# Extraversion, Neuroticism, Religiosity, and Self-perceived Effects of Pornography Consumption among Young Adults of Kerala, India

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## ABSTRACT

Understanding the link between pornography and personality has broad implications for individuals, relationships, and society as a whole. It can inform educational programs, and public health initiatives promoting healthy attitudes and behaviors related to sexuality. This study examines the relationship between Extraversion, Neuroticism, Religiosity, and Self-perceived effects of pornography. 781 participants were selected using stratified sampling technique from Kerala. Validated short form version of Self-perceived effects of pornography consumption scale (PCES-SF), a revised version of EPQ-BV, and Religiosity scales were used. The results indicated a significant correlation between extraversion and self-perceived effect of pornography, as well as religiosity and pornography consumption. However, no significant correlation was found between neuroticism and self-perceived effects of pornography consumption. Furthermore, negative correlation between age of exposure to pornography and its impact on self-perception, suggesting higher risk for negative self-perception with early exposure. Exposure to pornography at a younger age was associated with greater impact on self-perception and higher frequency of use. A strong positive correlation demonstrated that higher frequency of pornography consumption led to a greater impact on self-perception. No significant gender differences were found in self-perceived effects of pornography consumption.

Keywords: Extraversion, Neuroticism, Religiosity, Self-perception, Age of first exposure, Pornography

# INTRODUCTION

Pornography may be defined as written or pictorial material describing or showing explicit images of sexual acts that is read or viewed with the intention of increasing sexual arousal (Hald & Malmuth, 2008). People view pornography for amplifying their sexual fantasies (Byrne & Osland, 2000). In the case of pornography, the way to addiction is comparatively very easy and once it is formed it will become an obsessive-compulsive disorder. In order to reduce their obsession people, follow compulsive behaviour like watching more porns. They develop thoughts of reciprocating the same behavioural patterns as exhibited in pornographic videos. The association between pornography consumption and holding abusive attitudes toward women is primarily seen in persons with more antisocial personalities (Freguson & Hartley, 2009). Kama sutra was the first sexually explicating material in India. Later during the second half of the twentieth century, Indian miniature paintings were transformed from crafts to arts which are mainly in exhibitionistic form, these Indian miniature paintings acquired the status of art, many of them are depicting naked figures and thus neutered with the term 'nude', which was meant to regulate dangerous visual knowledge of the body (Nead, 1992). In the case of Avadhiragamala albums, they were also identified as pornography. The new shift from craft to art did little to ease the potential danger of the erotic. In India, the advent of internet pornography has become widespread, resulting in 30%

to 70% of web traffic (Ghosh, 2015). Some studies revealed that 35%-40% of content that is downloaded daily in India is pornographic (Outlook, 2019). India reports 95% rise in viewing pornography in this Covid-19 pandemic situation (India Today, 2020). According to Indian penal code (IPC) 1860, it is criminal to sell, distribute, exhibit, circulate or produce such obscene material. Pornography has also been prohibited under the information technology act, 2000 (IT Act).

Pornography is considered yet another source of information expressing ideas about gender, sex, and intimate relations. According to this view, most pornography merely triggers sexual thoughts that are not acted out, unless these thoughts result in harmful actions against others, pornography should be consider harmless (Malamuth, 1999), pornography is a form of communication which allows self-expression of sexual interests, and it is a part of basic human rights; freedom of expression of ideas (Malamuth, 1999). The conservative-naturalistic perspective holds that although individuals are equipped with a certain degree of free will, the socio-cultural environment influences their choices and decisions. According to this perspective pornography is seen as a part of this environment with the potential to adversely affect morals, values, standards, and behaviour of both the individual and society. The most commonly feared adverse effects of pornography include undesirable sexual behaviour like adultery, sexual aggression, loss of respect for traditional family structures and values,

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and a general non-specific moral decay (Linz &Malamuth, 1993). Pornography lacks intellectual or aesthetic merit; it is harmful to the viewers and damages the moral fabric of the society (Firestone, 1970).

