

# Pornified Content in Social Media: Exploring the Impact on Brazilian Addicts

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Research shows that the role of social media in our society is complex. While there are positives such as networking, social support, connecting with friends and family, and fulfilling our need to belong, there are also several potential negative effects such as cyberbullying, increased anxiety, low self-esteem, breach of privacy, mental health issues, and low grades and motivations among students. One such potential negative impact is the role of pornified content on social media serving as a trigger for people on the road to porn abstinence. Porn addiction and its various triggers have been studied extensively in several fields but the role of pornified content on social media is yet to be fully studied or

understood. The current exploratory study uses a survey method to investigate the role of pornified content on social media as a trigger for porn addiction among Brazilian porn addicts. Results suggest that some social media content is seen as a trigger by self-identified porn addicts, and the factors that influence such perceptions include age of the addict, gender, and the number of times they have relapsed. And changes in behavior on social media are influenced by individuals' perceptions of social media content as a trigger.

*Keywords: pornography addiction, social media, pornification, trigger, Brazil*

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**T**oday, Facebook, WhatsApp, Instagram, TikTok and WeChat all have over 1 billion users, and the total number of social media users worldwide is currently over 3.6 billion and is expected to increase to 4.41 billion by 2025 (Statista, 2020). People are drawn to social media for a number of reasons such as collective self-esteem and need to belong (Gangadharbatla, 2008), and a variety of other reasons including social interaction, information seeking, passing time, entertainment, relaxation, expression of opinion, information sharing, communicatory utility, convenience utility, and surveillance of others (Whiting & Williams, 2013). Akram and Kumar (2017) identify a number of negative effects of social media including but not limited to its effect on individuals' mental health; its effect on education such as reduced learning and research capabilities, loss of motivation and low grades, time wastage, and

procrastination; its effect on social aspects such as cyberbullying, hacking, addiction, fraud and scams; and lastly, its effect on promoting risky behaviors such as drug use and pornography. Of these, the role of social media in promoting pornography consumption is an area that has not been studied extensively. The current study is designed to address this specific gap in social media literature.

Pornography has a long history, but the advent of internet has revolutionized the way users search for and consume porn due to what is often termed as the Triple-A factor: access, anonymity, and affordability (Cooper, 1998). Porn consumption online is at record levels with over 6.83 million videos uploaded to just the Pornhub website, which roughly translates to 169 years of content (Pornhub, 2019). The widespread use and consumption of porn has led to a change in social attitudes toward pornography and the pornification of our culture, which is the increased influence and use of pornographic style images and aesthetics in all forms of media content including images uploaded to social media by users (Attwood, 2006, 2009; Blais-Lecours et al., 2016; Gill, 2012; Mulholland, 2015; Paul, 2005; Schuchardt, 2012). Thanks to social media algorithms, pornified content on such platforms has a way of spreading to all users and particularly those who happen to frequently consume such content online (Duportail et al., 2020; Hymas, 2018; Rackham, 2020; Schacht, 2020).

There is a wealth of literature on porn addiction and on the role of internet in such addictive behaviors. Internet, especially when accessed on mobile devices, makes it really easy with a simple swipe or touch to access such content (Love et al., 2015). Research also suggests that porn addiction is much similar to other types of addiction such as substance abuse, alcohol, or cigarettes as they all involve triggering the same reward system in our brains (de Alarcón et al., 2019; Duffy et al., 2016; Kraus et al., 2016; Love et al., 2015; Palazzolo & Bettman, 2020; Sniewski et al., 2018; Voon et al., 2014). Similar to other types of addiction, porn addicts can also relapse due to a number of reasons, and it often happens early on in the process of rehabilitation and for a variety of reasons often referred to as “triggers” in psychology literature (Fisher et al., 1998; Hughes et al., 2004; Tong et al., 2007; Yang et al., 2006). One such type of trigger is the proximal cue – also called environmental or contextual – which reminds the addict of the substance or behavior they are addicted to and cause intense cravings like when a cigarette addict sees someone else

smoking (Chaudhri et al., 2008; Elsheikh & Bashir, 2004; Kraus & Rosenberg, 2014; Marlatt, 1990; Tong et al., 2007; Zironi et al., 2006).

In this study, we examine the role of pornified content on social media in acting as a contextual cue or as a trigger that leads to relapse in self-acknowledged porn addicts. We first begin by reviewing existing literature on the role of social media in our society, followed by a review of literature on pornography addiction and the role of contextual cues in triggering relapse, and explore gaps in literature to examine the factors that influence self-identified porn addicts' perceptions of pornified content on social media and how they might deal with such triggers. In doing so, we bridge the gap in research on triggers for porn addicts, particularly on social media. Additionally, most of the research on social media has been conducted in and on social media users in western or developed nations (Griffiths, 2012), and our study fills the gaps by studying self-acknowledged porn addicts in Brazil. According to a Pornhub report, porn use in Brazil is on the rise and its currently placed 11th in the world in terms of usage.

## **LITERATURE REVIEW**

### **Social Media and Society**

There has been a tremendous amount of research in the last decade or so on the role of social media in our society. Much of this research centers on the negative impact of social media on our society including but not limited to the identification and study of several effects such as cyberbullying (Garrett et al., 2016; Nilan et al., 2015; Whittaker & Kowalski, 2015), psychological issues like depression, anxiety, stress, loneliness, low self-esteem, isolation, and a host of other mental health issues (Bashir & Bhat, 2017; Coyne et al., 2020), and hacking, spread of misinformation, privacy issues, and other criminal activities (Amedie, 2015). One under researched area is the study of the effects of pornified content on social media, particularly on image-based platforms such as Instagram.

