical ideals in pornography and one that highlighted the impact that these ideals have on young people. One example cited by the participants was the importance of having not only shaved axillae and legs, but also shaved genitals.

In the individual interviews, we obtained more detailed information on feelings and experiences of shaving one's body, particularly before a potential sexual encounter. It is important to mention that it was not only young women who shaved their genitals. Young men also shaved their entire bodies, even though masculinity was ultimately measured by performance. However, it was the young women who expressed concerns regarding this topic:

If I meet a guy for a one-night-stand ...then I am afraid that he will say "no" because I have hair between my legs! But, I save a little tuft to show that I actually am a woman and not a ten year old girl! (Female interview, aged 18 years)

Overall, it was the young women that admitted being influenced by the physical ideals displayed in pornography. They expressed some insecurity about their own bodies and about whether they would be considered adequate in the eyes of their sexual partners. They worried that they would be compared against the physical standards of the women in pornography and that they would be found lacking. A young woman recalled a situation when she was watching a pornographic movie together with male friends:

Q: How did you feel then?

F: Well, like very unattractive ... you can say that you aren't influenced by this, but no one can resist. You do want to have these ideal bodies.

Q: Why does one think like that?

F: Well, even though I don't think it is good looking to have huge silicone breasts, but... everyone in the movies have those and they all have shaved bodies...so, well ...they have what is regarded as gorgeous bodies. (Female interview, aged 15 years)

EXCERPT 4: Our participants also described anxiety that pornography consumption could lead to abuse for some people, even though none of them declared that they were at risk of this. They told us about a small group of young people, young men in particular, who were at risk. According to descriptions from our participants, these individuals suffered from social isolation and loneliness, which, in turn, may lead to vulnerable situations:

If you have poor self esteem ... and don't dare to date girls in real life. ...Then, if you are drinking beer and looking at porn instead ... and get the idea that you just can go out and fuck a girl. Then you will end up with a thick ear! (Male interview, aged 18 years)

[Other studies? What have we missed?]

* * * * *

QUESTION 7: WHAT DO WE KNOW ABOUT PORN ADDICTION?

This includes studies on compulsive use as well.

7.1.1 [Grubbs, Kraus, & Perry \(2019\)](#). Self-reported addiction to pornography in a nationally representative sample: The roles of use habits, religiousness, and moral incongruence. *Journal of Behavioral Addictions*.

ABSTRACT: BACKGROUND: Despite controversies regarding its existence as a legitimate mental health condition, self-reports of pornography addiction seem to occur regularly. In the United States, prior works using various sampling techniques, such as undergraduate samples and online convenience samples, have consistently demonstrated that some pornography users report feeling dysregulated or out of control in their use. Even so, there has been very little work in US nationally representative samples to examine self-reported pornography addiction.

METHODS: This study sought to examine self-reported pornography addiction in a US nationally representative sample of adult Internet users (N = 2,075).

RESULTS: The results indicated that most participants had viewed pornography within their lifetimes (n = 1,461), with just over half reporting some use in the past year (n = 1,056). Moreover, roughly 11% of men and 3% of women reported some

agreement with the statement “I am addicted to pornography.” Across all participants, such feelings were most strongly associated with male gender, younger age, greater religiousness, greater moral incongruence regarding pornography use, and greater use of pornography.

DISCUSSION: Collectively, these findings are consistent with prior works that have noted that self-reported pornography addiction is a complex phenomenon that is predicted by both objective behavior and subjective moral evaluations of that behavior.

7.1.2 [Vaillancourt-Morel, Blais-Lecours, Labadie, Bergeron, Sabourin, & Godbout \(2017\)](#). Profiles of Cyberpornography Use and Sexual Well-Being in Adults. *The Journal of Sexual Medicine*.

ABSTRACT: INTRODUCTION: Although findings concerning sexual outcomes associated with cyberpornography use are mixed, viewing explicit sexual content online is becoming a common activity for an increasing number of individuals.

AIM: To investigate heterogeneity in cyberpornography-related sexual outcomes by examining a theoretically and clinically based model suggesting that individuals who spend time viewing online pornography form three distinct profiles (recreational, at-risk, and compulsive) and to examine whether these profiles were associated with sexual well-being, sex, and interpersonal context of pornography use.

METHODS: The present cluster-analytic study was conducted using a convenience sample of 830 adults who completed online self-reported measurements of cyberpornography use and sexual well-being, which included sexual satisfaction, compulsivity, avoidance, and dysfunction.

MAIN OUTCOME MEASURES: Dimensions of cyberpornography use were assessed using the Cyber Pornography Use Inventory. Sexual well-being measurements included the Global Measure of Sexual Satisfaction, the Sexual Compulsivity Scale, the Sexual Avoidance Subscale, and the Arizona Sexual Experiences Scale.

RESULTS: Cluster analyses indicated three distinct profiles: **recreational (75.5%), highly distressed non-compulsive (12.7%), and compulsive (11.8%). Recreational users reported higher sexual satisfaction and lower sexual compulsivity, avoidance, and dysfunction, whereas users with a compulsive profile presented lower sexual satisfaction and dysfunction and higher sexual compulsivity and avoidance.** Highly distressed less active users were sexually less satisfied and reported less sexual compulsivity and more [sexual dysfunction](#) and avoidance. **A larger proportion of women and of dyadic users was found among recreational users, whereas solitary users were more likely to be in the highly distressed less active profile and men were more likely to be in the compulsive profile.**

CONCLUSION: This pattern of results confirms the existence of recreational and compulsive profiles but also demonstrates the existence of an important subgroup of not particularly active, yet highly distressed consumers. Cyberpornography users represent a heterogeneous population, in which each subgroup is associated with specific sexual outcomes.

7.1.3 [Bóthe, Tóth-Király, Zsila, Griffiths, Demetrovics, & Orosz \(2018\)](#). The Development of the Problematic Pornography Consumption Scale (PPCS). *Journal of Sex Research*.

ABSTRACT: To date, no short scale exists with strong psychometric properties that can assess problematic pornography consumption based on an overarching theoretical background. The goal of the present study was to develop a brief scale, the Problematic Pornography Consumption Scale (PPCS), based on Griffiths's (2005) six-component addiction model that can distinguish between nonproblematic and problematic pornography use. The PPCS was developed using an online sample of 772 respondents (390 females, 382 males; Mage = 22.56, SD = 4.98 years). Creation of items was based on previous problematic pornography use instruments and on the definitions of factors in Griffiths's model. A confirmatory factor analysis (CFA) was carried out because the scale is based on a well-established theoretical model leading to an 18-item second-order factor structure. The reliability of the PPCS was excellent, and measurement invariance was established. **In the current sample, 3.6% of the users belonged to the at-risk group.** Based on sensitivity and specificity analyses, we identified an optimal cutoff to distinguish between problematic and nonproblematic pornography users. The PPCS is a multidimensional scale of problematic pornography use with a strong theoretical basis that also has strong psychometric properties in terms of factor structure and reliability.

7.1.4 [Bóthe, Tóth-Király, Potenza, Orosz, & Demetrovics \(2020\)](#). High-Frequency Pornography Use May Not Always Be Problematic. *The Journal of Sexual Medicine*.

ABSTRACT: BACKGROUND: Previously, variable-centered analytic approaches showed positive, weak-to-moderate associations between frequency of pornography use (FPU) and problematic pornography use (PPU). However, person-centered studies are sparse in the literature, and these could provide insight into whether there are individuals who use pornography frequently and do not experience problems or whether there are individuals with comparable high-frequency use who differ on reported experiencing of negative consequences.

AIM: The aims of the present study were (i) to identify profiles of pornography use based on FPU and PPU by applying a person-centered analytic approach and (ii) to examine whether the identified profiles could be distinguished based on theoretically relevant demographic and psychological constructs.

METHODS: Latent profile analyses were conducted on 3 nonclinical samples recruited from general websites and a pornography site (study 1: N = 14,006; study 2: N = 483; study 3: N = 672).

RESULTS: Results were consistent across all studies. **3 distinct pornography-use profiles emerged: nonproblematic low-frequency pornography use (68-73% of individuals), nonproblematic high-frequency pornography use (19-29% of individuals), and problematic high-frequency use (3-8% of individuals).** Nonproblematic and problematic high-frequency-use groups showed differences in several constructs (ie, hypersexuality, depressive symptoms, boredom susceptibility, self-esteem, uncomfortable feelings regarding pornography, and basic psychological needs).

CLINICAL TRANSLATION: FPU should not be considered as a sufficient or reliable indicator of PPU because the number of people with nonproblematic high-frequency use was 3-6 times higher than that with problematic high-frequency use. These results suggest that individuals with PPU use pornography frequently; however, FPU may not always be problematic.

STRENGTHS & LIMITATIONS: Self-report cross-sectional methods have possible biases that should be considered when interpreting findings (eg, underreporting or overreporting). However, the present research included 3 studies and involved large community samples and visitors of a pornography website. The present study is the first that empirically investigated pornography-use profiles with a wide range of correlates using both severity of PPU and FPU as profile indicators on specific and general samples.

CONCLUSIONS: The present study is a first step in the differentiated examination of pornography-use profiles, taking into consideration both PPU and FPU, and it provides a foundation for further clinical and large-scale studies. Different psychological mechanisms may underlie the development and maintenance of FPU with or without PPU, suggesting different treatment approaches. Therefore, the present results may guide clinical work when considering reasons for seeking treatment for PPU.