Further, some models have also tried to explain pornography. Sexual communication model (SCM) views pornography as a natural result and it emphasizes more on considering human beings as sexual beings. This model holds a view about pornography that it performs positive, educational, informational, and therapeutic functions by serving as a source of educational and/or therapeutic aids (Goldstein, 1984). Wilson (1978) argued that pornography is a part of a latent mechanism through which society provides the individual with an opportunity to learn about sex and act as a potential clinical tool to help in overcoming sexual problems such as sexual guilt, shame and inhibition. Sexual Callousness Model (SCAM) considered pornography as a dangerous material with the potential to cause severe adverse effects. According to this model, pornography is not to be regarded as potentially beneficial, innocent, or harmless material to be used for recreational purposes, sexual pleasure, sexual development, or learning about sex (Kendrick, 1987). It argues that continuous exposure to pornography may cause acceptance and internalization of attitudes, opinions, values, morals and behavior portrayed in such materials (Buchmann, 1988). Thus continuous exposure to pornography in which women are portrayed as malleable, obsessed with sex, and willing to engage in any sexual act with any available partner potentially creates rape myths (Diamond, 1985) and it is highly problematic.

Pornography plays a significant part in men's sexual life and sexual socialisation (Wright & Bae, 2016). Consuming pornography has been proven to have an impact on men's sexuality in a number of areas, including body image dissatisfaction (Tylka, 2015), tolerance toward unintentionalsex activity (Peter & Valkenburg, 2010), preferences regarding the sexual practices depicted in pornography (Morgan, 2011), sexual aggression (Wright, Tokunaga, & Kraus, 2016), and sexual objectification of women (Mikorski& Syzmanski, 2016). Objectifying media representations of women, such as in pornography, socialise men to support particular ideas about masculinity and affect their sexual self-schemas (Brooks & Morrow, 2012).

Personality is the combination of characteristics or qualities that form an individual's distinctive character. According to Costa and McCrae (2002) extraversion, agreeableness, conscientiousness, and neuroticism are the four traits associated with risky forms of sexual behaviour. Through his three-factor model of personality, Eysenck has argued that extraversion is central to explaining individual differences in sexuality, according to these extraverts have favourable attitudes about having multiple sex partners and they also have favourable attitudes to engage in sexual intercourse with more partners than introverts (Eysenck, 1976). Neuroticism is rooted in negative emotionality, including anxiety, depression, and anger (Costa &Widiger, 1994). Neuroticism has been associated with several features of problematic sexuality which includes sexual dissatisfaction and marital distress (Bradbury & Fincham, 1988; Gottman, 2014). Some studies have found that people who score high in neuroticism tend to have more permissive sexual attitudes and engage in more sexual risk taking (Johnson, 1997).

Research has also found that the perceived effects of pornography were emphasized on 'third person' effects. That is people tend to attribute others as having more pornographic effects in their life than themselves (Lo & Paddon, 2000). The urge for longer stimulation, greater sexual stimulation, and a decline in sexual satisfaction most often reported were the unfavourable consequences of pornography. Age of first exposure was significantly related with the need for longer stimulation and more sexual impetuses to reach orgasm, and such individuals also experience a reduction in sexual plesure, quality of romantic relationship, neglect of basic needs and duties due to pornography use, and self-perceived addiction in both females and males. In their study they stated that pornography may have adverse effects on human health (Dwulit&Rzymski, 2019).

Fonceca, Raj and Anandan (2019) checked the impact of pornography on rural youth in Tamil Nadu, India. Most of the participants of the study stated that they had viewed pornographic content on a daily basis, constant viewing of porn interfered with their sleep pattern and had developed a thought of reciprocating the same behavioural patterns as exhibited in pornographic videos. More than half of them stated that they struggled with the urge to control their addiction. 66.3% of the participants stated that pornography interfered with their religious life, and they often felt guilty about it.

Declining the age of puberty and the increasing age of marriage has created a growing window of opportunity in which young people may engage in premarital romantic and sexual relationships. The Government of India estimates that about 2.40 million Indians are living with HIV, in which 83% are in the age group of 15-49 years (World Bank Group, 2012). Most of the divorce cases reported now-a-days have a root cause in any one of the partner's pornography consumptions. It creates a fantasy of sex life within their mind and they prefer pornographic models over their partner. In the case of Kerala, 49% of porn viewers were aged between 18-24 years, 30% between 25-34 years, 9% between 35-44 years, 5% between 45-54 years, 4% between 55-64 years and 3% of them were above 65 years (Paul, 2017). Kerala is the largest producer of porn videos in India (Kurian, 2012), at the same time Kerala possesses 96.2% literacy rate, the highest in India. This might suggest that there seems to be no relationship between educating people and pornography consumption. Extraversion, agreeableness, conscientiousness, and neuroticism are associated with risky forms of sexual behaviour (Costa &McCrae, 2002). The basic idea of every religion is the purity of mind and purity of intention. Viewing pornography has generally been considered as a major sin in any religion, and society often also has a negative attitude towards it. There is a need to study all these variables together to understand more about the effect of pornography on personality, especially in the most educated state of the Indian subcontinent.

