Prevalence of Problematic Pornography Use and Attitude Toward Pornography Among the Undergraduate Medical Students

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Abstract

Background: There are mixed views on categorizing pornography as addiction or as a sexual compulsivity or a subset of hypersexual behavior. Due to rise in the Internet access and technologies, the possibilities of conduit for sexual interactions, online pornography, and other type of repetitive behaviors have increased.

Aims: The current study aimed to find the prevalence of problematic pornography use and attitude toward pornography.

Methodology: A cross-sectional study was carried out among 1,050 undergraduate medical students to assess the prevalence of pornography addiction and attitude toward pornography. A Google document containing structured questionnaire in 3 different parts: (a) demographic details of students, (b) Problematic Pornography Consumption Scale, and (c) attitudes toward pornography scale. This Google document was shared with all the undergraduate students through email address and WhatsApp group. Participants who did not respond to the questionnaire were sent 3 reminders at a gap of 3 days. The responses were recorded in Excel sheet and analyzed using Epi-Info software.

Results: Prevalence of problematic pornography use among participants was 12.5%. There was statistically high prevalence of problematic pornography use among male participants ($P < .001$), nearly daily consumption of pornography per week ($P < .001$) and more than 20 min of consumption per day ($P < .001$). A statistical significant negative correlation was shown ($r = -0.483, P < .001$) between age of first exposure to pornography and problematic pornography consumption score. Males, being in a relationship, and those with problematic pornography use had higher score on attitude toward pornography scale.

Conclusion: It is important to provide education to students about the effects of problematic pornography use because there is negative correlation between exposure to pornographic imagery on the Internet and levels of genital and sexual esteem; pornography use was associated with poor quality of life, and depressive and anxiety symptoms. Gender-specific discussions so as to promote sexual health and participation in media literacy education would be beneficial for young people in changing attitude toward pornography.

Keywords

Problematic pornography, attitude toward pornography, undergraduate, medical

Introduction

In ancient India, eroticism was a well-studied concept as seen in Kamasutra written during the second or fifth century.¹ During British rule, Indian culture was admixed with the Victorian system of ethical and moral standards. At present in India, watching porn in private is not a criminal offense;
however, storing or publishing images of child sexual abuse is punishable. Due to rise in the Internet access and technologies, the possibilities of conduit for sexual interactions, online pornography, and other types of repetitive behaviors have increased. SimpleWeb in 2018 revealed that there is increasing number of porn visitors. The visits to these banned sites had come down by 50% but the use of proxy networks increased drastically for the consumption of pornography from various websites. India is the 3rd-most trafficked country in the world according to a report by Pornhub and 44% of the users belong to 18 to 24 years.

There are mixed views on categorizing pornography as addiction or a sexual compulsivity or a subset of hypersexual behavior. Problematic Internet pornography use is a feeling of loss of control over use and persistent adverse outcomes. “Pornography addiction” is defined as a propensity and tendency to view pornographic images and videos frequently and regularly and also experiencing distress when not allowed to do so. Impulsivity and compulsivity were found to be associated with those having problematic Internet pornography usage than those who do not use pornography with the same severity. Study reports that 58% of men view pornography weekly and 87% at least monthly; while the prevalence of pornography addiction ranges from 4.5% to 9.8%. Overall, pornography consumption increases over years, more among males particularly young adults, and decreases with age. Pornography use is associated with poor quality of life, depressive symptoms, mental and physical health suppressive days, and high level of anxiety as compared to nonpornography users.

One of the most common arguments against the use of porn is that porn creates an unhealthy image about women, promiscuous behaviors in society, and leads to increasing sexual assault on women, hence it should be banned. However, study reports that those who view more pornography had more favorable attitude toward females. Another study reports that pornography use may not be associated with gender nonegalitarian attitudes; pornography users held more egalitarian attitude toward women in position to power, working outside home, and abortion than nonusers. The scenes depicted in pornography and the frequency of pornography consumption may contribute to physical (eg, slapping, hitting, and choking) and sexual (eg, sexual coercion and forced penetration) violence toward women. A meta-analysis study concludes that exposure to pornography increases nonsexual aggression.