FIGURE:

Frequency vs Problematic Use

797

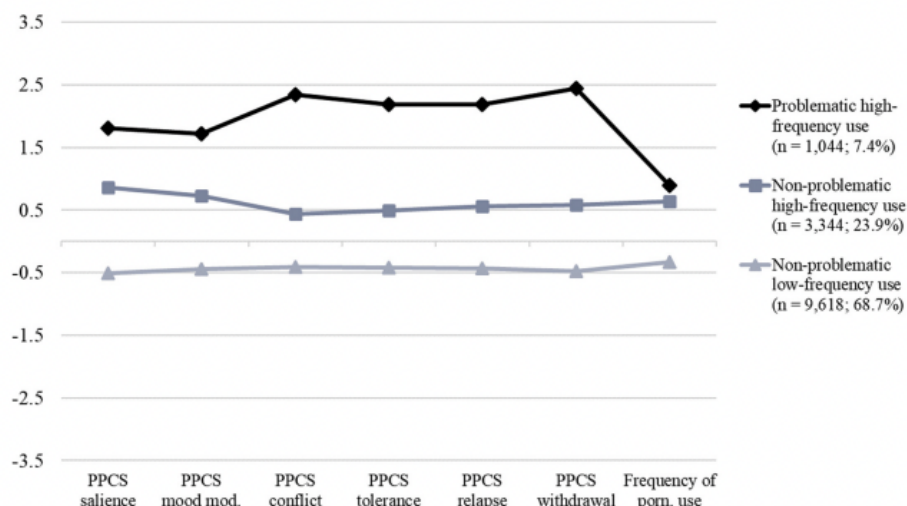


Figure 1. Latent classes based on the dimensions of the Problematic Pornography Consumption Scale (PPCS) and the frequency of pornography use (FPU) in study 1 (N = 14,006). *Note.* Scores on the subscales of the PPCS and FPU were standardized. Figure 1 is available in color online at www.jsm.jsexmed.org.

7.1.5 [Grubbs, Volk, Exline, & Pargament \(2015\)](#). Internet Pornography Use: Perceived Addiction, Psychological Distress, and the Validation of a Brief Measure. *Journal of Sex & Marital Therapy*.

ABSTRACT:The authors aimed to validate a brief measure of perceived addiction to Internet pornography refined from the 32-item Cyber Pornography Use Inventory, report its psychometric properties, and examine how the notion of perceived addiction to Internet pornography might be related to other domains of psychological functioning. To accomplish this, 3 studies were conducted using a sample of undergraduate psychology students, a web-based adult sample, and a sample of college students seeking counseling at a university's counseling center. The authors developed and refined a short 9-item measure of perceived addiction to Internet pornography, confirmed its structure in multiple samples, **examined its relatedness to hypersexuality more broadly, and demonstrated that the notion of perceived addiction to Internet pornography is very robustly related to various measures of psychological distress. Furthermore, the relation between psychological distress and the new measure persisted, even when other potential contributors (e.g., neuroticism, self-control, amount of time spent viewing pornography) were controlled for statistically,** indicating the clinical relevance of assessing perceived addiction to Internet pornography.

- 7.1.6 [Doornwaard, van den Eijnden, Baams, Vanwesenbeeck, & ter Bogt \(2016\).](#) Lower Psychological Well-Being and Excessive Sexual Interest Predict Symptoms of Compulsive Use of Sexually Explicit Internet Material Among Adolescent Boys. *Journal of Youth and Adolescence*.

ABSTRACT: Although a growing body of literature addresses the effects of young people's use of sexually explicit Internet material, research on the compulsive use of this type of online content among adolescents and its associated factors is largely lacking. This study investigated whether factors from three distinct psychosocial domains (i.e., psychological well-being, sexual interests/behaviors, and impulsive-psychopathic personality) predicted symptoms of compulsive use of sexually explicit Internet material among adolescent boys. Links between psychosocial factors and boys' compulsive use symptoms were analyzed both cross-sectionally and longitudinally with compulsive use symptoms measured 6 months later (T2). Data were used from 331 Dutch boys (M age = 15.16 years, range 11–17) who indicated that they used sexually explicit Internet material. The results from negative binomial regression analyses indicated that **lower levels of global self-esteem and higher levels of excessive sexual interest concurrently predicted boys' symptoms of compulsive use of sexually explicit Internet material. Longitudinally, higher levels of depressive feelings and, again, excessive sexual interest predicted relative increases in compulsive use symptoms 6 months later. Impulsive and psychopathic personality traits were not uniquely related to boys' symptoms of compulsive use of sexually explicit Internet material.** Our findings, while preliminary, suggest that both psychological well-being factors and sexual interests/behaviors are involved in the development of compulsive use of sexually explicit Internet material among adolescent boys. Such knowledge is important for prevention and intervention efforts that target the needs of specific problematic users of sexually explicit Internet material.

- 7.1.7 [de Alarcón, de la Iglesia, Casado, & Montejo \(2019\).](#) Online Porn Addiction: What We Know and What We Don't—A Systematic Review. *Journal of Clinical Medicine*.

ABSTRACT: In the last few years, there has been a wave of articles related to behavioral addictions; some of them have a focus on online pornography addiction. However, despite all efforts, we are still **unable to profile when engaging in this behavior becomes pathological.** Common problems include: sample bias, the search for diagnostic instrumentals, opposing approximations to the matter, and the fact that **this entity may be encompassed inside a greater pathology (i.e., sex addiction)**

that may present itself with very diverse symptomatology. Behavioral addictions form a largely unexplored field of study, and usually exhibit a problematic consumption model: **loss of control, impairment, and risky use**. Hypersexual disorder fits this model and may be composed of several sexual behaviors, like problematic use of online pornography (POPU). Online pornography use is on the rise, with a potential for addiction considering the **“triple A” influence (accessibility, affordability, anonymity)**. This problematic use might have adverse effects in sexual development and sexual functioning, especially among the young population. We aim to gather existing knowledge on problematic online pornography use as a pathological entity. Here we try to summarize what we know about this entity and outline some areas worthy of further research.

EXCERPT: Major brain changes observed across substance addicts lay the groundwork for the future research of addictive behaviors, including:

1. Sensitization
2. Desensitization
3. Dysfunctional prefrontal circuits (hypofrontality)
4. Malfunctioning stress system

These brain changes observed in addicts have been linked with patients with hypersexual behavior or pornography users through approximately 40 studies of different types: magnetic resonance imaging, electroencephalography (EEG), neuroendocrine, and neuropsychological. For example, there are clear differences in brain activity between patients who have compulsive sexual behavior and controls, which mirror those of drug addicts. When exposed to sexual images, hypersexual subjects have shown differences between liking (in line with controls) and wanting (sexual desire), which was greater. In other words, in these subjects there is more desire only for the specific sexual cue, but not generalized sexual desire. This points us to the sexual cue itself being then perceived as a reward.

Evidence of this neural activity signaling desire is particularly prominent in the prefrontal cortex and the amygdala, being evidence of sensitization. Activation in these brain regions is reminiscent of financial reward and it may carry a similar impact.

Moreover, there are higher EEG readings in these users, as well as the diminished desire for sex with a partner, but not for masturbation to pornography, something that reflects also on the difference in erection quality. This can be considered a sign of desensitization. However, Steele's study contains several methodological flaws to consider (subject heterogeneity, a lack of screening for mental disorders or addictions, the absence of a control group, and the use of questionnaires not validated for porn use). A study by Prause, this time with a control group, replicated these very findings.

The role of cue reactivity and craving in the development of cybersex addiction have been corroborated in heterosexual female and homosexual male samples.

EXCERPT 2: Some interesting facts about pornography consumption tendencies stand out. One of them is that the 1963 and 1972 male cohort showed only a very small decline on their usage from the year 1999 onwards, suggesting **that porn consumption among these groups has remained relatively constant since. The other one is that 1999 is also the year the tendency for women aged 18 to 26 to consume pornography became three times as likely than the ones aged 45 to 53,** instead of just two times as likely as it used to be up until that point. These two facts could be related to changing tendencies in pornography consumption motivated by technology (switching from the offline to the online model of consumption), but it is impossible to know for sure since the original data does not account for differences in both offline and online variants when tracking pornography usage.

EXCERPT 3: **Predictors for problematic sexual behavior and pornography use are, across populations: being a man, young age, religiousness, frequent Internet use, negative mood states, and being prone to sexual boredom, and novelty seeking.** Some of this risk factors are also shared by hypersexual behavior patients.

[Other studies? What have we missed?]

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8. MAJOR REVIEW ARTICLES AND DATABASES

8.1 STUDIES INDICATING A NEGATIVE EFFECT ON MENTAL AND/OR SEXUAL HEALTH

8.1.1 [Owens, Behun, Manning, & Reid \(2012\)](#). The Impact of Internet Pornography on Adolescents: A Review of the Research. *Sex Addiction & Compulsivity*.

ABSTRACT: The recent proliferation of Internet-enabled technology has significantly changed the way adolescents encounter and consume sexually explicit material. Once confined to a personal computer attached to a telephone line, the Internet is now

available on laptops, mobile phones, video game consoles, and other electronic devices. With the growth of the Internet has come easier and more ubiquitous access to pornography. The purpose of this article was to review the recent (i.e., 2005 to present) literature regarding the impact of Internet pornography on adolescents. Specifically, this literature review examined the impact of Internet pornography on sexual attitudes, beliefs, behaviors, and sexual aggression. The authors also discuss the literature related to the influence of sexually explicit Internet material on self-concept, body image, social development, as well as the expanding body of research on adolescent brain function and physical development. Finally, recommendations for future research were discussed, based on this literature review.

EXCERPT: Collectively, these studies suggest that youth who consume pornography may develop unrealistic sexual values and beliefs. Among the findings, higher levels of permissive sexual attitudes, sexual preoccupation, and earlier sexual experimentation have been correlated with more frequent consumption of pornography. Researchers have had difficulty replicating these results, however, and as a result the aggregate literature has failed to indicate conclusive results. Nevertheless, consistent findings have emerged linking adolescent use of pornography that depicts violence with increased degrees of sexually aggressive behavior... The literature does indicate some correlation between adolescents' use of pornography and self-concept. **Girls report feeling physically inferior to the women they view in pornographic material, while boys fear they may not be as virile or able to perform as the men in these media. Adolescents also report that their use of pornography decreased as their self-confidence and social development increase.** Additionally, research suggests that adolescents who use pornography, **especially that found on the Internet, have lower degrees of social integration, increases in conduct problems, higher levels of delinquent behavior, higher incidence of depressive symptoms, and decreased emotional bonding with caregivers.**

8.1.2 [Peter & Valkenburg \(2016\)](#). Adolescents and pornography: A Review of 20 years of research. *Journal of Sex Research*.