Porn and the internet have had a long and complex relationship with each driving the adopting and use of the other. The advent of social media has only complicated this relationship by providing individuals (particularly teen girls) the ability to post “pornified” images of themselves on various social media platforms leading to what Barton (2021) calls the Pornification of America. The posting of selfies on social media platforms, often

displaying nudity and self-pornification, is commonly referred to as digital seduction (Lasén & García, 2015), and is a particularly problematic practice among teen girls (Ringrose, 2010). The increased littering of almost all screens in our culture and particularly our social media platforms with such pornified content is normalizing porn and leading to pornification of our society (Barton, 2021). In addition to the negative aspects of pornification of our culture, these images also have the potential to impact porn consumption in general.

### **Pornography, Internet and Social Media**

Pornography is an ancient phenomenon, and it can be traced back to early pictorial or written human products (Palazzolo & Bettman, 2020). It is defined in various ways in academic literature, while sometimes it is not defined at all. For the purposes of this study, pornography, or as it is commonly referred to as porn or internet porn, is defined as content that describes or shows explicit sexual acts, with a focus on genitals, with the intention of creating sexual arousal (Bóthe et al., 2018; Guerra et al., 2004; Kraus et al., 2017; Kraus & Rosenberg, 2014; Sniewski et al., 2018).

Technology has always had an impact on pornography consumption, with each advancement making it “cheaper, more accessible, and easier to consume” (Price et al., 2016, p. 2). First, in the 1970s, individuals had to visit public theatres, which limited their access to pornography. Then, in the 1980s, videocassettes allowed for a more private and domestic experience. Finally, in the 1990s the internet began making porn more present in people’s homes (Schuchardt, 2012), due to three characteristics of the internet which, when combined, increase the reach of pornography among users: access, anonymity, and affordability. These three factors are often referred to as the Triple-A factors of the internet (Albright, 2008; Cooper, 1998; de Alarcón et al., 2019; Gola et al., 2016; Kraus & Rosenberg, 2014; Minarcik et al., 2016; Price et al., 2016).

As the internet expanded in quality, speed, and reach, there was also a major transformation in the production and distribution of content. In 1998 there were an estimated 100,000 pornographic websites and within a span of just seven years, that number rose to 4.2 million (Ballester-Arnal et al., 2017). Pornhub, the world’s largest pornographic website, releases a yearly data report which can help shed light on the way porn is consumed worldwide. In 2019 alone there were over 42 billion visits to the website,

with an average of 115 million visits per day. There were 39 billion searches, which is an increase of 8.7 billion when compared to 2018. The advent of the mobile phone and access to internet through smartphones has also accelerated porn consumption with 83.7% of all traffic to Pornhub coming from mobile devices, and 76.6% of that traffic was from smartphones, a growth of 7% compared to 2018. The report also showed a connection between pornography and social media websites. For instance, in March 2019, Facebook and Instagram went down due to a service outage, which caused an immediate surge of 11% to Pornhub's traffic and a 19% surge during peak hours (Pornhub, 2019). This shows both that social media users are also pornography users but that one may act as a substitute for the other.

Social attitudes to pornography have also shifted, becoming more socially normative (Blais-Lecours et al., 2016). This change in social attitudes to pornography has not remained limited to the pornographic realm (Schuchardt, 2012). Porn has become increasingly influential in mainstream media, leading to what is called the pornification of culture (Attwood, 2005, 2006, 2009; Gill, 2012; Mulholland, 2015; Paul, 2005; Schuchardt, 2012). Pornification, then, refers to the way that porn imagery, styles, and aesthetics appear in and shape films, television, music videos, fashion, and advertising, becoming increasingly visible in mainstream media cultures in general (Attwood, 2006, 2009; Gill, 2012; Mulholland, 2015; Paul, 2005; Schuchardt, 2012). This is also true for social media, which can be used to watch pornography and are also a place where individuals can find provocative content (Hymas, 2018; Rackham, 2020). Algorithm Watch has conducted research that provides evidence that Instagram favors pictures that show more skin, especially sexually suggestive and nudity content. These pictures appear in the user's feed more often than pictures that do not (Schacht, 2020). This phenomenon shows the importance of investigating the role of social media in pornography addiction.

Since 1998, the internet and related technologies have evolved and pornography can be accessed from anywhere at any time, which has significantly changed the way in which people use porn (Palazzolo & Bettman, 2020; Sirianni & Vishwanath, 2016; Sniewski et al., 2018). This change, which includes the ubiquity and never-ending possibility of new content, can also lead to negative consequences to an individual's life and lead to problematic or addictive behaviors, which will be explored in the next section (Dwulit &

Rzyski, 2019; Rocha, 2019; Sirianni & Vishwanath, 2016). Attwood (2009) highlighted the way that sex and technology are stitched together, given that “most communication technologies have been adapted for sexual purposes” (Attwood, 2009, p. xiv). The present study intends to build on that and explore the relationship between pornography addiction and social media use, considering “the complex consequences of media technologies’ embedding in everyday social life” (Couldry & Hepp, 2016, p. 214). By this, Couldry and Hepp (2016) mean that different media outlets and platforms become interconnected into what they call the media manifold (p. 213). In this media manifold, pornography and social media interact both for regular users and for pornography addicts, the latter being the focus of this study.

