Prevalence and Associated Variables of Pornography Consumption Among Urban Students
A Cross-Sectional Study

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Abstract. Pornography is one of the most severe threats to today's young generation. Besides being able to damage the brain of the perpetrator, pornography can also be a cause of sexual crimes. Today, millions of pornographic content are spread on the internet, and anyone can access them easily and quickly. This study aims to analyze the influence of attitudes, subjective norms, perceptions of behavioral control, and intentions on pornographic consumption behavior in students. This observational study used a cross-sectional design involving 525 samples of university students in Semarang City. Valid instruments were shared online. Then the data was bivariate tested with the chi-square and multivariate tested with logistic regression. Most of the participants are women (67.6%), heterosexual (98.1%), and live in boarding houses (59.2%). Almost all participants had seen pornography (96%), but more than half saw it accidentally. Attitude (p=0.001; PR=0.419), subjective norms (p=0.022; PR=0.392), perceived behavioral control (p=0.005; PR=0.327), and intention (p=0.001; PR=0.224) have a significant effect on pornography consumption behavior. It can be concluded that attitude significantly influences pornographic consumption behavior the most, among other variables studied.

Keywords: Pornography, Attitude, Subjective Norms, Behavioral Control Perception

1 Introduction

The world is experiencing rapid digital development and transformation covering all fields. Digital information technology is very beneficial for the progress of human civilization, but on the other hand, it can also have a negative impact that is harmful to its users. Media exposure is one of the most significant aspects influencing human attitudes and perceptions in thinking and behaving. Asosiasi Penyedia Jasa Internet Indonesia (2022) reported that internet penetration reached 77.02% of the total population in Indonesia. Ages 3-18 are the group that uses the internet most often.
(99.16%), and ages 19-34 are the second highest age after them. Teenagers are a potential age group to maximize the use of the internet. However, adolescents are also a vulnerable group to be exposed to dangers in the digital space, such as hoax content, violence, and pornography. Pornography is defined as images, sketches, illustrations, photographs, writing, sounds, sounds, moving images, animations, cartoons, conversations, gestures, or other forms of messages through various forms of communication media and public performances which contain obscenity or sexual exploitation that violates the norms of decency in society (Undang-Undang Pornografi No 44, 2008).

Some pornographic content often appears nonintentionally through pop-up advertisements when accessing internet pages (Ševčíková, et al., 2014). Although some others intend and deliberately seek it for specific reasons (Peter, J., & Valkenburg, 2016).

Viewing pornography can result in addiction, which leads to mental health disorders. Exposure to pornography in adolescents significantly impacts the depressed mental state (Chatterjee, 2023). Pornography is often considered a source of sex education for adolescents. Unfortunately, in the content, such information is inaccurate and contains myths (Chatterjee, 2023). Another negative impact of pornography is sexual harassment which places women as victims (Rostad, W. L., Gittins-Stone, D., Huntington, C., Rizzo, C. J., Pearlman, D., & Orchowski, 2019).

A previous survey in Indonesia of adolescents aged 16-24 years spread across 34 provinces found that sexual harassment in public spaces is increasingly widespread, offline and online (National Commission on Violence against Women, 2021). Of the 4,236 respondents, the majority had experienced sexual harassment (71.7%). Most harassment in digital spaces comes from social media (42%), chat apps (33%), online dating apps (9%), virtual game rooms (4%), and virtual discussion rooms (2%). While the most common form of harassment experienced online is the sending of intimate/pornographic/genital photos or video content (21%) (National Commission on Violence against Women, 2021). Several cases in Semarang City were reported in national newspapers about perpetrators who sexually assaulted 8-year-old children after watching pornographic videos (Farasonalia, 2022). Other cases in the form of sexual harassment and sexual disorders have also occurred because pornographic shows inspired them (Farasonalia, 2021). Sexual assault, sexual harassment, and sexual perversion can also occur because a person is exposed to pornography.