ABSTRACT: The goal of this review was to systematize empirical research that was published in peer-reviewed English-language journals between 1995 and 2015 on the prevalence, predictors, and implications of adolescents' use of pornography. This research showed that adolescents use pornography, but prevalence rates varied greatly. **Adolescents who used pornography more frequently were male, at a more advanced pubertal stage, sensation seekers, and had weak or troubled family relations. Pornography use was associated with more permissive sexual attitudes**

and tended to be linked with stronger gender-stereotypical sexual beliefs. It also seemed to be related to the occurrence of sexual intercourse, greater experience with casual sex behavior, and more sexual aggression, both in terms of perpetration and victimization. The findings of this review need to be seen against the background of various methodological and theoretical shortcomings, as well as several biases in the literature, which currently precludes internally valid causal conclusions about effects of pornography on adolescents.

8.1.3 [Döring \(2009\)](#). The Internet's impact on sexuality: a critical review of 15 years of research. *Comp. Hum. Behav.*

ABSTRACT: Young people's use and participation in online sexual activities (OSA) has increased in the past two decades and has changed their behavior in the area of sexuality. The existing literature has some important limitations, concerning the assessment of the construct and its orientation toward problematic use, while ignoring its healthy use or social participation and its relationship with well-being. The main objective of this study was to analyze the relationships between the three types of OSA (compulsive, isolated, and social) proposed by Delmonico and Miller, as well as offline sexual behavior, and psychosexual well-being. It was also necessary to evaluate the factor structure of the Internet Sexual Screening Test (ISST). Participants were 1,147 university students of both sexes, aged between 18 and 26 years, who completed a battery of online questionnaires. The main finding of the study is that, when controlling for other online sexual behavior, different types of OSA evaluated relate differently to offline sexual behavior and to psychosexual well-being, and that most young people made healthy use and participation of OSA. It also presents a new structure of the ISST. The discussion emphasizes the need to recognize the positive consequences of OSA to implement programs for the promotion of sexual health.

EXCERPT: In the United States, so called Internet addiction afflicts approximately **8.5% of Internet users who go online for sexual pursuits (Cooper, Scherer, Boies, & Gordon, 1999), which is equivalent to approximately 2% of all Internet users (Albright, 2008), or less than 1% of the general population (Shaw & Black, 2008).** These individuals most often engage in excessive use of online pornography, but also online chats, online games, etc. An intensive preoccupation with online pornography (usually by the male partner) can negatively impact the quality of heterosexual relationships, both sexually and emotionally (Manning, 2006). The use of online pornography in the workplace can impair performance and potentially result in employee dismissal (Cooper, Golden, & Kent-Ferraro, 2002). To the extent that

paid cyberpornography is consumed, excessive use may also lead to financial problems.

...empirical studies have shown that the consumption of **online pornography by Danish adolescents was accompanied by sexual insecurity** (Peter & Valkenburg, 2008b), and among adolescents in **Taiwan and Hong Kong it was associated with negative attitudes toward marriage, family, and monogamy** (Lam & Chan, 2007; Lo & Wei, 2005). **Such correlation studies, however, do not permit any determinations of causality.** For example, it may be the case that sexually insecure adolescents turn more frequently to pornography rather than becoming insecure because of it. Caution is advisable not merely regarding the attribution of causality, but also in the assessment of the presumed consequences.

8.1.4 [Park... & Doan \(2016\)](#). Is Internet Pornography Causing Sexual Dysfunctions? A Review with Clinical Reports. *Behavioral Sciences*.

ABSTRACT: Traditional factors that once explained men's sexual difficulties appear insufficient to account for the sharp rise in erectile dysfunction, delayed ejaculation, decreased sexual satisfaction, and diminished libido during partnered sex in men under 40. This review (1) considers data from multiple domains, e.g., clinical, biological (addiction/urology), psychological (sexual conditioning), sociological; and (2) presents a series of clinical reports, all with the aim of proposing a possible direction for future research of this phenomenon. Alterations to the brain's motivational system are explored as a possible etiology underlying pornography-related sexual dysfunctions. **This review also considers evidence that Internet pornography's unique properties (limitless novelty, potential for easy escalation to more extreme material, video format, etc.) may be potent enough to condition sexual arousal to aspects of Internet pornography use that do not readily transition to real-life partners, such that sex with desired partners may not register as meeting expectations and arousal declines.** Clinical reports suggest that terminating Internet pornography use is sometimes sufficient to reverse negative effects, underscoring the need for extensive investigation using methodologies that have subjects remove the variable of Internet pornography use. In the interim, a simple diagnostic protocol for assessing patients with porn-induced sexual dysfunction is put forth.

[NOTE: This article has been [recommended for retraction](#) by the Committee on Publication Ethics.]

8.1.5 [Wright, Tokunaga, Kraus, & Klann \(2017\)](#). Pornography Consumption and Satisfaction: A Meta-Analysis. *Human Communication Research*.

ABSTRACT: A classic question in the communication literature is whether pornography consumption affects consumers' satisfaction. The present paper represents the first attempt to address this question via meta-analysis. **Fifty studies collectively including more than 50,000 participants from 10 countries were located across the interpersonal domains of sexual and relational satisfaction and the intrapersonal domains of body and self satisfaction. Pornography consumption was not related to the intrapersonal satisfaction outcomes that were studied. However, pornography consumption was associated with lower interpersonal satisfaction outcomes in cross-sectional surveys, longitudinal surveys, and experiments.** Associations between pornography consumption and reduced interpersonal satisfaction outcomes were not moderated by their year of release or their publication status. But analyses by sex indicted significant results for men only.

[Other studies? What have we missed?]

8.2 STUDIES INDICATING A POSITIVE EFFECT ON MENTAL AND/OR SEXUAL HEALTH

[Other studies? What have we missed?]

8.3 STUDIES INDICATING A LITTLE OR NO EFFECT ON MENTAL AND/OR SEXUAL HEALTH

8.3.1 [Ferguson, & Hartley \(2022\)](#). Pornography and sexual aggression: Can meta-analysis find a link? *Trauma, Violence, & Abuse*.

ABSTRACT: Whether pornography contributes to sexual aggression in real life has been the subject of dozens of studies over multiple decades. Nevertheless, scholars have not come to a consensus about whether effects are real. The current meta-analysis examined experimental, correlational, and population studies of the pornography/sexual aggression link dating back from the 1970s to the current time. Methodological weaknesses were very common in this field of research. Nonetheless,

evidence did not suggest that nonviolent pornography was associated with sexual aggression. Evidence was particularly weak for longitudinal studies, suggesting an absence of long-term effects. Violent pornography was weakly correlated with sexual aggression, although the current evidence was unable to distinguish between a selection effect as compared to a socialization effect.

Studies that employed more best practices tended to provide less evidence for relationships whereas studies with citation bias, an indication of researcher expectancy effects, tended to have higher effect sizes. Population studies suggested that increased availability of pornography is associated with reduced sexual aggression at the population level. More studies with improved practices and preregistration would be welcome.

[Other studies? What have we missed?]

8.4 STUDIES INDICATING MIXED EFFECTS ON MENTAL AND/OR SEXUAL HEALTH

[Other studies? What have we missed?]

<https://link.springer.com/article/10.1007/s10508-019-1397-6>

(to add in this section.)

* * * * *

9. CONCLUSION

[To come]

Some thoughts at the moment:

- **Porn use is keeping men in a technological spiral (more time on porn -> worse off in actual relationships -> more lonely -> more porn and other tech, etc. And they all feed into each other)**

- Pornography seems to be particularly problematic in heterosexual relationships. It mostly is driven by males (lack of sexual interest, lack of sexual function, imagining pornography when having sex, watching porn secretly]
 - HOWEVER, when porn is used together, seems to have positive effects on relational intimacy
- High frequency use is when you are most likely to see problems emerge.
- Girls who watch porn regularly seem to have poor mental health. However, more and more woman are watching porn (it seems that the romance novel is being translated into what is now called 'porn for woman' – more sensual, romance based porn)
- High porn use often leads to a reduction in perceived attractiveness to a partner
- Hypothesis: Use at young age is not experienced as problematic. But as boys grow older they develop sexual functioning issues. This leads to relationship deterioration.
- Porn use has led to changes in sexual attitudes, colliding with the world of dating apps (more acceptable casual sex, more risky sex (condomless), etc.). But we also know that YA are having less sex... so not sure
- A rise of compulsive use leading to xxx
 - Boys are experiencing more depression, lower self-worth (we should see rise in compulsive use)
 - a. This is due to low employment, hard to get into a relationship, fewer friendships
 - Low self-esteem, depression, excessive sexual interest predict compulsive use
 - Compulsive use leads to....
- Porn has has some positive outcomes for LGBT
- Porn use is particularly problematic when tied with guilt and shame (which is quite common... for girls, for those who are religious).
- Some of the negative effects of porn can be counterbalanced if there is a strong social support network (e.g., good communication with parents about sex, etc.)
-

TO LOOK INTO:

- Types of porn people are watching (violent vs. non-violent; how socially taboo, etc.)
 - Also need to look into different types of porn use: camming, onlyfans, VR, paid subscription channels, mainstream vs. more taboo channels... child pornography...
- Any research on puberty and porn watching... impact on developing brain

- Rates of erectile dysfunction issues

Environment dependent testosterone (less sexual drive). Safer, more comfortable

If testosterone levels are lower... when would that have started? Also could explain more of

10. APPENDICES

10.1 TIMELINE OF DIGITAL PORN CHANGES

"In 1991, the year the World Wide Web went online, there were fewer than 90 different adult magazines published in America, and you'd have been hard-pressed to find a newsstand that carried more than a dozen. Just six years later, in 1997, there were about 900 pornography sites on the Web. Today, the filtering software CYBERsitter blocks 2.5 million adult Web sites."

Abbreviations: OF = OnlyFans; CB = Chaturbate; PH = Pornhub; YP = YouPorn; BZ = Brazzers, AVN = Adult Video News

Year	Platform and Change
1908	The first pornographic film, L'Ecu d'Or ou la bonne auberge is released in France in 1908
1933	The first non-pornographic film to depict a woman having an orgasm, "Ecstasy", is released in Czechoslovakia.
1953	PLAYBOY: Founded
1960s	The sexual revolution and the rise of the counterculture lead to a greater acceptance of pornography and an increase in its production and distribution.
1970s	HUSTLER and VIVID: VCR technology leads to the rise of the adult film industry. Hustler video and vivid entertainment are established. Adult film studios produce and distribute films on VHS tapes.
1971	ADAM&EVE: Established.