### **Research on Porn Addiction**

Addiction used to be conceptualized only if substances were involved and it later evolved to also encompass behaviors because the similar effects on the brain are what constitute manifestations of addiction (Love et al., 2015; Sniewski et al., 2018). These behaviors reinforce the “reward, motivation and memory circuitry” in the brain (Love et al., 2015, p. 389). Addiction, thus, is a construct that involves six main elements: salience, mood modification, conflict, tolerance, relapse, and withdrawal (Bóthe et al., 2018). Another important aspect of addiction is the compulsive and impulsive elements of the behavior – an action that is taken to reduce anxiety and action for immediate gratification, respectively (Duffy et al., 2016; Suzin, 2016).

Love et al. (2015) explained a common thread that encompasses all internet-related experiences, which is the ability to keep or increase arousal with a simple gesture (a mouse click or a swipe). They propose that this novelty-seeking triggers the reward system in the brain. Certain internet activities have the power to provide unending stimulation, which means they constitute supernormal stimuli (Love et al., 2015). For instance, internet addiction was divided into five subcategories: cybersexual addiction, cyberrelational addiction, net compulsions, information overload, and computer addiction (Young, 1999). Although today the American Psychology Association only recognizes Internet Gaming as an official disorder (Love et al., 2015), researchers believe the internet has the potential for more risk-addictive behaviors such as online gaming, online gambling, pornography, compulsive social media use, and online shopping for instance

(Andreassen et al., 2016; de Alarcón et al., 2019). Meshi et al. (2019) found that excessive social media use is linked to worse decision-making performance in the Iowa Gambling Task, which is similar to the results of individuals with substance-use addictive disorders. Their results reiterate the pervasiveness of social media, the technological and design features that make them captivating, and the reward triggering mechanism they provide (Meshi et al., 2019).

Love et. al (2015) presented strong evidence that constructs internet-related behaviors as potentially addictive and Rocha (2019) noted that almost all of the criteria for Internet Gaming Disorder can be equally applied to Pornography Addiction. The internet indeed has a strong relationship with sexual disorders, with a moderate correlation between internet compulsivity and pornography craving (Kraus & Rosenberg, 2014), and internet addiction acting as either a precursor or related phenomenon to cybersex addiction (Ballester-Arnal et al., 2017). Alimoradi et al. (2019) found a direct and indirect effect of social media addiction and the pervasiveness of social media addiction on sexual function and sexual distress. They underscored the need for research on the impact of social media technologies on sexual relationships and sexual constructs (Alimoradi et al., 2019).

Growing literature shows the similarities in the brain of substance-use addicts and individuals that present certain sexual compulsive disorders, including pornography consumption (de Alarcón et al., 2019; Kraus et al., 2016; Palazzolo & Bettman, 2020; Sniewski et al., 2018; Voon et al., 2014). These studies suggest that pornography addiction fits into the addiction framework (Dwulit & Rzymiski, 2019; Love et al., 2015). The specific characteristics of pornography, specifically internet pornography, operate as supernormal stimuli, meaning that the ease of access, the never-ending content and novelty, and the link with arousal are not similar to what is considered natural for human sexuality – that is, number of different partners, frequency of the sexual act, and the short time comprised in those changes, which makes compulsive pornography viewing potentially addictive (de Alarcón et al., 2019; Dwulit & Rzymiski, 2019; Love et al., 2015; Sirianni & Vishwanath, 2016).

Individuals that perceive a problem with their pornography use have issues controlling, regulating, and managing their consumption, they also experience craving,

higher rates of masturbation, and sexual dissatisfaction (Blais-Lecours et al., 2016; de Alarcón et al., 2019; Gola et al., 2016; Holas et al., 2020; Kraus et al., 2016; Rocha, 2019; Sniewski & Farvid, 2019). Negative consequences of pornography use are not restricted to the sexual arena, and these individuals also report neglect of basic needs, relationship, financial and work-related issues, and other subjective feelings of negative consequences in their lives (Bóthe et al., 2018; de Alarcón et al., 2019; Gola et al., 2016; Holas et al., 2020; Rocha, 2019; Sirianni & Vishwanath, 2016). Although there has been research linking the perception of addiction to pornography to distress and seeking treatment rather than actual pornography use (Gola et al., 2016; Grubbs et al., 2015, 2018), these individuals do “experience significant distress” when they believe their use is problematic (Rackham, 2020, p. 3), and they also experience negative effects when attempting to quit, such as irritability and loneliness (Dwulit & Rzymiski, 2019). Research has linked problematic pornography use to being young, religious, a man, using the internet frequently, having negative mood states, and experiencing sexual boredom and seeking novelty (de Alarcón et al., 2019).

Pornography addiction is not yet a formally recognized disorder, which causes the conceptualization of pornography addiction to vary (Duffy et al., 2016; Kraus & Rosenberg, 2014; Sniewski et al., 2018). Problematic Online Pornography Use (de Alarcón et al., 2019; Sirianni & Vishwanath, 2016), Problematic Use (Bóthe et al., 2018), Sexual Compulsion (Suzin, 2016), Self-Perceived Pornography Addiction (Duffy et al., 2016; Grubbs et al., 2015) and Problematic Pornography Consumption (Sniewski et al., 2018) are some of the different terms used to analyze this phenomenon, with the common thread that self-report data is not enough to support a diagnosis and the fact that there is a lack of consensus in research (Bóthe et al., 2018). In recent literature, self-perceived addiction, or self-perceived problematic use, has been an emerging concept in the field, which also links to a need to better comprehend the specific contexts and relationships of these individuals with pornography (Sniewski et al., 2018). Cooper et al. (2000) created a framework to differentiate recreational, risky, and pathological users of cybersex according to their time usage. Recreational users spent approximately one hour a week, risky users between one and ten hours, and pathological users would spend more than 11 hours a week accessing pornographic content (Cooper et al., 2000). In addition to excessive use as an element of



addiction, or perceived addiction, the definition also extends to the presence of significant negative consequences in the user's life. (Duffy et al., 2016; Gola et al., 2016; Sniewski et al., 2018). This study will use both pornography addiction and self-perceived pornography addiction because the main goal is not to provide a diagnosis or a diagnostic framework but to better understand how these individuals (dis)engage with pornography as media and their personal attitudes and behaviors towards it.

