Sexual Crime in India: Is it Influenced by Pornography?

Suresh Bada Math, Biju Viswanath, Ami Sebastian Maroky, Naveen C. Kumar, Anish V. Cherian¹, Maria Christine Nirmala²

ABSTRACT

**Purpose:** Studies on whether pornography poses a greater risk for sexually aggressive behavior have revealed conflicting results. This study aims to examine the relationship between the consumption of pornography and the subsequent increase in sexual violence, thus testing the hypothesis that increase in consumption of pornography is related to increased sexual crime, in the Indian scenario. **Materials and Methods:** The current study explored the association between reported incidence of crime over a period of four decades - 1971-2008 (time periods being divided into: Pre-liberalization and post-liberation - India adopted liberalization policy in 1992) and availability of pornography over internet with a particular focus on crime against women (such as rape, sexual harassment, and crime against women). **Results:** Comparison of pre-liberalization and post-liberalization growth of rape rates was not significant. Though there were statistically significant positive correlations between the number of internet users and sexual crime rates, the association was non-significant after controlling for the effects of population growth using regression analysis. **Conclusion:** Results presented needs to be interpreted with extreme care and caution. Nevertheless, the results from this study suggest that easy access to pornography did not have a significant impact on rape rates and crime rate against women.

**Key words:** Crime against women, pornography, sexual behavior, sexual violence

INTRODUCTION

Eroticism in ancient India was a well-studied concept as shown by the *Kamasutra*, written by Mallanaga Vatsyayana sometime during the 2nd or 5th century.[1] It was considered to be an integral part of adult education at time. However, major changes appear to have occurred following the British entry and drafting of the Indian Penal Code by Lord Macaulay[2] wherein Indian culture was admixed with the Victorian system of ethical and moral standards. Subsequent growth of the pornography industry, fuelled by the recent advances in information and technology, has also further shaped the sex culture in India.

The pornography industry is involved in the production and distribution of sexually explicit materials including literature, photos, audio, animation, movies, toys, and video games.[3] The most popular modes of access are magazines, compact discs, digital versatile discs, and the internet. It is estimated to be a $57 billion/year industry worldwide with its revenue being larger than the combined revenues of all the professions, even football, baseball, and basketball franchises put together.[4,3]
The advent of the ‘internet’ and ‘world wide web’ in India has significantly influenced pornography distribution and access. It has provided legal loopholes and made monitoring difficult, aiding the manufacturers and distributors, while for the consumer round-the-clock availability, easy accessibility and anonymity were served. Internet access in India has grown from 5 million in 2004 to 40 million in 2007 and continues to grow at the rate of 17% a year, according to web metrics firm.[6] India’s growth rate is the third highest in the Asia Pacific region.[6] Alongside this, accessing pornographic material has also increased with 12% of internet websites being related to pornography, and viewers being estimated to spend roughly 3000 to 4000 dollars per second.[10] Younger individuals were found to be more likely to use the internet both for viewing pornographic material and chat.[7]

Against this background, the well-known feminist dictum: “Pornography is the theory — rape is the practice” has raised serious concern,[8] especially among parents and policy makers. Defining what constitutes pornography plays a crucial role in research, policy, and law making. Pornography is a Greek word, which originally meant ‘writing about prostitutes.’[9] The definition of what constitutes pornography varies considerably across persons, gender, cultures, religions, communities, countries, time, and also across generations. The definition used for this study is a modified version of Kuhn et al., 2007,[10] which states that ‘pornography is a communication material provided for the purpose of sexually arousing or gratifying a user in isolation from others or in company of others.’

The existing literature on the effects of pornography can be broadly categorized into three; studies on convicted sex offenders and victims, laboratory studies, and general population studies.

Studies comparing those convicted for sex offences (rape, molestation, immoral trafficking, domestic violence etc.) and internet sex offenders have found contradictory results. Some have found that internet sex offenders were of lesser risk to the community and had lower prevalence of anti-social variables, such as, ‘acting out’ and breaking social rules,[11] while some of them found that they were equally dangerous to the society.[12] Psychiatric morbidity was found to be high in convicted sex offenders.[13] With respect to the role of pornography in commission of sexual offences also, there are varying results from having only a minor role[14] to primary involvement where child victims are involved.[15] Partners of battered women have been reported to have read or viewed significantly greater amounts of pornographic materials than those in a comparison group,[16,17] while among survivors at a rape crisis center, 28% reported that their abuser used pornography and that for 12%, pornography was imitated during the abusive incident.[18] However, a strong criticism of these studies is that the population surveyed is not representative of the true consumer.