# METHODS

## Objectives

- 1. To examine the relationship between extraversion and self-perceived effects of pornography consumption.
- 2. To examine the relationship between neuroticism and self-perceived effects of pornography consumption.
- 3. To examine the relationship between religiosity and self-perceived effects of pornography consumption.
- 4. To find out the influences of selected demographic variables on self-perceived effects of pornography consumption.

## Hypotheses

- 1. There is a significant relationship between extraversion and self-perceived effects of pornography consumption.
- 2. There is a significant relationship between neuroticism and self-perceived effects of pornography consumption.
- 3. There is a significant relationship between religiosity and self-perceived effects of pornography consumption.
- 4. Effects of pornography consumption decrease with increasing age of first exposure.
- 5. Perceived effects of pornography consumption increases with the frequency of pornography usage over the last six months.
- 6. Frequency of pornography usage over the last six months would be more in early exposed individuals

than those who are exposed to pornography during later years of life.

7. There is a significant difference over gender and selfperceived effects of pornography consumption of participants

Sample: The sample (N=781) for this study was in early adulthood (i.e., within the age range of 18-30 years). All participants were from various districts of Kerala and were educated at least to the level of higher secondary or more. Out of 781 participants 451 are males and 330 are females. On the basis of districts 3.7% belongs to Kasaragod, 13.7% belongs to Kannur, belongs to Wayanad, 41.2% belongs 1.2% to Malappuram, and 40% belongs to Kozhikode. In the case of frequency of pornography use over last six month, 56.8% of the participants reported that they used pornography less than one month, 16.0% used pornography more than 15 days, 11.1% of them used pornography most of the days in a month, 9.9% of them used it twice a week, and 6.2 % of them exposed to pornography more than once a day.

## Inclusion criteria

- 1. Any pornographic viewer watching porn at least 6 months before the data collection period.
- 2. Males and females within the age range of 20-40 years.
- 3. Native of Kasaragod, Kannur, Wayanad, Kozhikode and Malappuram.

## **Exclusion criteria**

- 1. Individuals who did not have any pornographic exposure in their life or were viewing porn less than 6 months since the day of data collection.
- 2. All other genders were excluded from the study.
- 3. Individuals from other districts of Kerala were excluded.

#### Instruments

**Self-perceived effects of pornography consumption** (PCES-SF) by Hald and Miller, 2019: It is a scale developed by Hald and miller in 2019 to measure individuals' subjective experiences and perceptions of the effect of pornography consumption on themselves. It consists of 14 items that assess various aspects of individuals' self-perceived effects of pornography consumption. Participants rate the extent to which they agree or disagree with each statement on a likert type scale, typically ranging from 1(not at all) to 7 (an extremely large).

**Eysenck personality questionnaire-brief version** (**EPQ-BV**) revised by Sato in 2005: The EPQ-BV is a shorter version of the EPQ, which consists of 24 items that assess two personality dimensions (extraversion and neuroticism). Participants respond to each by indicating their agreement or disagreement with the statement.

Religiosity scale (Modified version of Wilkes et al.) 1986: The wilkes et al. scale is a widely used measure of religiosity that assesses various dimensions of religious beliefs, practices, and experiences. It consists of multiple items that participants respond to on a likert scale, indicating the extent to which they agree or disagree with each statement.

#### **Procedure**

The study started with taking online consent for participation first. Around 6000 individuals were sent the online forms for consent, but watching porn being a sensitive personal issue only 2756 individuals agreed to participate. Although it was clearly mentioned that the data obtained will remain confidential and individual anonymity will remain throughout the study. It was also made clear that individual data will be a part of group data and hence will not be individually analyzed. The next step was to identify subjects who were watching porn from at least past six months. Again, an online form asking their duration of porn-watching was sent to all these 2756 individuals. It was mentioned in this form that even a rough estimate of duration of their porn-watching will be sufficient and they need not be too strict about the actual dates they started watching porn. The responses suggested that many of the participants were either curious about the topic under investigation and themselves were not watching porn or were watching for less than six months of duration. It might have happened that the participants got reluctant to participate further, so they did not turn back for study. Whatever could be the reason, out of 2756 participants, only 781 were the ones who turned up for this study and were watching porn for a period of more than 6-months from the start of data collection.