Although most pornographic websites require the user to declare they are 18 years old to enter, children and adolescents have access to this content, especially with the growth of mobile devices and internet access (Hymas, 2018). Research has also found a link between the age of first exposure to pornography and perceived addiction (Dwulit & Rzymiski, 2019; Sniewski et al., 2018). Suzin's (2016) subjects first watched pornography between 8 and 11 years old; Baldim (2017) noticed that in many analyzed reports, the age of access was younger than 12 years old; Palazzolo and Bettman's (2020) respondents had an average age of 14.89 years old, with the youngest age reported being six years old. Age of first exposure is related to neglect of basic needs, unhealthy notions of sexual relations, decrease in sexual satisfaction, need for longer and more sexual stimuli to reach orgasm and self-perceived addiction, with the highest probability being for exposure at 12 years old or younger (Dwulit & Rzymiski, 2019). The present study will also investigate the relationship between age of first exposure and pornography addiction, focusing on the connection between the age and seeing pornified content as a trigger, which is a new element in the study of pornography addiction.

There is no definite and reliable data that presents the prevalence of pornography addiction (de Alarcón et al., 2019). However, several studies have documented possible prevalence numbers. An Australian study found that 4.4% of men and 1.2% of women considered themselves addicted (Rissel et al., 2017); a Swedish study indicated that 5% of women and 13% of men reported some problems, and 2% of women and 5% of men indicated serious problems (Ross et al., 2012); Gola (2016) found that for 8% of respondents' frequent pornography use is a source of suffering; Kraus (2016) reported that one of seven men was interested in seeking treatment for pornography use; Dwulit and Rzymiski (2019) found that 12.2% presented self-perceived addiction; Ballester-Arnal et al. (2017) discovered 8.6% of participants had a risky profile, while 1.7% of men and 0.1% of

women had a pathological profile. Sniewski et al. (2018) summarize stating that “studies indicate that between 2% and 17% of pornography consumers meet previously established thresholds for compulsive and/or problematic pornography use” (p. 220). Considering the ubiquity of pornography and studies that indicate that the majority of adults – and upwards of 80% of the male Australian population for instance – have accessed pornography (Grubbs et al., 2018; Rissel et al., 2017), this population is an important one to study.

Moreover, as mentioned in the introduction, Brazil is the eleventh country that most watches pornography on Pornhub alone, and research on the topic of pornography has been limited in Brazil. This review only located three studies on pornography addiction, all of which pertain to psychology (Baldim, 2017; Rocha, 2019; Suzin, 2016). Most of the research on the topic has been conducted in Western or “developed” countries (Griffiths, 2012) and even in the broader topic of pornography, Brazil lacks research (Guerra et al., 2004). This highlights the need to better understand the Brazilian reality and a gap in research that is not connected to health-related disciplines.

### **Abstinence – Relapse and Cues**

Because there are no official diagnostic criteria, the conceptualization of pornography addiction varies in the literature and self-perceived addiction has emerged as a way to better understand the relationship these individuals have with pornography without the need to provide a diagnosis (Bóthe et al., 2018; Gola et al., 2016; Grubbs et al., 2015, 2018; Sniewski et al., 2018). Although it is not an officially recognized disorder, there has been an increase in individuals who seek treatment for pornography-related issues over the years (Kraus & Rosenberg, 2014). However, literature is scarce when it comes to treatment and understanding individual experiences (Holas et al., 2020; Rackham, 2020; Sniewski et al., 2018). The primary model focuses on abandoning pornography completely (de Alarcón et al., 2019; Rocha, 2019), with the use of different strategies such as pornography blockers on every device (Rocha, 2019). Other therapeutic approaches include using mindfulness-based interventions, acceptance-based psychotherapy, and inserting other behaviors that are gratifying and can replace the impulse of watching pornography (de Alarcón et al., 2019; Holas et al., 2020; Rocha, 2019; Sniewski et al., 2018).

However, as Rackham (2020) notices, nearly every addiction model sees relapse as a part of the recovery process. Some obstacles faced by individuals seeking to cease pornography consumption are the temptation to watch when they are aroused, after alcohol or drug use, and when they encounter negative feelings such as anxiety, boredom, or stress (Kraus et al., 2017; Rackham, 2020). Social media was highlighted as an important means of reaching provocative content, both intentionally and unintentionally (Rackham, 2020), which leads to the question if social media can act as a trigger for craving. While Rackham (2020) sought to understand the reasons for relapse in self-perceived pornography users, this study aims to explore the specific relationship between social media as a trigger for relapse, bridging the gap of knowledge in this area of the literature.

Because of the lack of literature on relapse and triggers on pornography addiction – especially on the role social media play – this review will explore some mechanisms that have been studied for substance abuse addictions. Relapse is a complex phenomenon which involves multiple variables (Fisher et al., 1998). Comprehension of this process depends on identifying predictors of relapse and it has been previously associated with the severity of drug dependence, the number of previous treatments, age of onset, and comorbidity in mental health disorders (Fisher et al., 1998).

With cigarettes, it has been found that the majority of relapses happen early in the process of recovery (Hughes et al., 2004), with 50% of a given sample having a smoke free period of two weeks or less (Yang et al., 2006) and only 4.7% of another sample remaining abstinent at the one-year mark (Tong et al., 2007). When it comes to alcohol abuse, 50% to 60% return to drinking within 3 months of treatment, and at least 80% by the sixth-month mark (Fisher et al., 1998).