Laboratory studies involve recruitment of volunteers who undergo assessments (such as their attitude to women, violence, rape, aggression, and sex) pre- and post-exposure to pornography.[19-21] Results indicated that the aggressive-pornographic materials increase aggression against females.[22] However, personality and substance use were found to be confounders.[23,24] Behavioral disturbances that occurred post-exposure were in individuals who showed more global disturbances of personality.[25] The major drawback of these laboratory studies was again that volunteers may not be representative of consumers in a society and that the studies were short term. The impact of multiple exposures, duration of exposure, pre-exposure personality, and long-term effect on a person had not been studied.

General population studies include surveys of consumers and indirect data including comparison of consumption of pornographic material in a society against reported levels of sex crimes in that population. These studies assess the prevalence of violence after exposure to pornography using questionnaires.[26] Some have reported that exposure to pornography on the internet can be described as a normative experience.[27] It appears that like all other stimuli, pornography does not have a single, homogenous effect on all consumers.[28] The overall findings in a study of self-perceived effects of pornography consumption in Denmark suggest that many young adults believe that pornography has had primarily a positive effect on various aspects of their lives such as their sexual knowledge, attitudes toward sex, attitude towards and perception of the opposite sex, sex life, and general quality of life.[29,30] A study of the United States of America (USA), Denmark, Sweden, and West Germany during the period 1964-1984 showed that there was no increase in rape rates in the face of evidence that during this period, the availability of various forms of pornography had developed from extreme scarcity to relative abundance.[31,32] On the other hand, a recent meta-analysis showed an overall significant positive association between pornography use and attitudes supporting violence against women.[35]

Thus, the relation between consumption of pornography and sexual violence remains inconclusive. In view of its impact on policy-making and judicial decision-making process (freedom of speech vis-à-vis regulating the behavior of an individual in private), this issue needs to be further explored. This study aims to test the hypothesis that increase in consumption of
pornography is related to increased sexual crime, in the Indian scenario.

MATERIALS AND METHODS

The reported crime rates in India particularly with reference to sexual crimes and crime against women over a four decade period were critically reviewed.

Data extraction
‘Crime in India’ is an annual publication of the National Crime Records Bureau,[34] Ministry of Home Affairs, Government of India with an objective to make available pan India crime-related data in one place for all stakeholders. The near regular publication helps to chart trends and guide police, other agencies, and policy makers to prevent, contain, and combat crime. Both national and state-level statistics on major cognizable crimes, local Acts, and special laws applicable in the country are reported along with district-wise statistics of the major cognizable crimes under the Indian Penal Code (IPC). Relevant data (rape, sexual harassment, total crime against women, and the percentage of total crimes that were directed against women) was extracted. The available data which spanned four decades was broadly divided into two time periods; pre-liberalization (before 1991) and post-liberalization (after 1991). ‘Liberalization’ refers to the economic reforms in 1991, which allowed the Indian market to open trade leading to exponential growth of the electronics and communication industry. In addition, the total number of internet users per year in India was tabulated.[35] We used the ‘number of internet users’ as a surrogate measure for ‘number of pornography consumers’ because the reliable estimates of this measure were unavailable. Disclaimer and limitation of the data made available by NCRB is disclosed on the website.[34]

Statistical analysis
Independent sample t test was done to detect whether there are statistical differences in crime rates between pre- and post-liberalization periods. Pearson’s correlation analysis was used to find the relationship between internet use and crime against women. To control for the influence of population growth, linear regression was done using the number of Rape cases as the dependent variable; total population and other crime rates as independent variables.