There is limited literature about pornography in Indian prospective. So the current study aimed to access the prevalence of problematic pornography use and attitude toward pornography among undergraduate medical students. A Google form was made and shared with all undergraduate students through their email address and WhatsApp group comprising of 1,050 students. The Google document contained structured questionnaire in 3 different parts: (a) demographic details of students, (b) Problematic Pornography Consumption Scale (PPCS), and (c) attitudes toward pornography scale. Participants who did not respond to the questionnaire were sent 3 reminders at a gap of 3 days. Ethical approval was taken from the institutional ethics committee.

**Materials**

**Problematic Pornography Consumption Scale**

It was used to measure problematic Internet pornographic use. It consists of 18 items that assess the 6 core components of addiction: salience, mood modification, conflict, tolerance, relapse, and withdrawal. Each component is measured by 3 items of the scale. Responses were recorded on the following 7-point scale: 1 = never, 2 = rarely, 3 = occasionally, 4 = sometimes, 5 = often, 6 = very often, 7 = all the time. A cutoff score of 76 was used to ascertain normal and problematic use; a score of 76 or higher indicates possible problematic pornography use. The Cronbach’s alpha of the total PPCS was 0.96. In the current study, PPCS demonstrated satisfactory internal consistency using Cronbach’s alpha (0.95).

**Attitudes Toward Pornography Scale**

The 20-item scale was used to assess attitude toward pornography. Some of the examples of items within scale are: “Viewing pornography is a fun way to relieve stress”, “Pornography leads to rape”, and “Individuals who engage in pornography are unsuccessful”. Participants’ responses were recorded on 7-point linear scale from 1 (strongly disagree) to 7 (strongly agree). Total score ranges from 20 to 140. The items with negative statements were reverse scored so that higher scores indicate more positive attitudes toward pornography. The reliability of the scale was 0.84. This scale shows satisfactory psychometric property for the current study using Cronbach’s alpha (0.74).

**Statistical Analysis**

Data entry and analysis was done using Microsoft Excel and Epi-Info software. The sociodemographic profiles of participants have been expressed in terms of frequency and percentage. Problematic pornography use of among different variables such as gender, relationship status, age groups, weekly, and daily consumption of pornography was assessed using chi-square test. Pearson correlation test was used to assess relation between age of first exposure to pornography and problematic pornography consumption score. Independent t-test was used to assess the relation of gender,
relationship status of participants, and problematic pornography use with attitude toward pornography score. While one-way ANOVA test was used to assess relation of different age group with attitude toward pornography score.

**Results**

Out of 1,050 participants, 753 students completed the Google form in study. Mean age of the students was 20.81 ± 1.70 years. Majority of participants (92.43%) was belonging to Hindu religion. Table 1 shows demographic details of participants.

Prevalence of problematic pornography use among participants was 12.5%. Table 2 shows that male participants reported higher problematic pornography use than female participants, which was denoted by chi-square test ($\chi^2 = 40.321, P < .001$). Participants having “nearly every day” consumption of pornography per week have statistical high problematic pornography use, which was denoted by chi-square test ($\chi^2 = 71.584, P < .001$). Participants who were watching pornography for “more than 20 min” per day had high problematic pornography use, which was denoted by chi-square test ($\chi^2 = 115.534, P < .001$). Participants who were in any relationship had statistically significant problematic pornography use, which was denoted by chi-square test ($\chi^2 = 11.474, P = .001$). No statistically significant difference was found between different age groups.

Figure 1 shows a negative correlation ($r = −0.483$) between age of first exposure to pornography and problematic pornography consumption score. The correlation was found to be statistically significant ($P < .001$) as denoted by Pearson correlation test. This means participants who have early age of exposure with pornography had higher score on PPCS.