Media exposure is closely related to increased perceptions of adolescents about sexual scripts, which also impacts the formation of their attitudes about sexuality (Wright, et al., 2014). Some teens show interest in sex and use the internet to get sex (25.6%). This behavior often leads to unprotected sex, alcohol use, and drug abuse (Farr, et al., 2020). In addition to attitudes, subjective norms, and perceived behavioral control can influence intention and pornographic consumption behavior (Ajzen, 1991). Subjective norms are formed by normative beliefs (an individual's most important beliefs) on whether a specific group of influential people (such as peers, superiors, teachers, etc.) think he/she should perform a behavior (Etezady, 2016). The intention to consume pornographic content will be stronger if supported by attitude, subjective norms, and perceived behavioral control. Perceived behavioral control reflects an individual perception of control over the performance of a focal behavior (Ajzen, 1991). It means one's belief in behavior formation through direction, control,
and coordination in planning, given the difficulty and ease of the stimulus, resulting in decisions in disagree and agree with behavior. The study aims to analyze the influence of attitude, subjective norm, perceived behavioral control, and intention on the occurrence of pornographic consumption behavior.

2 Methods

This observational study used a cross-sectional design, using primary data from 2023. The research variables use the framework of the theory of planned behavior from Icek Ajzen. The dependent variable studied is pornographic consumption behavior, while the independent variables include attitude, subjective norm, perceived behavioral control, and intention. Semarang City has a student population of 213,475 individuals. A sample size of 400 is determined using the minimal sample calculation formula. Purposive sampling was used to pick respondents to fill out surveys. Respondents must be university students with active status in Semarang City, aged 15-20 years, and eager to participate. Respondents who are on leave are barred from participating. The on-line instruments were subsequently given to participants, who completed all of the surveys on the Google form. Respondent characteristics (age, gender, residency status, and sexual orientation), attitude (5 questions), subjective norm (4 questions), perceived behavioral control (4 questions), intention (6 questions), and pornographic consuming behavior (5 questions) are all included in the test. All items were validated using Pearson Correlation and reliability tests with Cronbach's Alpha on 30 students who were not study participants. All questions and variables have been determined to be valid and reliable. The 525 respondent data were then examined bivariately with chi-square analysis and multivariately with logistic regression. The health research ethics commission of Dian Nuswantoro University granted clearance for this study with the number 331/EA/KEPK-Fkes-UDINUS/XII/2022.

3 Results

The respondents in this survey were, on average, 20.20 years old (SD: 1.009), with a range of 18-20 years. They are all students from state colleges (35.6%) and private universities (64.4%)—those living in boarding houses and those with family at home have nearly the same percentage. Simultaneously, the respondent's sexual orientation is primarily heterosexual. However, approximately 2% of respondents identified as bisexual. Table 1 provides a complete description of the demographics of respondents.

<table>
<thead>
<tr>
<th>Table 1. Demographic Summary of Respondents (n: 525)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variables</td>
</tr>
<tr>
<td>Gender</td>
</tr>
<tr>
<td>- Male</td>
</tr>
<tr>
<td>- Female</td>
</tr>
<tr>
<td>Status of residence</td>
</tr>
<tr>
<td>- Boarding house</td>
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<td></td>
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</tbody>
</table>
The majority of respondents (85%) have viewed pornography online, and some (60.5%) have encountered it by accident. The median age of the first-time viewers was 13 years old. Viewing pornography was uncommon (77.8%), with the majority obtaining it through social media (30.8%). Popular social media platforms include TikTok, Instagram, Facebook, Twitter, Whatsapp, and others.

The majority of research participants had a positive view, implying that there were still more respondents who disapproved with pornography usage. However, many respondents agreed with the consumption of pornography. The percentages of the two groups with an attitude of agreement and dissent are not dissimilar. Respondents with a disagree attitude were more likely to be female (65.6%), boarding house residents (59.4%), and straight (53.8%). Pornography consumption is more popular among bisexuals. Pornography, according to 25.7% of respondents, can ease tension, and 57.3% believe it can teach new things about sexuality. They (60.8%) also believe that watching pornography is natural, if not excessive. Regarding pornography use, 25.6% of respondents agreed that it was done for entertainment purposes, and 71.1% did not care if others did.

The percentage of subjective norm factors differs little as well. Most respondents (93%) have friends who have viewed pornography, partly due to friend encouragement (27.2%). Female respondents (66.5%), boarding house residents (64.7), and heterosexual orientation (57.1%) dominate supportive subjective norms. Viewing pornography is pleasurable (47.8%) and makes you more confident in relationships (37%), according to respondents’ peers.