1980s	The rise of home video technology and the personal computer leads to the growth of the pornographic video rental industry. The internet is created and the first online bulletin boards and forums dedicated to pornography appear. Usenet newsgroups provided an early way of sharing images over the narrow bandwidth available in the early 1990s. Peer-to-peer file sharing networks provide another form of free access to pornography.
1981	Invention of the webcam
1983	AVN: Adult Video News is established
1991	World Wide Web goes online, leading to an explosion of online pornography.
1997	XNXX: Founded In 1997, there are ~900 pornography sites on the web
2000s	MAJOR SHIFTS IN THE DOT.COM ERA: • Shift from Pay-per-view to user-generated tube sites where revenue did not come from subscribers but from advertisers. • Shift from desktop to laptop to multiple laptops in the family. • Faster internet speeds, better webcam technology (people could become online pornstars for a living). Enabled streaming on video pornography. • Porn becomes universally accessible (affordable and anonymous).
2005	BZ: Founded
2006	YP: Founded
2007	PH: Founded XVideos: Founded
2010s	MAJOR SHIFTS IN THE MOBILE ERA: • The rise of social media and mobile devices leads to an increase in the consumption of pornographic content. • Social media platforms such as Facebook and Instagram begin to implement stricter policies on pornographic content,

	leading to a decrease in the visibility of adult content on these platforms. • The rise of free pornographic content on the internet leads to a decrease in the revenue of the traditional pornographic industry, as more and more people turn to free content rather than paying for it. • The rise of virtual reality and live streaming technology leads to the creation of new forms of pornographic content, with platforms such as "CamSoda" and "Chaturbate" established.
2011	CB: Founded
2014	Camsoda: Founded
2016	OF: Founded. Uses subscription based model.
2017	SPANKCHAIN: Founded. Uses crypto and blockchain for secure and anonymous transactions.
2020s	MAJOR SHIFTS IN THE AI ERA • The use of cryptocurrency and blockchain technology allows for more secure and anonymous transactions in the pornographic industry. • The rise of subscription-based models and paywall systems in the pornographic industry, as a response to the decline in revenue due to the rise of free content online (e.g., Onlyfans). • The use of AI and deepfake technology leads to the creation of synthetic pornographic content, raising concerns about consent and the potential for abuse. • The rise of social media and the internet has led to an increase in the availability of amateur pornographic content, leading to a decrease in the revenue of the traditional pornographic industry.
2022	There are 2.5 million adult pornography sites

To include:

- Rise of audio porn
- Specialized porn (kinks, LGBTQ, porn for everyone and everything)
-

* * * * *

10.2 ERECTILE DYSFUNCTION TRENDS

10.2.1 [Pozzi... & Salonia, A. \(2021\)](#). Trends in reported male sexual dysfunction over the past decade: An evolving landscape. *International Journal of Impotence Research*.

ABSTRACT: We investigated changes in patterns of reported male SDs at a single academic centre over a 10-year time frame. Comprehensive data of 2013 patients consecutively assessed for the first time by a single Sexual Medicine expert between 2006 and 2019 has been analysed. All patients were assessed with a thorough sexual and medical history. Primary reason for seeking medical help at first assessment was recorded for all patients and categorized as: erectile dysfunction (ED), premature ejaculation (PE), low/reduced sexual desire/interest (LSD/I), Peyronie's disease (PD), and other SDs. Linear and logistic regression models tested the association between different reasons for seeking medical help and the time at first evaluation. Local polynomial regression model explored the probability of reporting different SDs over the analysed time frame. Median (IQR) age at first clinical assessment was 50 (38–61) years. Overall, most patients were assessed for ED (824; 41%), followed by PD (369; 18%), PE (322; 16%), LSD/I (204; 10%) and other SDs (294; 15%). Significant changes in terms of reported SD over the analysed time frame were observed. **The likelihood of assessing patients for ED significantly increased up to 2013, with a decrease in the past 5 years ($p < 0.001$). PE assessment at presentation linearly decreased over time (OR: 0.94; 95% CI: 0.91–0.96; $p < 0.001$). Patients assessed during the past few years were more likely to report PD (OR: 1.20; 95% CI: 1.15–1.25; $p < 0.001$) and LSD/I (OR: 1.21; 95% CI: 1.16–1.26; $p < 0.001$), with a linear increase over the evaluated time frame.** Likewise, patients were also more likely to report other SDs (Coeff: 1.06; 95% CI: 1.02–1.10; $p = 0.004$), with a linear increase over time. These results may reflect real changes in SD incidence, increased public awareness towards different SDs and the possible impact of novel treatments available on the market throughout the same time frame.

GRAPHS:

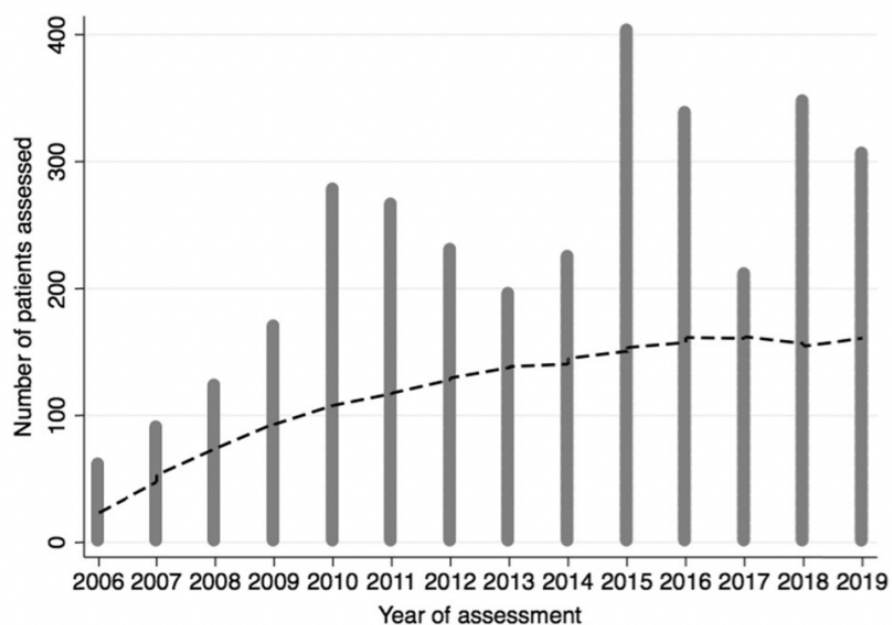


Fig. 1 Patients seeking help for sexual dysfunction (any type) over time. The dashed line represents the increasing trend of patients assessed over time estimated with local polynomial smoothing.

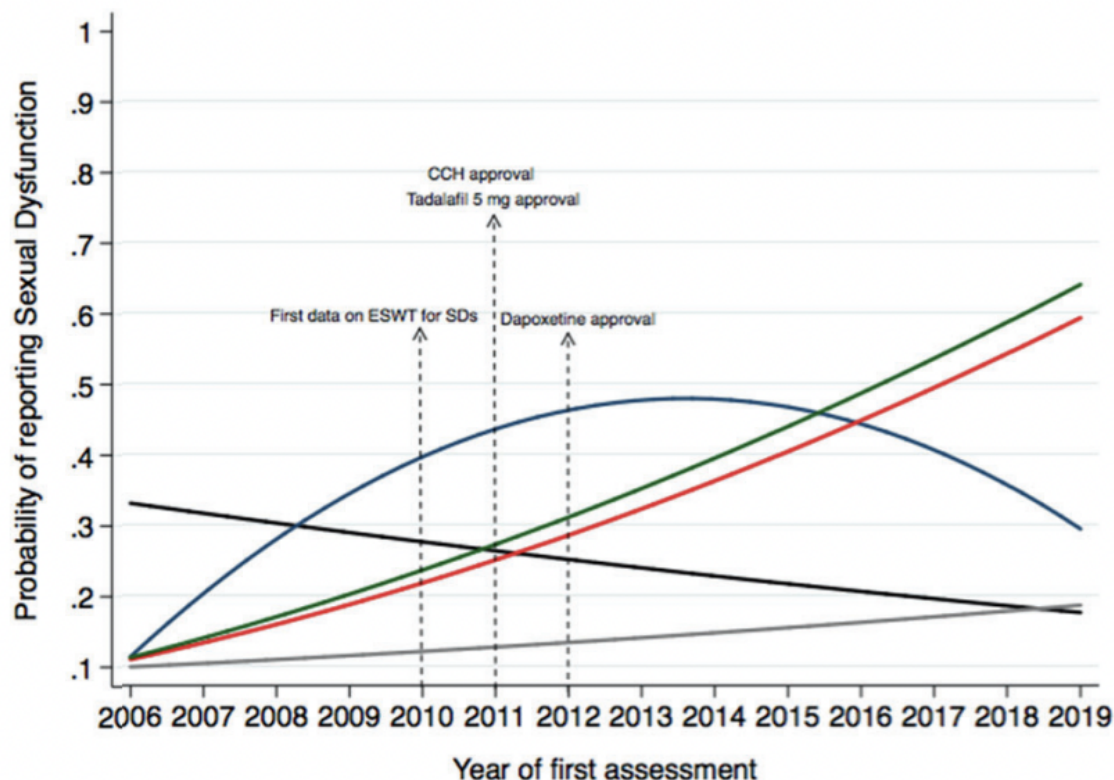


Fig. 2 Probability of reporting different sexual dysfunctions over time. Blue line represents erectile dysfunction over time; black line depicts premature ejaculation; green line represents Peyronie's disease; red line represents low sexual desire/interest; and grey line represents other sexual issues.

10.2.2 [Hui, He, Liu, Zeng, Zhang, & Wei \(2020\)](#). Trends in erectile dysfunction research from 2008 to 2018: A bibliometric analysis. *International Journal of Impotence Research*.

ABSTRACT: Insufficient penile erection to facilitate vaginal penetration is a medical condition referred to as erectile dysfunction (ED). By the year 2025, the number of ED cases across the world is expected to reach 322 million. There are numerous publications and studies in the field of ED over the past decades. Our aim is to comprehensively analyze the global scientific outputs of ED research and show the trends and hotspots in ED research. Data of publications were downloaded from the Web of Science Core Collection. We used CiteSpace IV and Excel 2016 to analyze literature information, including journals, countries/regions, institutes, authors, citation reports, and research frontiers. Until October 26, 2018, a total of 8880 papers in ED

research were identified as published between 2008 and 2018. Journal of Sexual Medicine published the most articles. The United States contributed the most publications and occupied leading positions in H-index value and the number of ESI top papers. Maggi M owned the highest co-citations. The keyword “Oxidative stress” ranked first in the research front-line. The amount of articles published in ED research has been stable from 2008 to 2018. The United States showed enormous progress in ED research, and is still the dominant country. Oxidative stress, vardenafil, and late-onset hypogonadism were the latest research frontiers and should be paid more attention.