These short periods of abstinence show the vulnerability to relapse, which Love et al. (2015) explain by noting that the protein DeltaFosB remains at elevated levels for extended periods, which enhances response to rewards and related cues. Environmental or contextual cues can trigger cravings moving from initially neutral stimuli to contextual stimuli (Chaudhri et al., 2008; Elsheikh & Bashir, 2004; Kraus & Rosenberg, 2014; Marlatt, 1990; Tong et al., 2007; Zironi et al., 2006). These cues represent what normally

precedes or happens at the same time as actual substance use, which Marlatt (1990) refers to as proximal stimuli, and they can differ from one individual to the other.

The brain, after repeated exposure to the drug – or in this case pornography – learns to seek the behavior that used to lead to rewards when it is presented with internal or external cues (Gamito et al., 2014). This means that previously neutral cues attain a “motivational value” that predicts rewards, which can then enhance craving leading to relapse (Sommer et al., 2017). Consequently, relapse is highly linked with contextual cues (Bernheim & Rangel, 2004; Carey, 2020; Gamito et al., 2014). Thus, the argument is that pornified social media content can present itself as environmental cues for self-perceived pornography addicts, which may lead to craving and relapse.

This study builds on this literature to investigate pornified social media content as triggers for pornography relapse, which may be seen as contextual stimuli, and explore which factors may influence social media being perceived as a trigger and the possible consequences for social media behavior. It has the goal to expand the literature on the Brazilian public as well as bring a media studies perspective on the issue of pornography addiction.

## **METHODS**

Although the field of research in pornography addiction is prolific, there is a gap in knowledge of how the affected individuals (dis)engage with porn as media, especially considering the strategies used and the involvement of other media in the process. This study, then, has an exploratory intent to investigate the role that social media play on the road to stopping pornography consumption. To that end, we formulate the following research questions:

RQ1: What are the factors that influence pornified content on social media being perceived as a trigger for self-identified Brazilian porn addicts?

RQ2: How does pornified content on social media being perceived as a trigger influence social media behaviors of self-identified Brazilian porn addicts?

## **Sample**

The population for this study is Brazilian self-identified pornography addicts who have stopped or are currently trying to stop using pornography. Because this is a very specific population, the questionnaire was posted on specific locales to recruit our sample:

the Brazilian Facebook groups *Recuse a Clicar – Grupo Misto* and *Recuse a Clicar – Só Homens* (Refuse to Click – Mixed Group, and Refuse to Click – Men Only) as well as the Facebook Page *Lembrete diário de que você deveria parar de ver pornografia* (Daily reminder that you should stop watching pornography), all of which target people suffering from pornography addiction.

Therefore, our sample was a nonprobability sample, with a combination of purposive, convenience, and snowball techniques – since some people shared the link with others on their personal pages or tagged people to respond. Given the very specific nature of our population of interest and the fact that this is an exploratory study, the use of such techniques was deemed appropriate. It is important to note here that the sampling was done through social media, which could lead to bias in the results considering the fact that people that consider themselves addicts and see social media as a problem could have stopped their social media use entirely. Nevertheless, this population can be difficult to find using other channels and given the exploratory nature of this study, it was deemed a sufficiently valid approach. Additionally, while these folks may have stopped using image-based social media sites like Instagram, they were nonetheless active on Facebook.

The initial sample was 1064 responses and after cleaning the data, 777 responses were left, more about data clearing will be said on the questionnaire explanation.

### **Design and Procedure**

This study uses an online-based questionnaire, which serves the purpose to reach specific groups. This also ensures anonymity that may lessen the discomfort and shame of talking about pornography consumption (Dwulit & Rzymiski, 2019; Kraus et al., 2016, 2017).

A questionnaire was developed by the researcher with input and feedback from several graduate students and a faculty member. It was pretested on a small sample of young adult professionals to ensure clarity. Revisions were made accordingly. This follows best practices in survey research (Moy & Murphy, 2016).

The questionnaire consists of three sections: (1) information on pornography use and pornography addiction; (2) scales that measured the likelihood of “social media as a trigger” and “change in social media behaviors,” and (3) demographic information. Scales used in section (2) were Likert scales, where the respondents are given 14 statements and

they have to choose on a scale of one to five how strongly they agreed or disagreed with that statement – these items measured social media as a trigger and change in behavior in social media use. For these Likert-type questions, the terms pornography and pornified content were defined for the respondent. The following definitions were used on the questionnaire:

“Pornography: It’s the type of content that explicitly shows genitals and/or has explicit sexual acts with the intention of creating sexual arousal. Pornified Content: It’s the type of content without any explicit sex acts or genitals completely uncovered. People may be in poses that are sexualized. They may be naked (with their genitals covered by another object or another part of their bodies), half-naked (bikini, for instance), or with tight/short clothes.”

Section (2) of the questionnaire also contained an extra multiple-choice question asking if social media had ever been a trigger for respondents that, if answered positively, led them to a follow-up question naming several social media apps. Respondents were asked to rate the probability that the given app acted as a trigger for them. Section (1) of the questionnaire also had a question that led respondents to a follow-up: First, respondents were asked if they had ever relapsed, the follow-up was how many times they had relapsed.