RESULTS

Total number of reported rape cases across four decades
As depicted in Table 1, there has been a slow and steady rise in the number of rapes and the total number of

| Table 1: Total number of reported rape cases, natural growth rate of population, and growth rate of cognizable crimes under Indian Penal Code across four decades (India adopted liberalization policy in 1992) |
| Year | No. RR | Growth of ‘R’ rate | Natural ‘G’ rate | No of Co IPC | Growth Co IPC | Year | No. RR | Growth of ‘R’ rate | Natural ‘G’ rate | No of Co IPC | Growth Co IPC |
|------|--------|-------------------|-----------------|--------------|--------------|------|--------|-------------------|-----------------|--------------|--------------|
| 1971 | 1      |                   |                 | 952581       |              | 1981 | 5409  | 7.68  | 21.4  | 1385757        | 1.26          |
| 1972 | 2605   | 4.74              | 19.7            | 984773       | 3.38         | 1982 | 5427  | 0.33  | 21.9  | 1353904        | −2.20         |
| 1973 | 2919   | 12.05             | 19.1            | 1077181      | 9.38         | 1983 | 6019  | 10.91 | 21.8  | 1349866        | −0.30         |
| 1974 | 2962   | 1.47              | 20.0            | 1192277      | 10.68        | 1984 | 6740  | 11.98 | 21.3  | 1358660        | 0.65          |
| 1975 | 3376   | 13.98             | 19.3            | 1160520      | −2.66        | 1985 | 7289  | 8.15  | 21.1  | 1384731        | 1.92          |
| 1976 | 3893   | 15.31             | 19.4            | 1093897      | −5.74        | 1986 | 7952  | 9.1   | 21.5  | 1405835        | 1.52          |
| 1977 | 4058   | 4.24              | 18.3            | 1267004      | 15.82        | 1987 | 8559  | 7.63  | 21.3  | 1406992        | 0.08          |
| 1978 | 4558   | 12.32             | 19.1            | 1334968      | 5.36         | 1988 | 9099  | 6.31  | 20.5  | 1440356        | 2.37          |
| 1979 | 4300   | −5.66             | 20.3            | 1336168      | 0.08         | 1989 | 9752  | 7.18  | 20.3  | 1529844        | 6.21          |
| 1980 | 5023   | 16.81             | 20.9            | 1368529      | 2.42         | 1990 | 10068 | 3.24  | 20.5  | 1604449        | 4.88          |

| Year | No. RR | Growth of ‘R’ rate | Natural ‘G’ rate | No of Co IPC | Growth Co IPC | Year | No. RR | Growth of ‘R’ rate | Natural ‘G’ rate | No of Co IPC | Growth Co IPC |
|------|--------|-------------------|-----------------|--------------|--------------|------|--------|-------------------|-----------------|--------------|--------------|
| 1991 | 10410  | 3.4               | 19.7            | 1678375      | 4.61         | 2001 | 16075 | −2.55 | 17.0  | 1769308        | −0.10         |
| 1992 | 11708  | 12.47             | 19.1            | 1689341      | 0.65         | 2002 | 16373 | 1.85  | 16.9  | 1780330        | 0.62          |
| 1993 | 12218  | 4.36              | 19.4            | 1629936      | −3.52        | 2003 | 15847 | −3.21 | 16.8  | 1716120        | −3.61         |
| 1994 | 13208  | 8.1               | 19.4            | 1635251      | 0.33         | 2004 | 18233 | 15.06 | 16.6  | 1832015        | 6.75          |
| 1995 | 13754  | 4.13              | 19.3            | 1695696      | 3.70         | 2005 | 18359 | 0.69  | 16.3  | 1822602        | −0.51         |
| 1996 | 14846  | 7.94              | 18.5            | 1709576      | 0.82         | 2006 | 19348 | 5.39  | 16.0  | 1878293        | 3.06          |
| 1997 | 15530  | 3.26              | 18.3            | 1719820      | 0.60         | 2007 | 20737 | 7.18  | 15.7  | 1989673        | 5.93          |
| 1998 | 15151  | −1.17             | 17.5            | 1778815      | 3.43         | 2008 | 21467 | 3.52  | 15.6  | 2093379        | 5.21          |
| 1999 | 15468  | 2.09              | 17.4            | 1764629      | −0.80        |      |        |       |       |                |               |
| 2000 | 16496  | 6.65              | 17.3            | 1771884      | 0.37         |      |        |       |       |                |               |

RR = Total number of reported rape cases, Growth of R rate = Growth of rape rate compared to previous year, Natural ‘G’ rate = Natural growth rate of population compared to previous year, No Co IPC = Total number of cognizable crimes under Indian Penal Code, Growth Co IPC = Growth rate of cognizable crimes under Indian Penal Code compared to previous year
cognizable offences under Indian penal code (IPC) over the last four decades. Comparison of growth of rape rates between pre-liberalization and post-liberalization era was non-significant (Mean SD = 7.78 ± 5.61 versus 4.40 ± 4.76, t = 1.97, P = 0.06).