Since the topic of this study aimed at analyzing highly personal information, the first step of this study was to maintain rapport with the individual subjects before administering questionnaires online. Rapport was built telephonically, by calling every subject individually. The subjects were made clear that it's a common behaviour to watch porn these days, thereby making it imperative to study more about porn watching and how significant his or her contribution in it will be. Along with confidentiality and anonymity, the subjects were made clear that they can leave the study at any point of their discomfort. The subject who got a call was sent online questionnaires just after disconnecting the call. The subject was required to complete the questionnaires in accordance with the instructions on manual which were clearly mentioned on the online questionnaire too. The link for online submission by subject was closed immediately by the researcher after the stipulated time limit. The same subject then was again called to express gratitude for providing data and asking queries if any from the researcher. This procedure was repeated for around a year to gather data from 781 subjects. Once the data was obtained it was subjected to statistical analysis.

#### RESULTS

Table 1: Correlation between religiosity, extraversion, neuroticism, and self-perceived effects of pornography.

Variables	Religiosity	Extraversion	Neuroticism	Self- perceived effects of pornography
Religiosity	1	018	.076	.235*
Extraversion	018	1	.092	.285**
Neuroticism	.076	.092	1	.131
Self- perceived effects of pornography	.235*	.285**	.131	1

\*p<0.05\*, p<0.01\*\* (2 tailed)

Table 2: Correlation between positive and negative effects of pornography consumption, extraversion, neuroticism, and religiosity.

Variables	PED	NED
Extraversion	.291**	.170
Neuroticism	.039	.265*
Religiosity	.125	.278*
*n<0.05* n<0.01**		

p<0.05\*, p<0.01

From Table 1, it can be seen that there is a significant positive relationship between extraversion and selfperceived effects of pornography consumption, and is significant at 0.01 level of significance. Hence H1 that there is a significant relationship between extraversion and self-perceived effects of pornography consumption is supported. But further analyzing the result the researcher reaches another interesting finding that neuroticism is moderately positively correlated with the negative effect dimension of the scale PCES-SF (see table 2). It can be seen that religiosity and selfperceived effects of pornography consumption are positively correlated. Which is significant at 0.05 level of significance. Which indicates that there is a significant relationship between these two variables. Hence, H3 there is a significant relationship between religiosity and self-perceived effects of pornography is supported. From Table 2, it can be seen that religiosity is positively correlated with the negative effect dimension of PCES-SF.

In order to check the percentage of responses to each item on the self-perceived effects of pornography scale, the researcher combined 'to a large extent to to an extremely large extent' to one and 'to a small extent to a moderate extent' to two, and 'not at all to to a very small extent' to three. And it is shown in Table 2.1.

Percentage of responses to each item on PCES-SF 1= to a large extent-to an extremely large extent 2= to a small extent-to a moderate extent 3=not at all-to a very small extent

Item number	Item	1 (%)	2 (%)	3 (%)
1	Overall, has improved your sex life? (P)	30	25	21
2	Has made your life more problematic? (N)	38	24	18
3	Has made you more respectful towards the opposite gender? (P)	28	10	33
4	Overall, has made your sex life worse? (N)	55	13	12
5	Has had a negative influence on your attitudes toward sex? (N)	46	19	13
6	Has improved your knowledge of oral sex? (P)	15	24	23
7	Has improved your quality of life? (P)	37	19	21
8	Has had a positive influence on your attitudes toward sex? (P)	24	24	21
9	Has added something positive to your sex life? (P)	25	23	22
10	Has led you to view the opposite gender more stereotypically? (N)	39	23	16
11	Has adversely influenced your opinions of sex? (N)	30	29	17
12	Has improved your knowledge of sex? (P)	9	30	28
13	Has positively influenced your opinions of sex? (P)	14	16	37
14	Has added something negative to your sex life? (N)	43	24	8

 Table 2.1: Percentage of responses to each item on PCES-SF

By analyzing the table 2.1 it can be seen that, most of the participants reported that pornography has improved their quality of life, but 37% of the participants reported it's not that much positively influenced their opinion of sex, and half percentage of the respondents gave a moderate range of responses to the question asking the extent of influence of pornography on their knowledge of sex. And many of them reported that it led them to view the opposite gender more stereotypically.

In order to determine the relationship between selected demographic variables, Pearson correlation was done which is shown in table 3.

**Table 3:** Correlation between self-perceived effects of pornography consumption, age of first exposure, frequency of pornography use over the last 6 months.

Variables	PCE	Age of first exposure	Frequency of pornography use over last 6 month
PCE	1	246*	.374**
Age of first exposure	246*	1	267*
Frequency of pornography use over last 6 month	.374**	267*	1

\*p<0.05\*, p<0.01\*\*

The results in Table 3 shows the correlation value for age of first exposure and frequency of pornography use over the last six months with perceived effects of pornography consumption. From Table 3 it can be seen that there is a negative correlation between age of first exposure and perceived effects of pornography consumption. Which supports the hypothesis of the study that perceived effects of pornography consumption decrease with increasing age of first exposure to pornography. Hence H4 is accepted.

