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Abstract
In recent decades, surge in the usage of pornography is promoting a severe negative impact on health and well-being throughout the world. In recent times, there is a surge in rape cases in India. There may be a relation between pornography addiction and an increase in sexual crime against women. This review aims to document the association between sexual violence and addiction to pornography in India. Six original articles were retrieved from databases for the initial review of the literature, such as PubMed, EMBASE, EBSCOhost, CINAHL plus, and PubMed Central. Out of the six included cross-sectional research, 50% reported primary (sample sizes range from 100 to 600), 33.3% secondary data, and 16.7% study assessed data from Google trend. Only 16.7% of included articles unveiled a significant association between the number of Internet users and increased sexual violence (rapes and or crimes) toward females that revealed an insignificant association when variables were controlled. About 33.3% of studies reported that the male gender was more vulnerable to pornography addiction among medical students than females. Pornography search had no significant association with literacy level. Female population ratio in Scheduled Castes and Scheduled Tribes positively and urbanization and female workforce participation negatively impacted crime against women.

Keywords
Pornography addiction, sexual violence, India, Internet sex, cyber pornography, sexual crime

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Introduction
Recent decades witness revolution in digital technology. Digital network has extended its reach even to the remotest places, rapidly across countries. Increasing consumption of the Internet also resulted in surge in the usage of pornography. Pornography has changed the traditional perception about sexuality. It may take the form of an addiction, which has several negative impacts on health and well-being. It raises concerns and harms in our society by infusing physical and sexual violence. The term pornography is defined as “the portrayal of sexual subject matter exclusively for sexual arousal, which can be presented in various media like video, film, video games, writing, magazines, and animation.” Pornography has appeared in various cultures around the world in some or the other way. Excess watching of porn is now an emerging social and public health concern. The main controversy of pornography revolves around pornographic addiction, and its consequences. There might be a significant association of sociofunctional and psychological impairment with addictions to pornography. Internet pornography addiction also comes under substance dependence. People use the Internet as a source to access sexually explicit material, sexual interactions, and cybersex. Alongside Internet access in India, accessing pornography material has...
also increased, with 12% of websites related to pornography.5 Most people have convenient access to pornography. It has been estimated that 90% of boys and 60% of girls under the age of 18 have been exposed to pornography, with the average age of first exposure being 12 years.6

World Health Organization defined sexual violence as "any sexual act, attempt to obtain a sexual act, unwanted sexual comments or advances, or acts to traffic, or otherwise directed, against a person's sexuality using coercion, by any person regardless of their relationship to the victim, in any setting, including but not limited to home and work."7 Approximately, 88% porn scenes include acts of physical aggression, 48% contain verbal aggression, and 94% of the target group was women.8 Additionally, in these videos, the men's portrayal as in charge, while women are submissive and obedient, exemplify unequal power and distribution between men and women; often, ego-centric cultures foster beliefs of male superiority and women inferiority, this attitude ultimately led to sexual violence against women.9 All these can play an important role in negative social issues like child sexual abuse, rape, violence against women, family breakdown, crime among youth, and sexually transmitted diseases.10

India stands in third position among most porn-watching countries11 and fourth in the highest rape crime countries.12 Sexual abuse affects women’s physical and mental health, as well as their sexual and reproductive health, in both short and long terms. As a result, sexual harassment is regarded as a serious public health problem. Every day, approximately 93 women are raped in India.13 There may be a connection between pornography addiction and an increase in sexual crime against women in India, as evidenced by the rise in rape cases. There were few reviews related to Internet pornography use and sexual motivation, learning from pornography, but there was no review on addiction to pornography and sexual violence against women in India. This review aims to document whether there is association between increase in sexual violence and addiction to pornography in India, selectively as it is understudied despite of its social relevance.

**Methods**

**Search Strategy**

A scoping review was conducted. A scoping review was deemed suitable as it allows the researchers to identify knowledge gaps, scope a body of literature, clarify concepts, interstage research conduct, or to inform a systematic review.14 The search was conducted considering the following databases for the initial review of the literature: PubMed, EMBASE, EBSCO CINAHL plus, and PubMed central. A wide range of searches was conducted on published literature to identify different types of publications. The search was limited only to India and only for a 20-year publication period (2001-2020) to confine the research to recent evidence.

The literature search via the databases used the words: pornography, eroticism, erotica, sexual crime, kidnapping, poaching, violence, battered, women, and India. The search words were employed using Boolean operator (OR). The search was limited to the original research articles that are available in English language and full-text articles. Besides, reference lists of the included studies were searched in order to identify relevant studies. The duplicated articles were removed before the implementation of inclusion and exclusion criteria to avoid duplicate bias. Finally, six original articles were included.