While there are many scales found in the literature on measures such as: “Self-Efficacy” (Kraus et al., 2017); “Problematic Pornographic Consumption Scale” (Bóthe et al., 2018); “Craving” (Kraus & Rosenberg, 2014) and other scales that measured if an individual had issues with their usage (Bóthe et al., 2018), there were no scales that measured the likelihood of social media as a trigger pornography addiction. Therefore, we adapted several items from studies on relapse, triggers, pornography, and social media addiction as well as previously tested and designed scales (Andreassen et al., 2016; Bóthe et al., 2018; Kraus et al., 2017; Kraus & Rosenberg, 2014; Pontes et al., 2016) to create a Likert-type “social media as a trigger” scale.

The questionnaire was developed using Qualtrics and it was posted on the Facebook groups and page after IRB and administrators’ approval. The first page of the questionnaire consisted of the consent form and the survey was terminated if respondents did not consent. Similarly, the survey was terminated if the respondents replied negatively to the first two questions: “Do you consider yourself a pornography addict?” and

“Have you stopped or are currently trying to stop watching pornography?” These two questions provided the framework for the data clearing that went from 1064 responses to 777. No identifiable data was collected, which ensures anonymity.

### **Variables**

Data on the following list of variables were collected to answer our research questions: the age of first pornography contact; duration; abstinence time and time individuals spent “attempting to stop”, “social media as a trigger” and “change in social media behavior.” In addition, several demographic variables were also collected on the questionnaire.

## **RESULTS**

### **Data Analysis**

The sample (N= 777) consisted of 89.1% men and 10% women with 0.9% choosing not to respond. Respondents were between 18 and 45 years old, with 18 being the mode and 20.83 being the mean. As for the race, 51.5% declared themselves white, 47% declared themselves black/person of color, and 1.6% as other. Most respondents either studied up till high school (36.4%) or were still in college (31.1%), and the vast majority (77.1%) lived in an urban area. As for religious affiliation, 45.7% described themselves as Agnostic/Atheist and 41% as Christians (Catholic, Evangelical, and Spiritism), while 13.3% declared other religions. Seventy-seven percent of them are heterosexual, 14.3% bisexual and 4.1% homosexual with 3.8% choosing not to respond. The vast majority (69.9%) are single, 22% are in a relationship and 8.1% are in other types of relationships (separated, divorced, etc.).

The age of first contact with pornography ranged from 3 to 22, with the most frequent being 12 and a mean of 11.12 years. Respondents spent between one and 22 years watching pornography, with the mean being 8.53 years and the mode being 10 years. Eighty-four percent of respondents have relapsed, and of those, 52.5% have relapsed five or more times. Tables 1, 2 and 3 below summarize the percentage of respondents for each of the following: reasons for stopping, how long they have been trying to stop and the abstinence period.

Table 1  
*Reasons for stopping*

Group	%
Impact on Everyday Life	43.1
Impact on Sexuality	15.2
Other	13
Overall (N=777)	

Table 2  
*How long respondents have been trying to stop*

Group (Duration Trying to Stop)	%
1 to 3 weeks	23.2
1 to 3 months	23.7
4 to 6 months	14.8
More than 6 months less than a year	15.1
More than a year	23.3

Table 3  
*Abstinence period*

Group	%
Less than a week	63.3
1 to 3 weeks	19.2
1 to 3 months	10
4 to 6 months	3.9
More than 6 months less than a year	1.3
More than a year	2.3

Next, scale reliabilities were calculated for the two sets of Likert scales – Social Media as a Trigger (SMT) and Change of Behavior (CB). The SMT scale had four items, which were: “I am afraid of seeing pornography in social media posts”; “I am afraid of seeing pornified content in social media posts”; “I feel the desire to watch pornography after being on social media”; and “A social media post has been the reason for me to watch pornography.” For change of behavior (CB) six items were used: “I changed my behavior on social media after I decided to stop watching pornography”; “I changed my behavior on social media after I saw a triggering post”; “I changed my behavior on social media after a



relapse”; I decreased the time spent on social media so I wouldn’t see pornographic or pornified content”; “I stopped following people on social media so I wouldn’t see pornographic or pornified content”; and “I left groups on social media (Facebook, WhatsApp, etc.) so I wouldn’t see pornographic or pornified content”. Tables 4a, 4b and 4c below summarize the results including Cronbach’s Alpha, mean scores and standard deviations of all scales along with each item in the scale. Both scales had an alpha close to or over .70 as recommended by Hair et al. (2010).

Table 4a

*Aggregates for Social Media as Trigger and Change in Behavior*

Group	Cronbach’s alpha	Mean	Std. Deviation	Std. Error Mean
SMT	0.671	3.6867	0.94562	0.03392
CB	0.805	3.5983	1.03903	0.03735

Table 4b

*Items and Descriptives for Social Media as Trigger Scale*

Group	n	Mean	SD	Std. Error Mean
I get apprehensive with the chance of seeing porn in social media posts	748	3.4	1.496	0.054
I get apprehensive with the chance of seeing pornified content in social media posts	748	3.4	1.483	0.054
I feel like watching porn after going on social media	748	3.32	1.355	0.049
A social media post has been the reason for me to watch pornography	748	4.62	0.908	0.033

Table 4c

*Items, Descriptives for Change in Behavior Scale*

Group	N	Mean	SD	Std. Error Mean
I changed my behavior on social media after I decided to stop watching pornography	752	3.86	1.328	0.048
I changed my behavior on social media after I saw a triggering post	750	3.66	1.348	0.049
I changed my behavior on social media after a relapse	734	3.53	1.443	0.053
I decreased the time spent on social media so I wouldn’t see pornographic or pornified content	753	2.77	1.571	0.057
I stopped following people on social media so I wouldn’t see pornographic or pornified content	750	3.96	1.423	0.052
I left groups on social media (Facebook, WhatsApp, etc.) so I wouldn’t see pornographic or pornified content	693	3.87	1.518	0.058

Our first research question asks about the factors that influence social media being perceived as a trigger. To investigate the various factors that influence individuals’ perception of social media as a trigger, we ran a regression analysis with “social media as a trigger” as the dependent variable and age of first contact, age, number of times individuals relapsed, time spent trying to quit, and how long it has been since they last watched porn, and host of other variables such as race, religious affiliation, sexual orientation and marital status that were dummy coded to serve as the independent variables. Results of the regression are summarized in Table 5.