10.2.3 [Armed Forces Health Surveillance Center \(2014\)](#). Erectile dysfunction among male active component service members, U.S. Armed Forces, 2004-2013.

ABSTRACT: Erectile dysfunction (ED) is considered a common medical disorder and it is the most common sexual complaint reported by men to healthcare providers. The epidemiology of this condition in active component U.S. service members has been unclear. This report describes the counts and rates of newly diagnosed ED in active component servicemen during 2004-2013. There were 100,248 incident cases of ED (rate: 8.4 per 1,000 person-years) during that period. ED cases classified as psychogenic comprised almost half of all ED cases. **Annual incidence rates more than doubled between 2004 and 2013.** Higher incidence rates were associated with advancing age; black, non-Hispanic ethnicity; marital status of separated, divorced, and widowed; higher level of education; and never having deployed. The editorial comments discuss comparisons with findings in the published literature, the limitations of this study, and possible additional analyses.

10.2.4 [Calzo... & Chavarro \(2021\)](#). Erectile Dysfunction in a Sample of Sexually Active Young Adult Men from a U.S. Cohort: Demographic, Metabolic and Mental Health Correlates. *The Journal of Urology*.

ABSTRACT: Little is understood about physiological and psychological correlates of erectile dysfunction among younger men. We examined prevalence and correlates of erectile dysfunction in a large U.S. sample of 18 to 31-year-old men.

METHODS: Erectile dysfunction prevalence and severity (defined using the International Index of Erectile Function-5 scale) were examined in cross-sectional survey data from 2,660 sexually active men, age 18 to 31 years, from the 2013 Growing Up Today Study. Erectile dysfunction medication and supplement use were self-reported. Multivariable models estimated associations of moderate-to-severe erectile dysfunction with demographic (age, marital status), metabolic (body mass

index, waist circumference, history of diabetes, hypertension, hypercholesterolemia) and mental health (depression, anxiety, antidepressant use, tranquilizer use) variables.

RESULTS: Among sexually active men 11.3% reported mild erectile dysfunction and 2.9% reported moderate-to-severe erectile dysfunction. Married/partnered men had 65% lower odds of erectile dysfunction compared to single men.

Adjusting for history of depression, antidepressant use was associated with more than 3 times the odds of moderate-to-severe erectile dysfunction. Anxiety was associated with greater odds of moderate-to-severe erectile dysfunction, as was tranquilizer use. Few men (2%) reported using erectile dysfunction medication or supplements. However, among them, 29.7% misused prescription erectile dysfunction medication. Limitations include reliance upon cross-sectional data and the sample's limited racial/ethnic and socioeconomic diversity.

CONCLUSIONS: Erectile dysfunction was common in a large sample of sexually active young adult men from a U.S. cohort and was associated with relationship status and mental health. Health providers should screen for erectile dysfunction in young men, and monitor use of prescription erectile dysfunction medications and supplements for sexual functioning.

10.2.5 [O'Sullivan, Byers, Brotto, Majerovich, & Fletcher \(2016\)](#). A Longitudinal Study of Problems in Sexual Functioning and Related Sexual Distress Among Middle to Late Adolescents. *The Journal of Adolescent Health: Official Publication of the Society for Adolescent Medicine*.

ABSTRACT: PURPOSE: Rates of sexual dysfunctions are high among adults, but little is known about problems in sexual functioning among adolescents. We completed a comprehensive assessment of problems in sexual functioning and related distress over a 2-year period among adolescents (16-21 years).

METHODS: A sample of 405 adolescents completed five online surveys over 2 years. The main outcome measures were clinical cutoff scores on the International Index of Erectile Function and Premature Ejaculation Diagnostic Tool for male adolescents and the Female Sexual Function Index for female adolescents. A secondary outcome was clinical levels of distress.

RESULTS: The majority of sexually active adolescents (78.6% of the male and 84.4% of the female) reported a sexual problem over the course; rates did not differ significantly by gender. Common problems for males were low sexual satisfaction (47.9%), low desire (46.2%), and problems in erectile function (45.3%). Common problems for females were inability to reach orgasm (59.2%), low satisfaction (48.3%), and pain (46.9%). Models predicting problems over time showed increased

odds among those not in a sexual relationship. Odds of reporting a distressing sexual problem decreased over time for female but not male adolescents.

CONCLUSIONS: Problems in sexual functioning emerge early in individuals' sexual lives, are often distressing, and appear not to fluctuate over time. Additional efforts to identify key factors linked to onset will help elucidate possible mechanisms.

10.2.6 [Landripet, & Štulhofer \(2015\)](#). Is Pornography Use Associated with Sexual Difficulties and Dysfunctions among Younger Heterosexual Men? *The Journal of Sexual Medicine*.

ABSTRACT: INTRODUCTION: Recent epidemiological studies reported high prevalence rates of erectile dysfunction (ED) among younger heterosexual men (≤ 40). It has been suggested that this “epidemic” of ED is related to increased pornography use. However, empirical evidence for such association is currently lacking.

AIM: This study analyzes associations between pornography use and sexual health disturbances among younger heterosexual men using four large-scale online samples from three European countries.

METHODS: The analyses were carried out using a 2011 cross-sectional online study of Croatian, Norwegian, and Portuguese men (Study 1; $N = 2,737$) and a 2014 cross-sectional online study of Croatian men (Study 2; $N = 1,211$). Chi-square test and multivariate logistic regression were used to explore the associations between pornography use and sexual difficulties.

OUTCOMES MEASURE: In Study 1, erectile difficulties, inability to reach orgasm, and a lack of sexual desire were measured using the Global Study of Sexual Attitudes and Behavior indicators. In Study 2, ED was measured with the abridged International Index of Erectile Function (IIEF-5). Delayed ejaculation and a decrease of sexual desire were assessed with one-item indicators.

RESULTS: **In Study 1, only the relationship between pornography use and ED among Croatian men was statistically significant ($\chi^2[2] = 18.76$, $P < 0.01$). The association was small and inconsistent.** Compared with infrequent use of pornography, **moderate but not high frequency of pornography use increased the odds of reporting ED (adjusted odds ratio = 0.53, $P < 0.01$).** In Study 2, no significant associations both between either the frequency or the recent dynamics of pornography use and male sexual dysfunctions were observed.

CONCLUSION: **We found little evidence of the association between pornography use and male sexual health disturbances.** Contrary to raising public concerns, pornography does not seem to be a significant risk factor for younger men's desire, erectile, or orgasmic difficulties.

10.2.7 [Rastrelli, & Maggi \(2017\)](#). Erectile dysfunction in fit and healthy young men: Psychological or pathological? *Translational Andrology and Urology*.

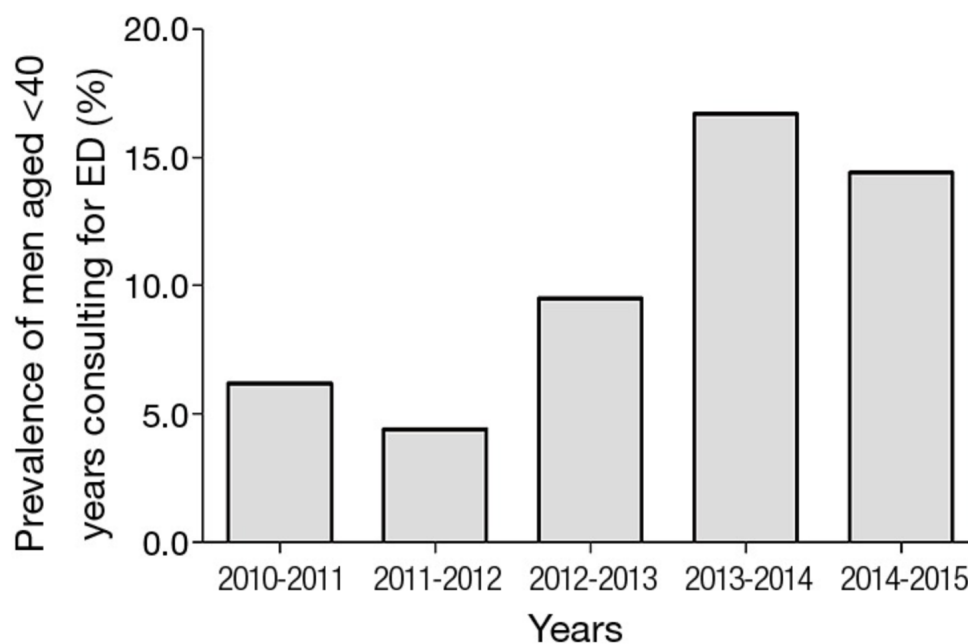
ABSTRACT: Epidemiological studies consistently show that prevalence of erectile dysfunction (ED) increases with ageing. Nonetheless, complaints of ED even in younger men are becoming more and more frequent. Healthcare professionals working in Sexual Medicine but even those operating in different clinical contexts might be adequately prepared to answer this increasing requirement. ED in younger men is likely to be overlooked and dismissed without performing any medical assessment, even the most basic ones, such as collection of medical history and physical exam. This is due to the widespread assumption that ED in younger individuals is a self-limiting condition, which does not deserve any clinical evaluation or therapy and can be managed only with patient reassurance. However, evidence shows that, in younger subjects, organic, psychological and relational conditions can contribute to the pathogenesis of ED and all these conditions might be evaluated and treated, whenever necessary. Among the organic conditions contributing to the onset of ED, metabolic and cardiovascular (CV) risk factors are surprisingly of particular relevance in this age group. In fact, in younger men with ED, even more than in older ones, recognizing CV risk factors or conditions suggestive of cardio-metabolic derangements can help identifying men who, although at low absolute risk due to young age, carry a high relative risk for development of CV events. In this view, the assessment of a possible organic component of ED even in younger individuals acquires a pivotal importance, because it offers the unique opportunity to unearth the presence of CV risk factors, thus allowing effective and high quality preventive interventions.