**Study Selection**

The article selection process is described below:

**Implementation of Inclusion and Exclusion Criteria**

Initially, the articles that resulted from applying search criteria were screened for study design. Furthermore, the titles and abstracts were scanned against inclusion criteria for the relevant articles, and then it was followed by the screening of full papers, which were identified in the initial screening as relevant articles. The articles that were not included with sufficient information regarding pornography and sexual violence were excluded. In addition, editorials, case reports, letters to the editors, and commentaries were excluded.

**Results**

**Distribution of Studies**

The search revealed only 6 articles discussing pornography viewing and sexual violence against females in India. The studies were conducted between 2014 and 2021, where more studies were identified in recent years (2019-2021) (Table 2). All included studies had a cross-sectional design; only 3 (50%) studies collected primary data, 2 (33.3%) studies analyzed secondary data, and 1 (16.7%) study assessed data from Google trend (Table 2). The sample size of the studies
| SN | Study          | Title                                                                 | Study Design          | Study Population     | Sample Size | Sampling Technique          | Instrument State Summary | State        | Summary                                                                                                                                                                                                 |
|----|----------------|                                                                      |                        |                        |             |                            |                        |             |                                                                                                                                                                                                                                                                   |
| 1  | Praveera et al | Cyber-pornography addiction among medical students of Telangana     | Cross-sectional       | Medical students       | 205         | Convenient Internet Sex Screening Test | Telangana               | It was aimed to assess the prevalence, type, and risk factors for cyber pornography addiction amongst students. The study revealed that 59% was third MBBS students, 4.4% were intern, and 58.4% males. Among males, 75 (36.9%) were under low risk, 45 (21.9%) at risk, while among females, 82 (40%) were under low risk, 3 (1.5%) are at statistically significant risk. It was to assess the pattern of increase of crime against women across different states in India and assess some associations with socioeconomic factors. It revealed that West Bengal and Assam have the most considerable crime growth rate against women, while Tamil Nadu had negative growth. It also revealed that female education and the female Scheduled Caste and Scheduled Tribe population have vital positive roles in increasing crime against women. However, the sex ratio, urbanization, and female workforce participation have a negative impact on it. |             |                                                                                                           |
| 2  | Maity and Roy  | Analysis of growth and identifications of the determinants of crime against women: insight from India | Econometric analysis  | Data from several secondary sources |             |                            |                        |             | The article assessed the influence of media awareness on sex crime reporting. Among the 100 respondents, 65% were female, 23% ages between 19 and 25, and 56% ages 26 and 35 (36%). It revealed no significant association between web utilization and assault, inappropriate behavior, and crimes against females. |             |                                                                                                           |
| 3  | Mondal and Mondal | Online pornography-seeking behavior and its relation to literacy rate and financial status of Indian states | Google trend analysis  |                        |             |                            |                        |             |                                                                                                                                                                                                                                                                   |
| 4  | Kamalakannan   | Influences of sex crime and media Awareness In India                | Cross-sectional       |                        | 100         |                            | Chennai                |             | The article assessed the influence of media awareness on sex crime reporting. Among the 100 respondents, 65% were female, 23% ages between 19 and 25, and 56% ages 26 and 35 (36%). It revealed no significant association between web utilization and assault, inappropriate behavior, and crimes against females. |             |                                                                                                           |
| 5  | Pandey and Kunkulol | Cyber pornography addiction amongst medical students of western rural Maharashtra | Prospective cross-sectional | Medical students       | 600         | Simple random sampling by using block randomization | Maharashtra            | It was aimed to assess the prevalence, type, and risk factors for cyber pornography addiction amongst students. The study revealed that 57.15% of the respondents are in the low-risk group, whereas 30% are vulnerable and 12.85% are in the highest risk group. Males have higher vulnerability than females. About 51% searched for online sexual content, and 22.4% had anxiety and disappointment when cyber pornography was inaccessible. |             |                                                                                                           |
| Author(s) | Title | Study Design | Data Source | Findings |
|----------|-------|--------------|-------------|----------|
| Math et al | Sexual crime in India: Is it influenced by pornography? | Retrospective analysis of secondary data | Number of Internet users (surrogate measure) from 1971 to 2008 was extracted from India's National Crime Records Bureau. | This study was aimed to assess the relationship between pornography consumption and the subsequent increase in sexual violence. It revealed a significant relationship between the number of Internet users and rapes and crimes against women. However, it found no association between the number of Internet users and sexual harassment. Quality of data, identification and underreporting of violence, sampling method, definition of pornography, and cultural variations are the study's potential limitations. |
with primary data ranges from 100 to 600; 2 (33.3%) studies assessed pornography viewing among medical students with the Internet Sex Screening Test Instrument (Table 2).