Nevertheless, half of those answered believed they could manage their pornographic consumption and redirect it to other constructive pursuits. More than half of respondents believe that external factors such as family, parents, and siblings are adequate for controlling pornography use behavior. Female respondents (69.9%), those living with parents (63.3%), and those of heterosexual orientation (58.1%) had the most perceived behavioral control. Respondents who want to view pornography are overwhelmingly male (72.9%), live in boarding houses (57.3%), and are bisexual (90%). Similarly, male respondents (71.2%), boarding house residents (54.8%), and bisexual orientation (80%) dominate pornography use behavior. Table 2 reveals that the percentage variation in the categories of all variables is just about 15%. However, most respondents (52.8%) disapprove with pornography, are supportive of the subjective norm (57%), have superior perceived behavioral control (57.3%), and have good intentions (53%). The majority of individuals (58.9%) also exhibit better behavior.
Table 2. The category of research variables (n=525)

<table>
<thead>
<tr>
<th>Variables</th>
<th>(Me±SD)(Min-Max)</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude</td>
<td>(8±3.015) (0-15)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Disagree (≥Me)</td>
<td>277</td>
<td>52.8</td>
<td></td>
</tr>
<tr>
<td>- Agree (&lt; Me)</td>
<td>248</td>
<td>47.2</td>
<td></td>
</tr>
<tr>
<td>Subjective norm</td>
<td>(6±2.132) (1-12)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Supportive (≥Me)</td>
<td>299</td>
<td>57</td>
<td></td>
</tr>
<tr>
<td>- Unsupportive (&lt; Me)</td>
<td>226</td>
<td>43</td>
<td></td>
</tr>
<tr>
<td>Perceived behavioral control</td>
<td>(16±4.512) (3-24)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Better (≥Me)</td>
<td>301</td>
<td>57.3</td>
<td></td>
</tr>
<tr>
<td>- Worse (&lt; Me)</td>
<td>224</td>
<td>42.7</td>
<td></td>
</tr>
<tr>
<td>Intention</td>
<td>(24±9.218) (0-36)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Good (≥Me)</td>
<td>279</td>
<td>53.1</td>
<td></td>
</tr>
<tr>
<td>- Not Good (&lt; Me)</td>
<td>246</td>
<td>46.9</td>
<td></td>
</tr>
<tr>
<td>Behavior</td>
<td>(3±1.045) (0-6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Better (≥Me)</td>
<td>309</td>
<td>58.9</td>
<td></td>
</tr>
<tr>
<td>- Worse (&lt; Me)</td>
<td>216</td>
<td>41.1</td>
<td></td>
</tr>
</tbody>
</table>

Source: Primary Data, 2023

The bivariate test between variables revealed a significant association between attitude (p-value 0.000), subjective norm (p-value 0.000), perceived behavioral control (p-value 0.000), and intention (p-value 0.000) and behavior. The participant with an agree-on attitude had a 0.419 times greater likelihood of consuming pornographic content than the individual who participated with a disagree attitude, according to an OR of 0.419 with a 95% CI of 0.262 to 0.669. Respondents with unsupportive subjective norms are 0.392 times more likely to consume pornographic material than respondents with supportive subjective norms. Respondents with lower perceived behavioral control are 0.327 times more likely to consume pornographic content than those with higher perceived behavioral control. Respondents with a high intention to consume pornographic content have a 0.224 times greater chance of doing so than respondents with a low intention. The cross-tabulation of variables and logistic regression test results is detailed in table 3 below.

Table 3. The factors associated with pornographic consumption behavior

<table>
<thead>
<tr>
<th>Variables</th>
<th>Behavior</th>
<th>p-value*</th>
<th>OR (95%CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude</td>
<td>Better</td>
<td>216/78</td>
<td>0.00</td>
</tr>
<tr>
<td>- Disagree</td>
<td>93/37.5</td>
<td>155/62.5</td>
<td></td>
</tr>
<tr>
<td>- Agree</td>
<td>85/28.4</td>
<td>131/58</td>
<td></td>
</tr>
<tr>
<td>Subjective norm</td>
<td>Better</td>
<td>214/71.6</td>
<td>0.00</td>
</tr>
<tr>
<td>- Supportive</td>
<td>95/42</td>
<td>131/58</td>
<td></td>
</tr>
<tr>
<td>- Unsupportive</td>
<td>76/25.2</td>
<td>140/62.5</td>
<td></td>
</tr>
<tr>
<td>Perceived behavioral control</td>
<td>Better</td>
<td>225/74.8</td>
<td>0.00</td>
</tr>
<tr>
<td>- Better</td>
<td>84/37.5</td>
<td>140/62.5</td>
<td></td>
</tr>
</tbody>
</table>
4 Discussion