Table 5

*Regression analysis (Dependent variable: SMT; Independent variables: Age of first contact, Years watched, Years trying to quit, Time since last watched, Number of times relapse, Age, Sex, Religious beliefs, Sexual Orientation, Relationship Status, and Race.*

Group	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	SE	Beta	t	Sig.	TOL	VIF
(Constant)	4.54	0.71		6.39	<.001		
Age of first contact	-.05*	0.02	-0.12	-2.42	0.016	0.66	1.51
Years watched	0.001	0.01	0.003	0.03	0.969	0.37	2.65
Years trying to quit	0.003	0.03	0.005	0.1	0.917	0.83	1.2
Time since last watched	-0.01	0.04	-0.01	-0.34	0.732	0.76	1.31
Times relapsed	.11*	0.03	0.15	3.28	0.001	0.78	1.26
AGE	-.04*	0.02	-0.15	-2.05	0.04	0.34	2.89
female_dummy	-0.19	0.47	-0.05	-0.4	0.687	0.09	10.9
male_dummy	0.4	0.46	0.12	0.86	0.389	0.09	11.12
catholic_dummy	.39*	0.14	0.15	2.62	0.009	0.52	1.91
evangelical_dummy	.59*	0.14	0.25	4.13	<.001	0.5	1.99
atheist_dummy	.28*	0.13	0.12	2.08	0.038	0.5	1.97
agnostic_dummy	0.18	0.13	0.08	1.34	0.181	0.48	2.04
hetero_dummy	0.17	0.21	0.07	0.8	0.423	0.2	4.93
homo_dummy	0.47	0.29	0.09	1.61	0.107	0.49	2.01
bisexual_dummy	0.25	0.23	0.09	1.07	0.281	0.23	4.22
single_dummy	-.31*	0.15	-0.14	-1.98	0.048	0.32	3.05
relationship_dummy	-0.15	0.17	-0.06	-0.92	0.358	0.34	2.9
white_dummy	-0.46	0.32	-0.24	-1.41	0.157	0.06	16.15
black_dummy	-0.27	0.34	-0.09	-0.78	0.435	0.13	7.35
brown_dummy	-0.43	0.33	-0.21	-1.3	0.193	0.06	15.04

a. Dependent Variable: Aggregate SM trigger. \* p<.05

As seen in table 5, only seven of the twenty predictors were statistically significant at  $p < 0.05$  level. The significant predictors were age of first contact, the number of times someone relapsed, and age. Age was a negative predictor of social media being perceived as a trigger, meaning that the older someone is the less likely they are to be triggered by social media. The number of times someone has relapsed is a positive predictor of social media being perceived as a trigger, meaning that the more times individuals relapse the more likely they are to be triggered by social media. Of the dummy variables, only religious affiliation and relationship status were statistically significant. Social media was perceived as a trigger by Catholics, evangelicals, and atheists, which seems to indicate that social media was perceived as a trigger by people of all religious denominations and atheists. Finally, whether someone was single or not was also a significant predictor of social media being perceived as a trigger. The negative coefficient on this predictor indicates that people who are less likely to be single are more likely to perceive social media as a trigger.

To test for the assumptions of regression, we included multicollinearity measures of tolerance and VIF, which were all above 0.25 (for TOL) and below four (for VIF) except gender and race. In the regression analysis, when gender was coded as dummy variables, it failed the multicollinearity test, which led us to investigate it a bit further through an independent samples t-test instead. To test whether gender played any role in individuals' perception of social media as a trigger, we first ran an independent samples t-test with gender as the grouping variable and perception of social media as a trigger as the test variable. The mean differences were statistically significant at  $p < .05$  level with Men ( $M = 3.7$ ) perceiving social media as a trigger more than women ( $M=3.3$ ) in our sample. This means that men are more likely to perceive social media as a trigger than women and this result can be extrapolated to the population from which the sample was drawn even though the magnitude of this difference is not too big.

To answer our second research question of whether social media being perceived as a trigger influences people's behavior on such sites, we ran a simple bivariate correlation between the two variables change in behavior (CB) and social media as a trigger (SMT). Table 6 below shows the results of the correlation analysis.

Table 6

*Bivariate Correlation between CB and SMT*

Variable	Variable 2	Correlation	Count	C.I.	Upper C.I.
CB	SMT	.455*			
	CB	1.000	774	.397	.509

\*p<0.5

The two variables are positively correlated with  $r=0.445$ ,  $p<.05$ . Based on this correlation coefficient, we note that social media being perceived as a trigger (SMT) significantly and positively predicts the changes in behavior (CB) that people reported. In other words, the more individuals perceived social media as a trigger the more likely they are to report changes in their behavior on social media

**DISCUSSION**

As pornographic content on the internet increases, more people are considering themselves addicted to and looking for ways to break free of it. The current exploratory study examined the role of social media in individuals’ efforts to abstain from watching porn online. First, we investigated the various factors that influence individuals’ perceptions of social media as a trigger. Among the statistically significant factors were age, gender, age of first contact, the number of times an individual has relapsed, religious affiliation and relationship status. Social media appears to act as a trigger for young people, males, the younger the individuals were when they first started watching porn, people who are more likely to relapse or have relapsed more times, people from all religious denominations and atheists, and people less likely to be single. Next, we found that the more individuals perceived social media as a trigger the more they changed their behaviors on such platforms.