**Association Between Pornography Consumption and Sexual Violence Against Females**

Among the 6 studies, only 1 (16.7%) study found a significant relationship between the number of Internet users and rapes or crimes against women. However, the relationship became insignificant when the population growth variable was controlled. Moreover, there was no association between the number of Internet users and sexual harassment. Also, no significant association was found between the Internet use and sexual violence and total crime against women. Quality of data, identification and underreporting of violence, sampling method, definition of pornography, and cultural variations are the study’s potential limitations (Table 2). Two (33.3%) studies identified that male medical students are more vulnerable to develop pornography addiction than females. One (16.7%) study assessed the influence of media awareness on sex crime reporting that revealed no significant association between web utilization and assault, inappropriate behavior, and crimes against females. Another study found a trend of the crime against women across India’s states, with West Bengal and Assam having the highest rates of rise, while Tamil Nadu having the lowest. It also revealed that female education and the female population of Scheduled Castes and Scheduled Tribes play critical roles in the rise in crime against women. However, sexual crime is negatively impacted by the gender ratio, urbanization, and female workforce participation. Crime against women is not exclusively controlled by women’s attitudes or demographic correlates. Instead, such demographic variables may be predictors of vulnerability due to gender. The reported crimes are much less than the actual figures of sexual crimes; so, this data needs cautious interpretation. Similarly, findings of this study also give a skeptical view about female education and various social strata in relation to pornography and sexual crimes against women. Further, studies are warranted in this aspect to understand the social determinants of pornography use and sexual crime against women. Finally, 1 study assessed the online pornography-seeking behavior amongst Indian Internet users and its correlation with the literacy level. It revealed that the northern states had a higher volume of online pornography searches and no significant association between the literacy rate and relative pornography search.

**Discussion**

To the best of the authors’ knowledge, this study is the first literature review conducted regarding pornography and sexual violence against women in India that identifies the association between sexual violence and addiction to pornography in India. Association doesn’t establish the causality. So, the authors do not claim here that pornography addiction or exposure is the sole cause of sexual violence against women in India. However, the close association of pornography addiction and sexual violence indicates that the former may be a potential risk factor for the later entity. Also, a recent meta-analysis found that violent and non-violent pornography is weakly correlated with sexual aggression.

This review is the first to summarize pornography addiction and sexual violence against women in India, indicating a research gap in the field exploring the variables. Additionally, due to limited studies that focus on the topic, further research in this field is needed. Similar to addiction to tobacco use, pornography addiction is also a serious public health problem. So, authors believe that protecting people from the exposure of pornography requires the appropriate level of awareness about the health and social risks associated with the use of pornography. It has been hypothesized that individuals with pornography addiction are most likely to have Internet addiction too. Indulgence in Internet addiction may be associated with spending too much time online, which affects personal relationships significantly. Poor communication in a relationship may result in relational challenges and violence.

Promoting sex education in schools and colleges among adolescents can help eliminate misconceptions about pornography and its adverse effects and prevent the development of wrong concepts about sexuality. At the same time, there is a need to screen school-going children and adolescents for Internet addiction, which is the forerunner of pornography addiction. Educating the public about the negative impact of cyber pornography on individuals and populations is needed. Individuals suffering from pornography addiction should be referred to rehabilitation facilities, and counselling/therapy should be given based on a mental health professional’s assessment of the signs and symptoms of addiction. Furthermore, tailored recovery services for people addicted to pornography may be beneficial. Support groups may be more beneficial and certain people find strength in talking to those who have been through similar situations. In order to decrease the access to such explicit material, legal information technology (IT) acts should be implemented, advertisement of the explicit material should be banned on the websites, and keep a check on the industry of pornography. The government should take active measures such as implementing education programs as in England and Wales, under the Children and Social Work Act, 2017 introduced compulsory relationship and sexual education in all schools for both sex and digital safety or literacy from September 2020 which will enhance the preparation of adolescents when they see sexually explicit material online. Additionally, legal IT acts should be implemented for regulating young people’s access to pornography.

The study included only 6 original articles, which can be a limitation as the strong evidence cannot be proved with only a few articles. Furthermore, the review only included articles...
published in the English language, which can be a language bias. Additionally, excluding articles that are not available in full text can cause relevant articles to be missed out.

**Conclusion**

Sexual attraction is innate in humans, and all genders enjoy a balanced sex life, with sexual desire remaining the primary driver of reproductive health. Many factors affect people’s sexual activity, including gender, knowledge and attitudes, community, and religion. However, pornography has become globally available, and the Internet’s current existence availability has encouraged both sexual health education and the projection of inappropriate sexual behaviors. In a densely populated country like India, where a variety of external factors are at play, cyber pornography may have an impact on male sexual harassment and crime against women. Nevertheless, public awareness, social integration, and sexual health educations, as well as a robust unbiased justice system, will jointly work as preventive measures in such a community.

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