Number of crimes against women cases reported and the total number of internet users across last 15 years

As shown in Table 2, in the preceding decade and a half, the overall percentage of crimes showed an increase ranging from 3% to 9.4%. There was also evidence to show that various forms of crimes against women were also increasing, viz.: Rape, sexual harassments, total crime against women, and the percentage of total crime which is directed against women. There was also a clear rise in the number of internet users from 1998 onwards.

Relationship between the total number of internet users and crimes against women

There were statistically significant positive correlations between number of internet users and; total number of rapes (r = 0.857, P < 0.002), total crimes against women (r = 0.791, P < 0.006), and the percentage of total crime that was directed against women (r = 0.842, P < 0.002). There was no correlation between the number of internet users and total number of sexual harassment cases (r = 0.335, P = 0.313). However, there was also a significant positive correlation between total population and; total number of rapes (r = 0.933, P < 0.001), total crimes against women (r = 0.95, P < 0.001), the percentage of total crime that was directed against women (r = 0.933, P < 0.001), and the total number of sexual harassment cases (r = 0.844, P < 0.001). In addition, total population positively correlated with number of internet users (r = 0.935, P < 0.001). Hence, to control for the influence of population growth, linear regression was done using the number of rapes as the dependent variable; total population, number of internet users, and other crime rates as independent variables. None of the variables were significant.

DISCUSSION

Authors of the study would like to emphasize that this article does not attempt to take a definitive position on pornography but rather to examine the available evidence to test the relationship between pornography and sexual violence. The study contained large available data and had a very specific hypothesis. However, this study has its own limitations as it relies on the data published by NCRB. The results of this study need to be interpreted carefully and cautiously because sexual crimes are likely to be underreported. In addition, the number of internet users was used for analysis because there was no reliable method to establish the number of pornography consumers.

In this study, we did not find a significant relationship between internet use and sexually aggressive behavior such as rape, sexual harassment, and total crime against women. Findings of this study are consistent with the findings from U.S.A., Denmark, Sweden, and West Germany, which reported no significant change in the crime rate in relation to pornography consumption.[31,32] However, some studies, including a recent meta-analysis,[33] have found positive associations between consumption of pornography and sexual aggression.[36]

It is a popular notion that pornography influences the behavior of Indian men more than in other cultures. Trans-cultural variations are described as the common reason. In India, any discussion about sex is considered “taboo,” and most people do not have even basic sex education. Sex education provides factual information about sexuality, which counteracts the messages