Semarang City is the capital of Central Java Province, with the Java Sea to the north. Residents are of many ethnic backgrounds, including Javanese, Chinese, Arab, and Descent. Semarang, as a metropolitan city and the capital of Central Java province, has adequate facilities (Central Bureau of Statistics, 2023). Because information is easily and quickly accessible, everyone can freely communicate and get information. Anyone can easily post and download any type of content for a specified purpose. Similarly, when it comes to pornographic content, anyone can be a perpetrator who spreads pornographic content or a victim who suffers from the negative impacts of pornography. Based on a review of Planned behavior theory, this study discusses the impact of numerous variables on the occurrence of pornography intake behavior. Although some noteworthy data were achieved, this study does not go into detail into the arguments for adopting attitudes, subjective norms, and perceived behavioral control. To obtain more detailed data, a mixed-method technique must be implemented for the next research.

4.1 Attitude toward behavior

Pornography is frequently regarded as useful, particularly among certain age groups. In this study, youth who supported pornography did so for a variety of reasons, including stress relief, entertainment, learning new things about sexuality, and feeling normal. Particularly during the last covid pandemic, when many people spent more time connected to the internet. Along with gaming, gambling, and social networking, watching pornography can help reduce tension and anxiety. (Király, O., Potenza, M. N., Stein, D. J., King, D. L., Hodgins, D. C., Saunders, J. B., ... & Demetrovics, 2020). Another study discovered that 11.47% of the 46.3% of students who watched porn had symptoms indicating with problematic internet use. All of these people experienced stress, with 43% experiencing extreme stress and 57% experiencing moderate stress (Madaan N, Wundavalli L, 2020).

Some teenagers learn about sexuality by watching pornography, according to a study of students aged 14 to 24 conducted in the United States. One-quarter of young adults in the United States believe pornography is a useful source of information about how to have sex and what they believe they are learning from it (Rothman EF, Beckmeyer JJ, Herbenick D, Fu TC, Dodge B, 2021). Information on sexuality should be collected from government websites or institutes working with the subject. Pornographic content may contain erroneous facts and misconceptions that contradict sexuality theory. Pornographic exposure can lead to more liberal sexual attitudes. (Raine
Because of their unprotective sex, they may become involved in sexual conduct and be at danger for sexually transmitted diseases, HIV, and AIDS. Furthermore, pornographic use has been linked to numerous forms of sexual violence, hostility, and harassment (Raine G, Khouja C, Scott R, Wright K, 2020).

4.2 Subjective Norm and Urgency Perceived Parental Behavioral Control

The social environment influences a person's conduct significantly. As a key social context, peers frequently supplant family in shaping the formation of adolescent behavior (Weber, M., Quiring, O., & Daschmann, 2012). When compared to girls, teenage boys prefer to discuss sexual content with their peers. They believe they are not free to watch pornography in their home (Weber, M., Quiring, O., & Daschmann, 2012). Peer groups not only influence kids' viewing of pornography, but also their sexual conduct. Peer pressure makes teens three times more likely to engage in premarital sex than their peers. Peer pressure was found to have a statistically significant relationship with premarital sexual behavior (Damtie, Y., Cherie, N., Fentaw, 2022). Peer groups can also trade sexually explicit files with one another. This condition is known as a sexual media environment with a broader range. Furthermore, accessible parent-child channels for discussing about sexual and media experiences, sex education at home or school, and parental participation with children on the Internet are all positive influences (Greenfield, 2004).

Some respondents have friends who believe that pornography can boost sexual confidence (Jhe GB & Lin J, 2023). Another study found that early puberty was associated with earlier exposure to pornography and later exposure. The more frequently a person views pornography, the more probable he will have unprotected sexual intercourse. Furthermore, they will have a more favorable attitude regarding premarital sex behavior and brief sexual interactions (Hu, Z., Sun, H., Liang, H., Cao, W., Hee, J. Y., Yan, Y., & Tang, 2022). Balancing the harmful and positive impacts of pornography consumption will provide clarity for adolescents and health professionals. The role of parents is critical in shielding teenagers from pornographic exposure. Peer group pornography use mediated the association between teenage pornography use, pubertal timing, and parental parenting (Nieh, H. P., Chang, L. Y., Chang, H. Y., Chiang, T. L., & Yen, 2020). When teenagers reach puberty, parents must discuss the adolescent life challenges connected to sexual and reproductive health. Furthermore, parents must apply teen-friendly communication, form friendships, and select a style that their teenagers enjoy.