Our study, though exploratory in nature, uses a large sample of self-acknowledged porn addicts and also presents some additional findings, which we hope serves as a starting point for future research. Respondents from all three religious affiliations and even atheists seem to equally perceive social media as a trigger. This is in tune with prior research in this area that links pornography addiction with religious or moral reasons (Grubbs et al., 2018). People from all religious denominations seem to be united in this. However, it is important to note that in our survey, only 9.8% of our respondents selected

religious motives as reason to want to stop, while impact on everyday life was the major reason at 43.1%, which seems to be congruent with other findings of the negative effects of pornography on daily life and people with addictive behavior (Bóthe et al., 2018; de Alarcón et al., 2019; Gola et al., 2016; Holas et al., 2020; Rocha, 2019; Sirianni & Vishwanath, 2016).

Our sample also illuminates issues with relapse, consistent with Rackham's (2020) finding that pornography addicts struggle with relapse and abstinence just as much as other behavior and substance addictions. This can be easily seen both by the high rate of relapse (83.3%), the high amount of relapse instances (52.2% have relapsed five times or more) as well as the stark difference between the percentages of the "Trying to Stop" periods and "Abstinence" periods, which can be closely analyzed in Tables 2 and 3. Ultimately, this sample has over 80% of respondents with less than a month of abstinence, which is also similar to studies done on cigarettes (Yang et al., 2006).

This research provided a new perspective on pornography addiction. Whereas previous studies come from a medical and psychological perspective, we approach this from a media studies lens with the understanding that everyday media use and deep mediatization mean that no medium is consumed without other media being interconnected. We began with the assumption that social media use affects those that call themselves pornography addicts. We found that there is evidence to link the two such that porn addicts find social media as a trigger, and a variety of other factors influence this perception among porn addicts.

Further, this study makes the case for an interdisciplinary approach that can focus on the population's experience with pornography as media, to investigate and understand how these users engage and disengage with pornography, social media, and perhaps other media in an effort to connect more deeply with this population and understand their problems and needs. From our research and a quick examination of the qualitative data collected on our survey through open-ended comments section, although not the main focus of this project, we observed that this group both shows a necessity to talk and be heard – over a thousand responses were collected in less than two weeks with no financial motivator – as well as display a complicated relationship with pornography and social

media when it comes to their sexuality, identity, masculinity, relationships, and even religion.

Despite the exploratory nature of our study, our initial findings do present some diagnostic, policy, and behavioral implications. First, the finding that younger males are more likely to find social media as a trigger suggests that policy makers need to consider children and teen use of social media more seriously. In addition to all the other harmful effects of social media, trigger porn addiction is another reason why an Instagram for children—an idea put forth by its parent company, Meta (formerly Facebook)—may be a bad idea. Next, for porn addicts, avoiding social media, particular image-based services like Instagram and Tik Tok, may be very effective in curbing their addiction.

Our study is a first step to creating a framework for thinking about pornography use, pornography addiction, pornified content, and social media. Similar to browser add-ons that block pornographic content, social media sites could create in-app options to block pornified/pornographic content for those that wish to continue using their services. Policies that consider the issue of minors easily accessing pornography on social media websites could be put in place. Ultimately, more research is needed to better understand the implications of the interconnectedness between pornography and social media.

### **Limitations and Future Research**

Considering this study has an exploratory purpose, it has some limitations. First, it relied on self-report data, which is limited given its reliance on respondents' memory and willingness to share pornography behavior (Kraus et al., 2016, 2017; Kraus & Rosenberg, 2014). Second, some of the questions on our survey were not based on previously developed scales, which limits the validity of the findings. Reliability can also be considered a limitation, especially for the Social Media as a Trigger Index, given its Cronbach's Alpha was slightly lower than .7.

Two limitations arose from the sample. First, the possible bias stemming from sampling from social media websites. This eliminated people that might consider social media so triggering they completely stopped their use and also people that never use social media but are a part of the population. However, given the large sample size and our initial findings, we believe the overall contribution of this research outweighs the sample bias and provide fruitful starting points for future research. Second, the nonprobability

sample also limits the generalizability of the results to the universe of all porn addicts. However, our goal here was exploration rather than generalization and we hope our findings are a good starting point for future research in this area.

As presented in the literature review, the role of social media in the pornography addiction is underexplored. Our results show that there is a link between social media and porn addiction in that social media can act as a trigger for certain groups of people. Findings serve the study's exploratory purpose and point to social media indeed acting as contextual stimuli with which self-perceived pornography addicts have to deal. Our purposive sample from a self-acknowledged porn addicts' group on Facebook also indicates that this group is using social media as a community building tool to help each other and share experiences. Social media, then, is not simply a trigger but a possible place for support, which can be further expanded on with future research. Also, our finding that people less likely to be single are more likely to find social media as a trigger has implications for the impact of porn addiction on relationships. This is an important area that should be examined for future research in this area. Lastly, our results also point to the complexity of the issue so further research should attempt to grapple with this complexity using mixed methods approach—a combination of qualitative methods and a more refined multivariate design using quantitative methods—to delve deeper into the relationship between social media and porn addiction. As Attwood (2005) properly puts it “[pornography] is experienced in quite astonishingly different ways” (p.81). The very same argument can be made about the active disengagement with pornography that these individuals experience on social media.

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