ADDITIONAL EXCERPT: Studies on ED mostly involve middle-aged and older men, with younger aged men often overlooked. In a multi-centre worldwide study, involving more than 27,000 men from eight countries, Rosen et al. showed an **ED prevalence of 8% among men aged 20–29 years and 11% among those aged 30–39 years**. Most of the studies involving younger men and conducting age-stratified analyses have been performed in Europe, where the prevalence of ED in men younger than 40 years ranges between 1% to 10%. **The prevalence reported in these studies is highly variable due to different methodologies used in defining ED, population accrual, acquisition of data and choice of tools for investigating erectile function.** A smaller number of studies on this topic have been conducted outside Europe. Both in Australia and in America, the available information suggests a similar range of prevalence of ED among young subjects, with the same extent of variability among studies. According to these data, ED in younger men, although still not extensively studied and largely overlooked by the scientific community, is a quite common condition.

In a recent study conducted in a Urology Clinic, it has been observed that one out of four men seeking medical care for ED was younger than 40 years. In our Sexual Medicine and Andrology Unit, established in an Endocrinology setting at the University of Florence, medical consultations for younger men are infrequent, **with a prevalence of men aged less than 40 years at only 14.1% of more than 3,000 men complaining of ED. However, when considering the new referrals to our Unit during the last 6 years, we can notice a progressive increase in prevalence of men below 40 years seeking medical care for ED (Figure 1).** According to these data, ED is becoming a common concern even among young men, and the clinical practitioner in sexual medicine must become aware of how to manage the problem and avoid underestimating a symptom.

FIGURE:

Figure 1



Percentage of men younger than 40 years on the total population of subjects that consulted for the first time the Sexual Medicine and Andrology Unit of the University of Florence for erectile dysfunction, according to the year of referral. ED, erectile dysfunction.

10.2.8 [Capogrosso... & Salonia \(2013\)](#). 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*.

ABSTRACT: INTRODUCTION: Erectile dysfunction (ED) is a common complaint in men over 40 years of age, and prevalence rates increase throughout the aging period.

Prevalence and risk factors of ED among young men have been scantily analyzed.

AIM: Assessing sociodemographic and clinical characteristics of young men (defined as ≤ 40 years) seeking first medical help for new onset ED as their primary sexual disorder.

METHODS: Complete sociodemographic and clinical data from 439 consecutive patients were analyzed. Health-significant comorbidities were scored with the Charlson Comorbidity Index (CCI). Patients completed the International Index of Erectile Function (IIEF).

METHODS: Descriptive statistics tested sociodemographic and clinical differences between ED patients ≤ 40 years and >40 years.

RESULTS: **New onset ED as the primary disorder was found in 114 (26%) men ≤ 40 years (mean [standard deviation [SD]] age: 32.4 [6.0]; range: 17-40 years).** Patients ≤ 40 years had a lower rate of comorbid conditions (CCI = 0 in 90.4% vs. 58.3%; $\chi^2(2)$, 39.12; $P < 0.001$), a lower mean body mass index value ($P = 0.005$), and a higher mean circulating total testosterone level ($P = 0.005$) as compared with those >40 years.

Younger ED patients more frequently showed habit of cigarette smoking and use of illicit drug, as compared with older men (all $P \leq 0.02$). **Premature ejaculation was more comorbid in younger men, whereas Peyronie's disease was prevalent in the older group (all $P = 0.03$).** At IIEF, severe ED rates were found in 48.8% younger men and 40% older men, respectively ($P > 0.05$). Similarly, rates of mild, mild-to-moderate, and moderate ED were not significantly different between the two groups.

CONCLUSIONS: This exploratory analysis showed that one in four patients seeking first medical help for new onset ED was younger than 40 years. Almost half of the young men suffered from severe ED, with comparable rates in older patients. Overall, younger men differed from older individuals in terms of both clinical and sociodemographic parameters.

10.2.9 [Rosen, Fisher, Eardley, Niederberger, Nadel, & Sand \(2004\)](#). The multinational Men's Attitudes to Life Events and Sexuality (MALES) study: I. Prevalence of erectile dysfunction and related health concerns in the general population. *Current Medical Research and Opinion*.

ABSTRACT: OBJECTIVE: The aims of the Men's Attitudes to Life Events and Sexuality (MALES) study were to identify prevalence of erectile dysfunction (ED) and related health issues in the general male population in Europe, North and South America, and to examine the attitudes and behavior of men in relation to these health issues.

Research design and methods: Phase I of the MALES study involved 27839 men aged 20-75 years who were interviewed in eight countries (United States, United Kingdom,

Germany, France, Italy, Spain, Mexico, and Brazil) using a standardized questionnaire. Phase II of the MALES study involved 2912 men who were recruited from the sub-sample of Phase I MALES participants who reported ED together with additional men with ED recruited from other sources.

MEASURES: Prevalence of ED and associated attitudes.

RESULTS: **The overall prevalence of ED in the MALES sample was 16%.** ED prevalence varied markedly by country, however, from a **high of 22% of men in the US reporting ED to a low of 10% in Spain.** The prevalence of self-reported ED increased with increasing age. Men with co-morbid medical conditions and risk factors, including cardiovascular disease, hypertension, dyslipidemia, and depression all reported higher prevalence of ED. Men with ED also reported increased prevalence rates of these co-morbid conditions. MALES Phase II data indicated that among men who reported ED, 58% had actively sought medical attention for their condition; however, only 16% of men with ED were currently being treated with oral PDE-5 therapy.

CONCLUSIONS: The MALES study confirms the high prevalence rates of ED and its association with co-morbid medical conditions, such as diabetes and depression, reported in other large-scale, epidemiological studies. Despite the advent of oral phosphodiesterase inhibitors, only 58% of ED sufferers consult a physician about their problem, and only 16% of men with self-reported ED maintain their use of oral therapy.

10.2.10 [Pozzi... & Salonia \(2021\).](#) Trends in reported male sexual dysfunction over the past decade: An evolving landscape. *International Journal of Impotence Research*.

ABSTRACT: We investigated changes in patterns of reported male SDs at a single academic centre over a 10-year time frame. Comprehensive data of 2013 patients consecutively assessed for the first time by a single Sexual Medicine expert between 2006 and 2019 has been analysed. All patients were assessed with a thorough sexual and medical history. Primary reason for seeking medical help at first assessment was recorded for all patients and categorized as: **erectile dysfunction (ED), premature ejaculation (PE), low/reduced sexual desire/interest (LSD/I), Peyronie's disease (PD), and other SDs.** Linear and logistic regression models tested the association between different reasons for seeking medical help and the time at first evaluation. Local polynomial regression model explored the probability of reporting different SDs over the analysed time frame. Median (IQR) age at first clinical assessment was 50 (38–61) years. Overall, most patients were assessed for ED (824; 41%), followed by PD (369; 18%), PE (322; 16%), LSD/I (204; 10%) and other SDs (294; 15%). Significant changes in terms of reported SD over the analysed time frame were observed. **The likelihood of assessing patients for ED significantly increased up to 2013, with a**

decrease in the past 5 years ($p < 0.001$). PE assessment at presentation linearly decreased over time (OR: 0.94; 95% CI: 0.91–0.96; $p < 0.001$). Patients assessed during the past few years were more likely to report PD (OR: 1.20; 95% CI: 1.15–1.25; $p < 0.001$) and LSD/I (OR: 1.21; 95% CI: 1.16–1.26; $p < 0.001$), with a linear increase over the evaluated time frame. Likewise, patients were also more likely to report other SDs (Coeff: 1.06; 95% CI: 1.02–1.10; $p = 0.004$), with a linear increase over time. These results may reflect real changes in SD incidence, increased public awareness towards different SDs and the possible impact of novel treatments available on the market throughout the same time frame.

10.2.13 [Park... & Doan \(2016\)](#). Is Internet Pornography Causing Sexual Dysfunctions? A Review with Clinical Reports. *Behavioral Sciences*.

ABSTRACT: Traditional factors that once explained men's sexual difficulties appear insufficient to account for the sharp rise in erectile dysfunction, delayed ejaculation, decreased sexual satisfaction, and diminished libido during partnered sex in men under 40. This review (1) considers data from multiple domains, e.g., clinical, biological (addiction/urology), psychological (sexual conditioning), sociological; and (2) presents a series of clinical reports, all with the aim of proposing a possible direction for future research of this phenomenon. Alterations to the brain's motivational system are explored as a possible etiology underlying pornography-related sexual dysfunctions. This review also considers evidence that Internet pornography's unique properties (limitless novelty, potential for easy escalation to more extreme material, video format, etc.) may be potent enough to condition sexual arousal to aspects of Internet pornography use that do not readily transition to real-life partners, such that sex with desired partners may not register as meeting expectations and arousal declines. Clinical reports suggest that terminating Internet pornography use is sometimes sufficient to reverse negative effects, underscoring the need for extensive investigation using methodologies that have subjects remove the variable of Internet pornography use. In the interim, a simple diagnostic protocol for assessing patients with porn-induced sexual dysfunction is put forth.

10.2.14 [Rowland, Castleman, Bacys, Csonka, & Hevesi \(2022\)](#). Do pornography use and masturbation play a role in erectile dysfunction and relationship satisfaction in men? *International Journal of Impotence Research*.