| Year | Rapes | Sexual harassment | Total crime against women | % total IPC crime against women | Number of internet users | Total population (in millions) |
|------|-------|-------------------|---------------------------|--------------------------------|-------------------------|-----------------------------|
| 1995 | 13754 | 4689              | 109259                    | 6.4                            | *                       | 9322                        |
| 1996 | 14846 | 5671              | 115723                    | 6.8                            | *                       | 9488                        |
| 1997 | 15330 | 5796              | 121265                    | 7.05                           | *                       | 9654                        |
| 1998 | 15151 | 8053              | 131338                    | 7.38                           | 1,40,000                | 9822                        |
| 1999 | 15468 | 8858              | 135771                    | 7.69                           | 2,80,000                | 9990                        |
| 2000 | 16496 | 11024             | 141373                    | 7.98                           | 5,50,000                | 10160                       |
| 2001 | 16075 | 9746              | 143795                    | 8.13                           | 7,00,000                | 10320                       |
| 2002 | 16373 | 10155             | 143034                    | 8.03                           | 16,50,000               | 10490                       |
| 2003 | 15847 | 12325             | 140601                    | 8.19                           | 22,50,000               | 10640                       |
| 2004 | 18233 | 10001             | 154333                    | 8.42                           | 39,00,000               | 10800                       |
| 2005 | 18359 | 9984              | 155553                    | 8.53                           | 50,60,000               | 10950                       |
| 2006 | 19348 | 9966              | 164765                    | 8.8                            | 40,00,000               | 11100                       |
| 2007 | 20737 | 10950             | 185312                    | 9.3                            | 42,00,000               | 11250                       |
| 2008 | 21467 | 12214             | 195856                    | 9.4                            | *                       | 11400                       |
about sexuality presented in pornography.[32] Without adequate sex education, it is suggested that pornography would serve to act as a “permission giving” agency by promoting wrong notions about the sexuality of women and children, thus breeding sexual violence.[36] However, these notions are mostly not supported by evidence. Hence, it is not surprising to note that such a relationship could not be established in this study. As previously stated, this finding is similar to studies in European countries and the USA. It has been suggested that pornography might act as an “aphrodisiac” for males rather than a blueprint for rape.[31,32] The ability to release sexual tension by masturbation following pornography consumption might reduce the possibility of real-time sexual aggression or rape. It seems that the much-hyped causal relationship between pornography and sexual behavior is an exaggeration by politicians and mass media.

Following reasons can be attributed to the inconclusive results across studies: Sexuality itself being a dynamic phenomenon varies within community and also across community. Others reasons can be attributed to methodology of the studies such as study sample, sampling method and definition of pornography, transcultural dimensions such as, variation in legal systems and awareness, perception of sexual crime, and degree of tolerance to such behavior. Stigma and systematic studies, the current data presents the pornography on other indicators. One of the possible methods to at least minimize the effect of pornography is to promote sex education in schools and colleges. There is an immediate need to inculcate sex education in the curriculum in order to prevent the development of wrong notions about sexuality among adolescents.