It can be also seen from Table 3 that the effect of pornography consumption is (positively) correlated with the frequency of pornography use over the last six months, i.e. Perceived effects of pornography consumption increase with the frequency of pornography use over the last six months. Hence H5 is accepted.

Table 3 shows that there is a negative significant relationship between age of first exposure and frequency of pornography use over the last six months, i.e., frequency of pornography use over the last six months would be more in early exposed individuals than those who are exposed to pornography very late in their life. Hence H6 is accepted.

In order to determine the sex difference on selfperceived effects of pornography consumption t test was performed and results were presented in Table 4. Before performing t test Levene's test is performed to assess the equality of variance. The F values of selfperceived effects of pornography consumption and gender were 0.327 (p>0.05), and equal variance of variables are not assumed in self-perceived effects of pornography consumption. For analyzing further relationship t test was carried out.

 Table 4: Mean, S.D, and t value of self-perceived effects of pornography consumption by sex

Sex	Ν	Mean	S.D	4
Male	451	39.72	13.73	t value 0.398
Female	330	38.26	17.07	0.396

The results in table 4 shows the t-value for selfperceived effects of pornography use by sex difference are not significant. Hence H7; there is a significant difference between sex difference and self-perceived effects of pornography consumption of participants is not supported.

#### DISCUSSION

Personality traits have often been shown to have correlational relationships with human behavior. Just like Grubbs et al (2015) have argued that religiosity is a factor for perceived addiction of pornography because of their feeling of guilt for acting against their religious or cultural values. Similarly, the result of the study indicates a significant relationship between extraversion and self-perceived effects of pornography consumption. In another study conducted by Zeitsch et al. (2012) extraversion is positively correlated with engagement in sexual risky behavior. Researcher also found that there is no significant relationship between neuroticism and self-perceived effects of pornography consumption. It was in contradiction to the study hypothesis, which states that there is a significant relationship between these two variables. Lobell et al (2016) found that neuroticism has an insignificant correlation with risky sexual behavior, and pornography consumption. Even though the study result shows an non-significant relationship between neuroticism and perceived effects of pornography, neuroticism has a small positive correlation with negative effects of pornography consumption. Even though the correlation was very small, most of them reported that the consumption of pornography has led them to view the opposite gender more stereotypically (39%), it also adversely influenced their opinions of sex (30%) and it made their life more problematic (38%).

In the case of religiosity, the correlation was very small with the self-perceived effects of pornography consumption, and it was also noticed that there is a small correlation between religiosity and negative effects of pornography consumption. According to Baltazar et al (2010) religious commitment or religiosity is negatively associated with consuming pornography. In his study he finds that the negative religious effects of pornography use were felt most severely by males. Nelson et al (2010) argued that frequent religious practice was negatively associated with pornography consumption, and young people who view pornography feel embarrassed or guilty about their behavior and therefore do not participate in religious activities. It may be due to the cognitive dissonance in the mind of religious people who believe porn viewing to be wrong yet do it anyway.

There is a negative correlation between age of first exposure and perceived effects pornography consumption. It supports the study hypothesis, which states that perceived effects of pornography consumption decrease with increasing age of first exposure to pornography. As the age of first exposure to pornography increases, the chances of taking that to life will decrease, it may be because of the individual's social maturity or their ability to see the world as it is. Early exposure to pornography may increase the person's unusual arousal to the pornographic materials and that person's chances of viewing the world apart from this fantasy would be very less as compared to others.

As expected, there is a strong positive correlation between the effect of pornography consumption and the frequencies of pornography use over the last six months. As the frequency of exposure increases its perceived effect on the individual also increases. And there is a negative correlation between age of first exposure and frequency of pornography use over the last six months. Age of first exposure was significantly associated with the need for longer stimulation and more sexual stimuli to reach orgasm, and they also experience a decrease in sexual satisfaction, quality of romantic relationship, neglect of basic needs and duties due to pornography use, and self-perceived addiction in both females and males (Dwulit& Rzymski,2019).

The study could not find any gender differences in perceived effects of pornography consumption. Which indicates that both men and women experience the same level of perceived effects of pornography consumption. Gender differences were found not to have any role in determining it.Overall, the study has thrown light over self-perceived effects of pornography consumption in context to various other variables.

Acknowledgments: The authors gratefully thank all the participants of this study

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