4.3 Intention as a Possibility for Pornographic Consumption Behavior

One of the abusive uses of internet sexual activities that might lead to addicted sex is pornography (Karila, L., Wéry, A., Weinstein, A., Cottencin, O., Petit & Reynaud, M., & Billieux, 2014). Pornography-watching behavior can happen by chance. However, in this study, respondents who intended to watch pornography had a 0.224 times greater risk of consuming pornographic than respondents who had no intention. Inten-
tion emerges as a result of the drive of sexual relationship evaluation, sacrifice to someone, pranks, revenge, and self-satisfaction. Furthermore, pornography is consumed for emotional reasons such as sadness and exhaustion (Esplin, C. R., Hatch, S. G., Hatch, H. D., Deichman, C. L., & Braithwaite, 2021). Another study categorizes motivation into four categories: connection, mood management, habitual usage, and imagination (Paul, B., & Shim, 2008).

Exposure to pornography in children can induce brain damage, poor capacity to concentrate and focus, addiction to porn videos, sex aberrations, and future perpetrators of sexual abuse or violence (Anggraini, T., & Maulidya, 2020). When adolescents are exposed to pornography, it might cause cognitive issues and barriers (Imawati, 2019). Pada responden yang pernah mengkonsumsi pornografi, sebagian besar (73%) memiliki rencana untuk menghentikan perilakunya. Niat yang baik ini perlu didorong dengan pengalihan pemenuhan motivasi dengan kegiatan positif lainnya. Selain itu, sikap, norma subyektif, dan perceived behavioral control perlu dikuatkan karena beberapa variabel ini memiliki pengaruh yang signifikan pada pembentukan niat. The majority (73%) of individuals who had ever consumed pornography intended to stop doing so. This excellent aim must be promoted by broadening motivation satisfaction with various pleasant actions. Furthermore, attitudes, subjective norms, and perceived behavioral control must be enhanced because some of these variables have a substantial influence on intention formation. Respondents with negative sentiments were 0.248 times more likely to intend to watch pornography. Respondents with less supportive subjective norms are 0.462 times more likely to intend to watch pornography. Similarly, low perceived behavioral control increases the likelihood of planning to watch pornography by 0.188 times.

Pornography affects children as young as five years old, but by the age of seventeen, most urban teenagers have access to pornography. Teenagers are still under the care of their parents at this time. Adolescent attitude formation necessitates the essential participation of parents through youth-friendly communication. Children should be educated about the harmful consequences and hazards of pornography from an early age. Furthermore, parents must set limits on media access, both online and offline. Zurcher, (2023) states that parents can influence their children's literacy media. Furthermore, parents believe it is their job to educate their children about pornography through open and honest dialogues and supervision. Parents afterwards believed that schools should do more to teach children about pornography. Because parents may be less confidence in their abilities, school becomes a reinforcing force that supports them (Burke, S., Purvis, M., Sandiford, C., & Klettke, 2023).

5 Conclusion

All of the independent variables have a substantial relationship with pornographic consuming behavior. Similarly, attitude, subjective norms, and perceived behavioral control all have an impact on intention. Attitude, subjective norm, perceived control behavior, and intention have the most influence on pornographic consumption behavior in that order. In terms of the likelihood of intention, the subjective norm has a
considerable influence on attitude and perceived behavioral control. Respondents' intentions and behaviors in consuming pornography can be minimized by raising urban teenagers' attitudes, choosing surroundings and significant individuals who accept pornography, and developing self-control and urban adolescents' environment not to use pornography. Control of the social environment is advised by integrated parents and schools that can share information more competently.

**Author Contributions**
The first author helps to write articles in the format specified by the editorial journal and serves as an author correspondent. The second and third authors assisted with the analysis of bivariate and multivariate data. The fourth and fifth authors were in charge of data collection on the field. Finally, the sixth author contributes to the discussion of results and the writing of corrections.

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**Institutional Review Board Statement**
The study was carried out with the approval of Universitas Dian Nuswantoro's research ethics committee. The presented research protocol passed the ethical test under seven WHO 2011 guidelines. The research ethics commission approved this study with the number 331/EA/KEPK-Fkes-UDINUS/XII/2022.

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**Conflicts of Interest**
Because no financing was obtained from foreign sources, it is assumed that no conflict of interest arose from this work. According to the agreement, all parties involved have obtained rights and obligations.

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