ABSTRACT: Both masturbation frequency and pornography use during masturbation have been hypothesized to interfere with sexual response during partnered sex as well

as overall relationship satisfaction. However, results from prior studies have been inconsistent and frequently based on case studies, clinical reports, and simple binary analyses. The current study investigated the relationships among masturbation frequency, pornography use, and erectile functioning and dysfunction in 3586 men (mean age = 40.8 yrs, SE = 0.22) within a multivariate context that assessed sexual dysfunctions using standardized instruments and that included other covariates known to affect erectile functioning. Results indicated that frequency of pornography use was unrelated to either erectile functioning or erectile dysfunction (ED) severity in samples that included ED men with and without various sexual comorbidities or in a subset of men 30 years or younger ($p = 0.28\text{--}0.79$). Masturbation frequency was also only weakly and inconsistently related to erectile functioning or ED severity in the multivariate analyses ($p = 0.11\text{--}0.39$). In contrast, variables long known to affect erectile response emerged as the most consistent and salient predictors of erectile functioning and/or ED severity, including age ($p < 0.001$), having anxiety/depression ($p < 0.001$ except for a subset of men ≤ 30 years), having a chronic medical condition known to affect erectile functioning ($p < 0.001$ except for a subset of men ≤ 30 years), low sexual interest ($p < 0.001$), and low relationship satisfaction ($p \leq 0.04$). Regarding sexual and relationship satisfaction, poorer erectile functioning ($p < 0.001$), lower sexual interest ($p < 0.001$), anxiety/depression ($p < 0.001$), and higher frequency of masturbation ($p < 0.001$) were associated with lower sexual and lower overall relationship satisfaction. In contrast, frequency of pornography use did not predict either sexual or relationship satisfaction ($p \geq 0.748$). Findings of this study reiterate the relevance of long-known risk factors for understanding diminished erectile functioning while concomitantly indicating that masturbation frequency and pornography use show weak or no association with erectile functioning, ED severity, and relationship satisfaction. At the same time, although verification is needed, we do not dismiss the idea that heavy reliance on pornography use coupled with a high frequency of masturbation may represent a risk factor for diminished sexual performance during partnered sex and/or relationship satisfaction in subsets of particularly vulnerable men (e.g., younger, less experienced).

10.2.15 [Berger, Kehoe, Doan, Crain, Klam, Marshall, & Christman \(2019\)](#). Survey of Sexual Function and Pornography. *Military Medicine*.

ABSTRACT: INTRODUCTION: We aimed to explore and describe the pornography habits of young men and women. Given recent upward trends in pornography use and erectile dysfunction, along with a plausible pathophysiology, we hypothesized that pornography use would correlate with sexual dysfunction.

MATERIALS: Institutional Review Board approval was obtained. Surveys were distributed to 20–40 year old men and women presenting to a urology clinic. Information

was collected on demographics and medical history. Sexual function was evaluated with the International Index of Erectile Function (IIEF) in men and the Female Sexual Function Index in women. Extent of potential addiction to pornography was measured with the pornography craving questionnaire and the obsessive passion scale. Pornography use was measured based on both frequency and duration, and analyzed relative to sexual dysfunction.

RESULTS: Men used pornography significantly more frequently than women (81.1% vs. 39%). Computer and cellular phone image viewing were the most popular modalities in both sexes. There was no association between IIEF and craving for, or obsessive passion for, pornography. **Preference for pornography with masturbation was found to be significantly associated with erectile dysfunction ($p = 0.001$). Rates of erectile dysfunction were lowest in those preferring partnered sex without pornography (22.3%) and increased significantly when pornography was preferred over partnered sex (78%). No correlation was found between any variables and female sexual dysfunction.**

CONCLUSION: Pornography and sexual dysfunction are common among young people. No clear relationship exists between extent of addiction to pornography and sexual dysfunction in either gender. However, men who prefer masturbation with pornography to partnered sex have a significantly increased risk of sexual dysfunction. Given sexual dysfunction may be associated with mental health concerns, further evaluation of its causes and impact on military operational readiness are warranted.

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10.3 PORN USE MOTIVATION

10.3.1 [Paul, & Shim \(2008\)](#). Gender, Sexual Affect, and Motivations for Internet Pornography Use. *International Journal of Sexual Health*.

ABSTRACT: The Internet has substantially changed the way society consumes pornographic material and has become the most popular venue for this sexual purpose. However, researchers have paid little attention to why people use pornographic material online. Arguing that the use of Internet pornography is a motivated behavior meant to obtain what one wants to see, this study attempts to identify specific motivations for Internet pornography use. In addition, this study analyzes how gender and sexual affect—positive or negative—are associated with motivations for Internet pornography use. Overall, 321 undergraduate students including males and females responded to an online questionnaire. Findings show that motivations behind Internet pornography use

can be broken down into **four factors—relationship, mood management, habitual use, and fantasy. Males revealed far stronger motivations than females; and those with more erotophilic tendencies were more likely than those with more erotophobic tendencies to be motivated to use Internet pornography for all four motivational factors.** The implications of the findings are discussed.

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10.4 CAMMING, ONLYFANS, AND ESCORTING

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10.5 EXPLOITATION AND CHILD PORNOGRAPHY

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10.6 IMPACT OF PORN USE AMONG LGBTQ+

10.6.1 [Böthe, Vaillancourt-Morel, Bergeron, & Demetrovics \(2019\)](#). Problematic and Non-Problematic Pornography Use Among LGBTQ Adolescents: A Systematic Literature Review. *Current Addiction Reports*.

ABSTRACT: PURPOSE: Pornography use is highly prevalent among adolescents, yet lesbian, gay, bisexual, transgender, and queer (LGBTQ) adolescents remain an understudied population and knowledge about their pornography use is limited. Therefore, we aimed to provide an overview of LGBTQ adolescents' pornography use patterns and compare them with those of heterosexual adolescents.

RECENT FINDINGS: Despite the fact that there is limited data to draw conclusions, pornography may be viewed at a younger age for LGBTQ girls, be more prevalent, and be more frequent among LGBTQ adolescents than among their heterosexual

counterparts. Despite this higher use pattern, **LGBTQ adolescents may not be more prone to developing problematic pornography use based on their reported primary motivations for use. LGBTQ adolescents may not only use pornography to experience sexual pleasure, but they can also use it to learn about sexuality and develop their sexual identity.** However, LGBTQ adolescents' pornography use does not appear to be related to more negative outcomes compared with heterosexual adolescents; thus, LGBTQ adolescents do not seem more vulnerable to pornographic materials than heterosexual adolescents.

SUMMARY: Although problematic or compulsive pornography use may seem an obvious explanation, LGBTQ adolescents' more frequent pornography use may derive from their unmet needs regarding information on LGBTQ sexual activities and may be considered a part of their sexual identity development process.

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10.7 THE FUTURE OF PORN

10.7.1 [Powell, Flynn, & Henry \(2018\)](#). AI can now create fake porn, making revenge porn even more complicated. *The Conversation*.

EXCERPT: The technology uses an AI method known as "[deep learning](#)", which involves feeding a computer data that the computer then uses to make decisions. In the case of fake porn, the computer will assess which facial images of a person will be most convincing as a face swap in a pornographic video.

Known as "morph" porn, or "parasite porn", fake sex videos or photographs are not a new phenomenon. But what makes deepfakes a new and concerning problem is that AI-generated pornography looks significantly more convincing and real.

...Creating, distributing or threatening to distribute fake pornography without the consent of the person whose face appears in the video is a form of "image-based sexual abuse" ([IBSA](#)). Also known as "non-consensual pornography" or "revenge porn", it is an invasion of privacy and a violation of the right to dignity, sexual autonomy and freedom of expression.

[In one case](#) of morph porn, an Australian woman's photos were stolen from her social media accounts, superimposed onto pornographic images and then posted on multiple websites. She described the experience as causing her [to feel](#):

physically sick, disgusted, angry, degraded, dehumanised

Yet responses to this kind of sexual abuse remain inconsistent. Regulation is lacking in Australia, and elsewhere.

10.7.2 [Galaitsi, Hendren, Trump, & Linkov \(2019\)](#). Sex Robots—A Harbinger for Emerging AI Risk. *Frontiers in Artificial Intelligence*.

EXCERPT: Sex robots' ability to physically and emotionally resemble actual people—usually idealized and hyper-sexualized women—to provide gratifying intimate experiences is the key innovation and main risk driver. For example, a developer seeking to enhance the user experience with a sex robot may design a machine learning algorithm that builds trust between the human user and robot. Trust certainly benefits intimacy. But such a technology, once developed, may be deployed both within sex robots and other formats to induce user trust even potentially against the user's best interest. Advanced machine learning may allow robots to cultivate love and devotion, the ability to elicit personal information or to manipulate and influence behavior. These capabilities are all theoretically possible, and perhaps more importantly, they are profitable for AI sex robots to cultivate. With the worldwide sex technology reportedly worth 30 billion USD ([Kleeman, 2017](#)), the market may incentivize the development of AI capabilities that may be vastly more consequential than blinking silicon sex dolls....

...In addition to enhancing conventional risks, internet-enabled sex toys and sex robots also pose new cybersecurity risks that cannot be fully addressed under existing regulatory processes for other products. Such risks including lax security measures that allow uninvited parties to collect and store usage information or videos, or the potential hacking of remotely operated sex toys ([Hern, 2016](#); [Burgess, 2018](#); [Devlin, 2018](#)). With the expiration of the teledildonics patent in August 2018, the cybersex toy industry is now poised for rapid expansion, but without protections in place for consumers ([Kobie, 2018](#)). AI development for sex robots may increase consumer exposure to existing conventional risks and cybersecurity risks of sex toys.

10.7.3 [Ratner \(2021\)](#). When “Sweetie” is not so Sweet: Artificial Intelligence and its Implications for Child Pornography. *Family Court Review*.

ABSTRACT: The production of child pornography using Artificial Intelligence is poised to potentially evade current laws protecting child abuse. Artificial

Intelligence “DeepFakes” can be used to create indistinguishable videos and images of child abuse, without actual child abuse ever occurring. This Note proposes two solutions for curbing this inevitable dilemma. First, Artificial Intelligence should fall under the “computer-generated” terminology found in the 18 U.S.C. § 2256(8) definition of child pornography. Second, if Artificial Intelligence cannot be considered to fall under that definition, then 18 U.S.C. § 2256(8) should be amended to include “Artificial Intelligence-generation.”

10.7.4 [Hundt, Agnew, Zeng, Kacianka, & Gombolay \(2022\)](#). Robots Enact Malignant Stereotypes. *2022 ACM Conference on Fairness, Accountability, and Transparency*.