Table 3 shows that male participants had statistically significant higher score on attitude toward pornography scale than female participants, which was denoted by independent $t$-test ($F = 2.850, P < .001$). Participants who were in any relationship had statistically significant higher score on attitude toward pornography scale than others, which was denoted

| Table 1. Demographic Details of Participants |
|---------------------------------------------|
| **Demographic Variable** | **No. of Participants N = 753** | **Percentage** |
| Gender | | |
| Male | 525 | 69.72 |
| Female | 228 | 20.27 |
| Religion | | |
| Hindu | 696 | 92.43 |
| Muslim | 31 | 04.12 |
| Others | 26 | 03.45 |
| Geographical area | | |
| Rural | 181 | 24.04 |
| Urban | 572 | 75.96 |
| Age group in years | | |
| 18-20 | 356 | 47.28 |
| 21-23 | 348 | 46.22 |
| 24-26 | 049 | 06.50 |
| Relationship status | | |
| Not in any relationship | 622 | 82.60 |
| Being in a relationship | 131 | 17.40 |

| Table 2. Relation of Problematic Pornography Use With Different Variables |
|-----------------------------------------------|
| **Variables** | **No of Participant** | **Problematic Pornography Use, N = 753** | **Chi-Square ($\chi^2$) P Value** |
| Gender | Male | 525 | Yes (92 (17.52%)) | No (433 (82.48%)) | 40.321 | <.001 |
| | Female | 228 | 24 (5.26%) | 432 (94.73%) | 71.584 | <.001 |
| Weekly consumption of pornography | Less than once/week | 456 | 24 (5.26%) | 432 (94.73%) | 71.584 | <.001 |
| | 1-3 times/week | 195 | 35 (17.95%) | 160 (82.05%) | | |
| | Nearly every day | 102 | 35 (34.31%) | 67 (65.69%) | | |
| Time spent on online pornography | Less than 10 min | 400 | 21 (5.25%) | 379 (94.75%) | 115.534 | <.001 |
| | 10-20 min | 263 | 31 (11.79%) | 232 (88.21%) | | |
| | More than 20 min | 90 | 42 (46.67%) | 48 (53.33%) | | |
| Relationship status | | | | | | |
| Not in any relationship | 622 | 66 (10.61%) | 556 (89.39%) | 11.474 | .001 |
| Being in a relationship | 131 | 38 (28.17%) | 93 (71.83%) | | |
| Age (years) | 18-20 | 356 | 39 (10.96%) | 317 (89.04%) | 2.486 | .289 |
| | 21-23 | 348 | 46 (13.22%) | 302 (86.78%) | | |
| | 24-26 | 049 | 09 (18.37%) | 40 (81.63%) | | |
Table 3. Comparison of Mean Attitude Toward Pornography Score With Different Variable

| Variables                        | Mean (SD)     | Statistical Value |
|----------------------------------|---------------|-------------------|
| Gender                           |               |                   |
| Male                             | 94.96 (15.26) | F = 2.850         |
| Female                           | 85.47 (14.00) | P < .001          |
| Age (years)                      |               |                   |
| 18-20                            | 91.25 (15.26) | F = 6.146         |
| 21–23                            | 91.90 (15.47) | P = .002          |
| 24–26                            | 99.45 (15.95) |                   |
| Relationship status              |               |                   |
| Not in any relationship          | 90.67 (14.99) | F = 1.246         |
| Being in a relationship          | 98.80 (16.20) | P < .001          |
| Problematic pornography use      |               |                   |
| Present                          | 99.31 (16.07) | F = 1.502         |
| Absent                           | 91.05 (15.16) | P < .001          |

Figure 1. Scatter Plot Between Age (years) Exposure of First Contact of Pornography With Problematic Pornography Consumption Score

Discussion

Problematic Pornography Use

The current study found 12.5% prevalence of problematic pornography use among participants. Mennig et al.\(^9\) found that 7.1% participants have problematic use of pornography. Dwulit et al.\(^20\) in a cross-sectional study among Polish University students found 12.2% prevalence of self-perceived...
higher testosterone in males, or if it is influenced by cultural differences are due to biological or social influence or women. He revealed that it is difficult to pinpoint whether through an evolutionary perspective such as men being more in his study attempted to explain these gender differences reported as 19% by Kaur et al24 and more than 25% by Sharma masturbation. While prevalence rate of premarital sex was reported 80% prevalence of intercourse with commercial sex workers. Sachdev et al23 in a study among university students reported 80% prevalence of masturbation. While prevalence rate of premarital sex was reported as 19% by Kaur et al24 and more than 25% by Sharma pornography material by males. Emmers-Sommer et al29 young adults of Scandinavia reports high consumption of pornography among male participants than females. Similarly, a study by Kvalem et al28 among young adults of Scandinavia reports high consumption of pornography material by males. Emmers-Sommer et al29 in his study attempted to explain these gender differences through an evolutionary perspective such as men being more aggressive and this translates to more pornography usage than women. He revealed that it is difficult to pinpoint whether gender differences are due to biological or social influence or higher testosterone in males, or if it is influenced by cultural constraints placed on genders.29 Sex differences are observed in sexual brain activity of ventromedial prefrontal cortex; sexual neuroimaging studies report that females have weaker response to visually erotic stimuli.30

It is observed in the current study that participants having younger age of exposure to pornography have higher score on Problematic Pornography Use Scale. Dwulit et al30 reported that the age of first exposure to pornography was significantly associated with higher self-perceived addiction in males and females as well as required sexual stimuli to reach orgasm when using pornography and decrease in sexual satisfaction. Bulot et al31 in a study among university students reported that the premature age of exposure to pornography is associated with higher sexual activity. High pornography use leads to sexual permissiveness causing increasing rates of sexually transmitted diseases (STDs), and engagement in premarital as well as extramarital sex.32 Adequate sex knowledge and a positive attitude toward sex are necessary for doctors and medical students to give proper sex-related information with a supportive and nonjudgmental attitude.33

The current study found that participants spending more time to pornography daily or weekly have high prevalence of problematic pornography use. Similarly, George et al34 in a review study reported that excess viewing of pornography has been associated with brain changes similar to what can be seen in drug addictions. Allen et al35 reported that consistent use of pornography may facilitate escalation of craving due to certain metacognition changes, information processing, and problematic use leading to addictive behaviors.

The current study found that participants in any relation (such as romantic relation) have high prevalence of problematic pornography use. Dwulit et al30 reported similar findings; the frequency of pornography use was higher among participants engaged in a romantic relationship as compared to singles. It may be due to pornography being described as arousing, exciting, or stimulating.36 Government of India banned 857 porn websites; this step may help in reducing pornography consumption and problematic use.37 Morrison et al’s significant negative correlations were obtained between exposure to pornographic imagery on the Internet and levels of genital and sexual esteem; pornography use was associated with poor quality of life, and depressive and anxiety symptoms.33 Therefore, it is important to provide education to students about the adverse effects of pornography. A case report by Darshan et al38 about pornography addiction with “dhat” syndrome found that psychotherapy and pharmacotherapy were effective in reducing compulsion to watch pornography. Cognitive behavior therapy was effective in ameliorating symptoms of online addiction such as motivation to quit, online time management, and abstinence from problematic online applications.39 Targeted treatment for pornography abuse, sexual addiction, and sexual abuse are needed to support the individuals who are addicted to pornography.

Attitude Toward Pornography
The current study found that male participants have more positive attitude toward pornography than females. Study by Häggström-Nordin et al40 Swedish high school students reported that male participants have significant positive attitude toward pornography; both male and female participants stated that they got inspiration and new ideas from pornography, but female participants have opinion that pornography created uncertainty and demands. Cowan et al’s study among female participants from Southern California reports highly negative attitude toward pornography. Mellor et al’s study among general population reports no difference between male and female attitude toward pornography. The difference in attitude toward pornography may be due to confounding variables such as cultural or religious background.

The current study found that participants having problematic pornography use had more positive attitude about pornography. Study by Häggström-Nordin et al40 reports that participants who had looked at hardcore pornography have positive attitude toward pornography than softcore porn viewer. Study by Svedin et al43 among 2,015 male high
school Swedish students found that participants who view sexually explicit material more frequently have positive or liberal attitude toward pornography than those who view pornography less frequently or not at all and create a more stimulating sex life.

The current study found that participants with higher age group have more positive attitude toward pornography. The results may be due to increased knowledge with age that changes the attitude. The current study found that participants in any relationship have more positive attitude toward pornography. One possible reason of this may be that pornography is reported as arousing, exciting, and stimulating in a study by Wallmyr et al. Also, Miller et al in his study found that pornography users have a significant positive indirect effect on sexual satisfaction. Gender-specific discussions so as to promote sexual health and participation in media literacy education would be beneficial for young people in changing attitude toward pornography.

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