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REFERENCES

1. Available from: http://en.wikipedia.org/wiki/Kama_Sutra. [Last accessed on 2010 Jun 6].
2. Available from: http://en.wikipedia.org/wiki/Lord_Macaulay. [Last accessed on 2010 Jun 6].
3. Available from: http://www.economywatch.com/world-industries/porn-industry.html. [Last accessed on 2010 Jun 6].
4. Available from: http://www.toptenreviews.com/2-6-04.html. [Last accessed on 2010 Jun 6].
5. Weitzer, R., Sex for sale: Prostitution, pornography, and the sex industry. 2nd ed. New York, NY 270 Madison Ave: Pub: Routledge; 2010.
6. Available from: http://www.comscore.com/Press_Events/Press_Releases/2009/11/China_India_Japan_Fuel_Rapid_Growth_in_Asia_Pacific_Internet_Audience. [Last accessed on 2010 May 6].
7. Traeen B, Nilson TS. Use of pornography in traditional media and on the Internet in Norway. J Sex Res 2006;43:245-54.
8. Morgan, R. Theory and practice: Pornography and rape. In: LJ Lederer, editor. Take back the night. New York: William Morrow; 1980. p. 134-40.
9. Available from: http://en.wikipedia.org/wiki/Pornography. [Last accessed on 2010 Jun 6].
10. Pope NAK, Voges KE, Kuhn KL, Bloxsome EL. 27. Pornography and erotica: Definitions and prevalence. In: 2007 international nonprofit and social marketing conference social entrepreneurship, social change and sustainability, 27 and 28 September, 2007, Brisbane, Australia: Griffith University. Available from: http://eprints.qut.edu.au/27717/2/27717.pdf. [Last accessed on 2007, 2010 May 6].
11. Webb L, Craissati J, Keen S. Characteristics of internet child pornography offenders: A comparison with child molesters. Sex Abuse 2007;19:449-65.
12. Krueger RB, Kaplan MS, First MB. Sexual and other axis I diagnoses of 60 males arrested for crimes against children involving the Internet. CNS Spectr 2009;14:623-31.
13. Kanyanya IM, Othieno CJ, Ndeeti DM. Psychiatric morbidity among convicted male sex offenders at Kamiti Prison, Kenya. East Afr Med J 2007;84:151-5.
14. Endrass J, Urbaniok F, Hammermeister LC, Benz C, Elbert T, Laubacher A, et al. The consumption of Internet child pornography and violent and sex offending. BMC Psychiatry 2009;9:43.
15. Langewin R, Curnoe S. The use of pornography during the commission of sexual offenses. Int J Offender Ther Comp Criminol 2004;48:572-86.
16. Simmons CA, Lehmann P, Collier-Tenison S. Linking male use of the sex industry to controlling behaviors in violent relationships: An exploratory analysis. Violence Against Women 2008;14:406-17.
17. Sommers EK, Check JV. An empirical investigation of the role of pornography in the verbal and physical abuse of women. Violence Vict 1987;2:189-209.
18. Bergen RK, Bogle KA. Exploring the connection between pornography and sexual violence. Violence Vict 2000;15:227-34.
19. Donnerstein E. Aggressive erotica and violence against women. J Pers Soc Psychol 1980;39: 269-77.
20. Lopez PA, George WH, Davis KC. Do hostile sexual beliefs affect men’s perceptions of sexual-interest messages? Violence Vict 2007;22:226-42.
21. Parrott, DJ. Aggression toward gay men as gender role enforcement: Effects of male role norms, sexual prejudice, and masculine gender role stress. J Pers 2009;77:1137-66.
22. Malamuth NM, Addison T, Koss M. Pornography and sexual aggression: Are there reliable effects and can we understand them? Annu Rev Sex Res 2000;11:26-91.
23. Norris J, Davis KC, George WH, Martell J, Heiman JR. Alcohol’s direct and indirect effects on men’s self-reported sexual aggression likelihood. J Stud Alcohol 2002;63:688-95.
24. Norris J, Kerr KL. Alcohol and violent pornography: Responses to permissive and nonpermissive cues. J Stud Alcohol Suppl 1993;11:118-27.
25. Fukui A, Westmore B. To see or not to see: The debate over pornography and its relationship to sexual aggression. Aust N Z J Psychiatry 1994;28:600-6.
26. Cornett MB, Shuntich R. Sexual aggression: Perceptions of its likelihood of occurring and some correlates of self-admitted perpetration. Percept Mot Skills 1991;73:489-507.
27. Sabina C, Wolak J, Finkelhor D. The nature and dynamics of internet pornography exposure for youth. Cyberpsychol Behav 2008;11:691-3.
28. McKee Alan. The need to bring the voices of pornography consumers into public debates about the genre and its effects. Australian Journal of Communication 2005;32:71-94.
29. Häggström-Nordin E, Sandberg J, Hanson U, ‘Tydén T. ‘It’s everywhere!’ young Swedish people’s thoughts and reflections about pornography. Scand J Caring Sci 2006;20:386-93.
30. Hald GM, Malamuth NM. Self-perceived effects of pornography consumption. Arch Sex Behav 2008;37:614-25.
31. Kutchinsky B. The effect of easy availability of pornography on the incidence of sex crimes: The danish experience. Journal of Social Issues 1973;29:163-81.
32. Kutchinsky B. Pornography and rape: Theory and practice? Evidence from crime data in four countries where pornography is easily available. Int J Law Psychiatry 1991;14:47-64.
33. Hald GM, Malamuth NM, Yuen C. Pornography and attitudes supporting violence against women: Revisiting the relationship in nonexperimental studies. Aggress Behav 2010;36:14-20.
34. NCRB, National Crime Records Bureau, Ministry of Home Affairs. Available from: http://ncrb.nic.in/ciipprevious/main.htm. [Last accessed on 2010 Mar 6].
35. Available from: http://www.internetworldstats.com/asia/in.htm. [Last accessed on 2010 Jun 6].
36. Vega V, Malamuth NM. Predicting sexual aggression: The role of pornography in the context of general and specific risk factors. Agress Behav 2007;33:104-17.
37. Wallmyr G, Welin C. Young people, pornography, and sexuality: Sources and attitudes. J Sch Nurs 2006;22:290-5.
38. Braun-Courville DK, Rojas M. Exposure to sexually explicit web sites and adolescent sexual attitudes and behaviors. J Adolesc Health 2009;45:156-62.