ABSTRACT: Stereotypes, bias, and discrimination have been extensively documented in Machine Learning (ML) methods such as Computer Vision (CV). Natural Language Processing (NLP), or both, in the case of large image and caption models such as OpenAI CLIP. In this paper, we evaluate how ML bias manifests in robots that physically and autonomously act within the world. We audit one of several recently published CLIP-powered robotic manipulation methods, presenting it with objects that have pictures of human faces on the surface which vary across race and gender, alongside task descriptions that contain terms associated with common stereotypes. Our experiments definitively show robots acting out toxic stereotypes with respect to gender, race, and scientifically discredited physiognomy, at scale. Furthermore, the audited methods are less likely to recognize Women and People of Color. Our interdisciplinary sociotechnical analysis synthesizes across fields and applications such as Science Technology and Society (STS), Critical Studies, History, Safety, Robotics, and AI. We find that robots powered by large datasets and Dissolution Models (sometimes called “foundation models”, e.g. CLIP) that contain humans risk physically amplifying malignant stereotypes in general; and that merely correcting disparities will be insufficient for the complexity and scale of the problem. Instead, we recommend that robot learning methods that physically manifest stereotypes or other harmful outcomes be paused, reworked, or even wound down when appropriate, until outcomes can be proven safe, effective, and just. Finally, we discuss comprehensive policy changes and the potential of new interdisciplinary research on topics like Identity Safety Assessment Frameworks and Design Justice to better understand and address these harms.

10.7.5 [Cohut \(2018\)](#). Sex robots may do more harm than good. *Medical News Today*.

EXCERPT: However, Cox-George and Bewley identified four themes describing the alleged benefits brought by sexbots to potential users (and society at large). These are, as the researchers name them in their published paper:

- safer sex
- therapeutic potential
- potential to treat pedophiles and sex offenders
- changing societal norms

Current claims in support of these realistic sex dolls suggest that, by using them, potential buyers would no longer be tempted to support sex trafficking, or engage in sex tourism.

They would also, allegedly, encourage safer sex as the sexbots themselves are made of washable materials that are resistant to bacteria.

Also, there are claims that sexbots could be used therapeutically by people who might otherwise engage in pedophilia, or various forms of sexual harassment and assault. But, in the absence of hard evidence to support these ideas, they are, at best, a sign of wishful thinking, argue the authors of the new study.

...As for the claim that sexbots could be an “easy fix” for sexual violence or deviancy, Cox-George and Bewley fear that they may instead strengthen or normalize these urges — even potentially leading to addictive behavior.

The team is also concerned about the impact that dolls’ artificially flawless appearance, and other idealized features — such as the lack of bodily hair on many of these dolls — may have on users’ perception of what is “normal” and “attractive” in a potential partner. “Sexbots are generally female and ‘air-brushed,’” the authors write, which “rais[es] the question of public interest in avoiding gender discrimination and inequality due to the promotion of distorted views of attractiveness that reduce female body confidence.” Cox-George and Bewley conclude that, despite claims that sex robots would bring a number of health-related benefits, the sale of these dolls has very little to do with such concerns.

10.7.6 [MacClure \(2022\)](#). Text-to-Image-to-Porn? The Future of X-Rated, AI-Generated Porn. *The Guardian*.

EXCERPT: Some blend of the AI avatar service and text-to-image could make its way into the porn sector and possibly pave the way for porn actors to monetize animations of their likeness with consent.

However, no on-demand or user-friendly animation technology is perfect.

"People thought that deepfakes would just sort of totally eliminate or completely disrupt the porn industry and that hasn't really happened," said Noelle Perdue, a porn historian, writer and futurist based in Toronto. "Ultimately, performers are very talented and successful for a reason, and it's because they're very good at performing."

While the likelihood of text-to-image or video technology taking over or revolutionizing porn appears low in the short term, people will continue to be people and use the latest internet toy as an outlet for their most absurd thoughts, all while improving the technology.

10.7.7 [Wiggers \(2022\)](#). Meet Unstable Diffusion, the group trying to monetize AI porn generators. *TechCrunch*.

EXCERPT: When [Stable Diffusion](#), the text-to-image AI developed by startup [Stability AI](#), was open sourced earlier this year, it didn't take long for the internet to wield it for porn-creating purposes. **Communities across Reddit and 4chan tapped the AI system to generate realistic and anime-style images of nude characters, mostly women, as well as non-consensual fake nude imagery of celebrities.**

But while Reddit quickly shut down many of the subreddits dedicated to AI porn, and communities like NewGrounds, which allows some forms of adult art, banned AI-generated artwork altogether, new forums emerged to fill the gap.

By far the largest is [Unstable Diffusion](#), whose operators are building a business around AI systems tailored to generate high-quality porn. The server's [Patreon](#) — started to keep the server running as well as fund general development — is currently raking in over \$2,500 a month from several hundred donors.

...Unsurprisingly, some AI ethicists are as worried as Chaudhry is optimistic. While the use of AI to create porn isn't new — TechCrunch covered an AI-porn-generating app just a few months ago — Unstable Diffusion's models are capable of generating higher-fidelity examples than most. The generated porn could have negative consequences particularly for marginalized groups, the ethicists say, including the artists and adult actors who make a living creating porn to fulfill customers' fantasies.

...“The risks include placing even more unreasonable expectations on women’s bodies and sexual behavior, violating women’s privacy and copyrights by feeding sexual content they created to train the algorithm without consent and putting women in the porn industry out of a job,” Ravit Dotan, VP of responsible AI at Mission Control, told TechCrunch. “One aspect that I’m particularly worried about is the disparate impact AI-generated porn has on women. For example, a previous AI-based app that can ‘undress’ people works only on women.”

...The group has its work cut out for it. Of all the challenges Unstable Diffusion faces, moderation is perhaps the most immediate — and consequential. **Recent history is filled with examples of spectacular failures at adult content moderation. In 2020, MindGeek, Pornhub’s parent company, lost the support of major payment processors after the site was found to be circulating child porn and sex-trafficking videos.**

10.7.8 [Wiggers \(2022\)](#). AI is getting better at generating porn. *TechCrunch*.

EXCERPT: Called Porn Pen, the website allows users to customize the appearance of nude AI-generated models — all of which are women — using toggleable tags like “babe,” “lingerie model,” “chubby,” ethnicities (e.g., “Russian” and “Latina”) and backdrops (e.g., “bedroom,” “shower” and wildcards like “moon”). Buttons capture models from the front, back or side, and change the appearance of the generated photo (e.g., “film photo,” “mirror selfie”). There must be a bug on the mirror selfies, though, because in the feed of user-generated images, some mirrors don’t actually reflect a person — but of course, these models are not people at all. Porn Pen functions like “[This Person Does Not Exist](#),” only it’s NSFW.

...But Porn Pen raises a host of ethical questions, like biases in image-generating systems and the sources of the data from which they arose. Beyond the technical implications, one wonders whether new tech to create customized porn — assuming it catches on — could hurt adult content creators who make a living doing the same.

“I think it’s somewhat inevitable that this would come to exist when [OpenAI’s] DALL-E did,” Os Keyes, a Ph.D. candidate at the University of Washington, told TechCrunch via email. “But it’s still depressing how both the options and defaults replicate a very heteronormative and male gaze.”

Currently, few laws around the world pertain to [deepfaked](#) porn. In the U.S., only Virginia and California have regulations restricting certain uses of faked and deepfaked pornographic media.

...In theory, a porn actor could use copyright protections, defamation and potentially even human rights laws to fight the creator of a deepfaked image. But as a piece in MIT Technology Review notes, gathering [evidence](#) in support of the legal argument can prove to be a massive challenge.

When more primitive AI tools popularized deepfaked porn several years ago, a Wired [investigation](#) found that nonconsensual deepfake videos were racking up millions of views on mainstream porn sites like Pornhub. Other deepfaked works found a home on sites akin to Porn Pen — according to Sensity data, the top four deepfake porn websites received more than 134 million views in 2018.

10.7.9 [Monge \(2022\)](#). The Age Of AI-Generated Porn Is Here. *Geek Culture*.

EXCERPT: Deepfake media are already here. The existing process alters the face of an existing image or video with someone else's. It poses particular harm to women as AI-generated porn can be used to blackmail and silence them.

In 2019, [Sensity AI](#), a research company found that 96% of deepfake videos online were non-consensual porn.

But what about coming up with images and videos of celebrities from scratch? That's where the new AI models like Stable Diffusion come in. Soon, deepfakes will be possible with nothing but a photo of a real person and a couple of text instructions.

Child pornography

The very idea of child pornography is repulsive and abhorrent. And now, with the advent of AI, there is a new and even more troubling development: computer-generated child pornography.

AI does not have a soul and will only follow whatever human instructs it to do. It's extremely difficult to regulate what people try to come up with and publish using this technology.

More violent than traditional pornography

Because it is created by computers, there are no limits to what the creators can make. This can lead to some very disturbing and violent content.

Unfortunately, there are a few laws in the world that address the issues surrounding deepfake content.

In the U.S., Virginia and California are the first states to have regulations restricting certain use and distribution of deepfake media.

The law in Virginia imposes criminal penalties on the distribution of nonconsensual deepfake pornography, whereas the law in Texas prohibits the creation and distribution of deepfake videos intended to harm candidates for public office or influence elections.

With the rise of new AI models like Stable Diffusion, I expect more legislation and technological tools against synthetic porn will occur soon.

10.7.10 Videos related to sex robots

- <https://money.cnn.com/mostly-human/i-love-you-bot/>
- <https://www.engadget.com/2018-06-05-the-truth-about-sex-robots.html>
- <https://www.engadget.com/2018-06-05-the-truth-about-sex-robots.html>
- <https://www.cnet.com/videos/abyss-creations-sex-robots-realdolls/>
- <https://www.nytimes.com/video/technology/100000003731634/the-uncanny-lover.html>

10.7.11 [Harwell \(2023\)](#). 'Claudia' offers nude photos for pay. Experts say she's an AI fake. *Washington Post*.

EXCERPT: But the new class of images raise many of the same concerns, including that they could be used to impersonate real women. On some forums, users talk of how to use diffusion models and other AI-powered techniques, such as "inpainting," to superimpose the faces of real women onto the bodies of AI-generated fakes.

"To humiliate and push women out of the public sphere, they don't even need to look exactly like the women. They rely on the shock effect," said Sam Gregory, the executive director of Witness, a nonprofit group that specializes in video technology and human rights.

Some forums devoted to using the tool to create AI-generated porn even discuss how the tool can be used to create sexually explicit images of women without their consent. People also have shared guides on how to use the technology to edit real images, including to remove the clothing of women who were photographed fully dressed.

Some female avatar accounts explicitly tell viewers that they were created with Stable Diffusion or other AI tools. Others have been a bit more subtle: “[Ailice](#),” an avatar with roughly 10,000 Instagram followers, defines itself as “AI life, real vibes.”

IMAGE:

