

Pornography Consumption and Generation Z Sexual Behavior: The Role of Risk and Self-Control

Diyah Hesti Nur Khasanah¹, Yoma Bagus Pamungkas²

^{1,2}Universitas Semarang, Indonesia

Email: diyahestii30@gmail.com¹, yoma@usm.ac.id²

DOI: <https://doi.org/10.35719/fenomena.v23i1.610>

Received: March 17, 2024

Revised: April 15, 2024

Accepted: May 19, 2024

Published: June 21, 2024

Abstract :

Development in digital technology has made it easy to obtain pornographic content via social media, especially X, such that it is now among the key avenues of spreading pornographic content and has raised eyebrows about Generation Z's sexual behavior. Previous research has sought to highlight direct consumption of pornography without taking into consideration the influence of psychosocial factors, hence leaving out more complex mechanisms. The current study sought to examine the impact of pornography consumption on social media X on Generation Z's sexual behavior with risk perception as a mediator and self-control as a moderator. The research followed a quantitative design with 384 Generation Z respondents in Indonesia, and it was analyzed by Structural Equation Modeling–Partial Least Squares (SEM-PLS) version 4. The results reveal that pornography consumption has a significant positive impact on sexual behavior ($\beta = 0.360$; $p < 0.001$) that risk perception partially mediates ($\beta = 0.287$; $p < 0.001$) and that there exists a moderating role of self-control that suppresses this impact ($\beta = -0.231$; $p < 0.001$). The findings underscore the importance of addressing psychosocial factors and indicate implications for digital literacy, comprehensive sexuality education, and the improvement of adolescents' self-regulation.

Keywords: *Pornography Consumption, Risk Perception, Self-Control, Sexual Behavior, Generation Z, SEM-PLS*

Abstrak:

Perkembangan teknologi digital telah memudahkan akses terhadap konten pornografi melalui media sosial, terutama X, sehingga kini menjadi salah satu saluran utama penyebaran konten pornografi dan menimbulkan kekhawatiran terkait perilaku seksual Generasi Z. Penelitian sebelumnya cenderung menyoroiti konsumsi langsung konten pornografi tanpa mempertimbangkan pengaruh faktor psikososial, sehingga mengabaikan mekanisme yang lebih kompleks. Penelitian ini bertujuan untuk menganalisis dampak konsumsi pornografi di media sosial X terhadap perilaku seksual Generasi Z dengan persepsi risiko sebagai mediator dan pengendalian diri sebagai moderator. Penelitian ini menggunakan desain kuantitatif dengan 384 responden Generasi Z di Indonesia. Metode analisis menggunakan Structural Equation Modeling–Partial Least Squares (SEM-PLS) versi 4 digunakan. Hasil penelitian menunjukkan bahwa konsumsi pornografi memiliki dampak positif yang signifikan terhadap perilaku seksual ($\beta = 0,360$; $p < 0.001$), yang sebagian dimediasi oleh persepsi risiko ($\beta = 0,287$; $p < 0.001$), dan moderasi kendali diri berperan untuk menekan efek tersebut ($\beta = -0,231$; $p < 0.001$). Hasil ini menunjukkan pentingnya aspek psikososial dan bagaimana literasi digital, pendidikan seksual komprehensif, dan pengendalian diri yang lebih baik dapat membantu remaja menjadi lebih sadar diri.

Kata Kunci: *Konsumsi Pornografi, Persepsi Risiko, Pengendalian Diri, Perilaku Seksual, Generasi Z, SEM-PLS*

Correspondent Author: diyahestii30@gmail.com (Diyah Hesti Nur Khasanah)

How to cite: Khasanah, D. H. N., & Pamungkas, Y. B. (2024). Pornography Consumption and Generation Z Sexual Behavior: The Role of Risk and Self-Control. *Fenomena*, 23(1), 115–130. <https://doi.org/10.35719/fenomena.v23i1.610>

Introduction

During the digital transition age, the consumption of digital pornography is increasing, particularly among Generation Z (born 1997–2012), referred to as "digital natives" due to their upbringing in a technological environment (Alruthaya et al., 2021). Generation Z perceives and behaves distinctively compared to older generations, as they trust the information they encounter online and on social media (Chang & Chang, 2023). The National Survey of Children and Adolescents' Life Experiences SNPHAR (2021) indicates that 66.6% of boys and 62.3% of girls aged 13–17 in Indonesia had experienced online pornography. This supports the findings of Husna & Mubarakah (2024), indicating that junior and senior high school students often encounter pornography through social media. This exposure is associated with an increased risk of maladaptive sexual behaviors, including aggression and reproductive health complications (Pathmendra et al., 2023), and may, in some instances, result in addictive symptoms necessitating therapeutic intervention (Kraus et al., 2016). Pornography is defined as sexually explicit content created with the cooperation of all involved parties to provoke arousal (Ashton et al., 2019). This condition is pertinent for analysis as Generation Z undergoes identity formation, moral development, and self-regulation, rendering it academically and practically significant to comprehend the ramifications of pornography consumption while concurrently advocating for sexuality education, digital literacy, and reproductive health policies in Indonesia.

Many studies have emphasized the connection between pornography consumption and adolescent sexual behavior. Studies suggest that pornography consumption can enhance individuals' receptiveness to sexual topics and diminish their sensitivity to cultural norms (Peter & Valkenburg, 2016). Furthermore, adolescents who engage with pornography exhibit a higher propensity for participating in risky sexual behaviors, including violent sexual acts and various other sexual risks (Pathmendra et al., 2023). Gunnoo & Powell, (2023) discovered that adolescents who frequently consume pornography tend to perceive it as reality, thereby affecting their comprehension of sexual relationships and societal perspectives on the subject. Numerous studies continue to examine the direct relationship between pornography consumption and sexual behavior, neglecting intermediary psychological factors such as risk perception and self-regulation. These factors elucidate how individuals evaluate the outcomes of sexual behavior and regulate impulsive urges. The existing literature inadequately clarifies the intricate relationships among variables, highlighting the need for further research to comprehend the psychological mechanisms affecting adolescent sexual behavior.

The research gap exists due to the scarcity of studies employing psychological factors as moderators or mediators in the relationship between sexual behavior and the consumption of pornographic content on digital media. Most of the literature overlooks the effects of risk perception and self-control, instead treating pornography as an independent variable that directly affects sexual behavior. Additionally, previous research has rarely focused on Indonesia's sociocultural context, which has different norms and ethical standards compared to other countries, or employed the Theory of Planned Behavior (TPB) as a comprehensive framework in the digital realm.

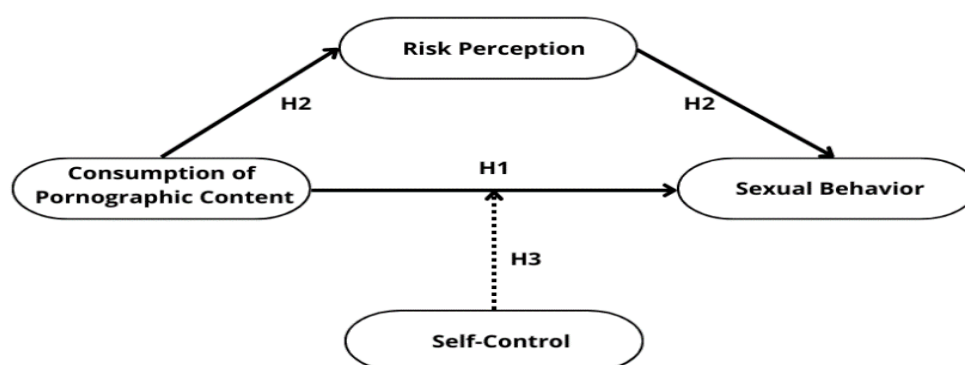
This study significantly contributes by presenting a more comprehensive model that positions self-control as a moderator and risk perception as a mediator within the Theory of Planned Behavior (TPB) framework. It also shows how this research can help with education and policy in Indonesia.

This research framework amalgamates four theories to elucidate the dynamics of Generation Z's sexual behavior in the digital era. The Theory of Planned Behavior (TPB) (Ajzen, 1991) establishes a foundational framework for analyzing the impact of attitudes, subjective norms, and perceived behavioral control on individuals' intentions and actions, including sexual behavior, as articulated by Fishbein and Ajzen (2011). Cultivation Theory (Gerbner, G., & Gross, 1976) corroborates this theory by asserting that extensive exposure to pornographic content on social media can alter individuals' perceptions and emotions regarding sex, potentially normalizing specific sexual behaviors. Risk Perception Theory (Slovic, 1987) serves as a mediator by analyzing how individuals' assessments of adverse outcomes influence their behavior, while Self-Control Theory (Gottfredson, M. R., & Hirschi, 1990) functions as a moderator, suggesting that individuals with diminished self-control are more prone to impulsive behaviors. The Online Disinhibition Effect Suler, (2004) shows that being anonymous on social media can make people less self-controlled and more likely to take risks. This research is significant for both scholars and practitioners, as it elucidates the sexual behaviors of Generation Z in the digital era and provides a foundation for strategies to mitigate risky sexual conduct.

This study investigates the influence of pornography consumption on digital media regarding the sexual conduct of Generation Z. It examines risk perception as a mediator and self-control as a moderator to ascertain whether the effect is direct or influenced by these psychological mechanisms. The expected outcomes seek to enrich academic literature and provide practical contributions via sexuality education, digital literacy, and contextual reproductive health policies. This research delineates opportunities for further inquiry, including both longitudinal and cross-cultural studies related to social norms, religion, family, identity, and self-sufficiency. This framework leads to the development of three hypotheses. Hypothesis 1: Exposure to pornography affects the sexual conduct of Generation Z. Hypothesis 2: The relationship between sexual behavior and pornography consumption is influenced by individual perceptions of risk. Hypothesis 3: The relationship between sexual behavior and the consumption of pornography is influenced by self-control. Below is an example of the hypothesis:

Figure 1

Research hypothesis, personal data processing



Method

This study highlights pornography consumption on social media, particularly on the X platform (formerly Twitter), due to the increasing distribution and access to online sexual content, especially among Generation Z as digital natives (Alruthaya et al., 2021). X's policy permitting the distribution of consensual sexual content with designated labels has resulted in a rise in global traffic from 100 million to 5.7 billion visits per month (CNN Indonesia, 2024; Similarweb, 2024). In Indonesia, pornographic content continues to be readily accessible, despite potential blocking measures by the Ministry of Communication and Information Technology (Antara News, 2024). The study of this phenomenon is crucial, as exposure to pornography can affect sexual perceptions, attitudes, and behaviors, while also presenting psychosocial, moral, and reproductive health risks (Owens et al., 2012; Pathmendra et al., 2023; Peter & Valkenburg, 2016). The X platform is pertinent for examining digital interactions, psychological mechanisms, and their effects on Generation Z in Indonesia.

The study utilized a quantitative design employing SEM-PLS version 4, which adeptly models intricate relationships among latent variables, accommodates non-normally distributed data, and addresses direct, mediated, and moderating relationships (Hair et al., 2019; Henseler et al., 2015; Sarstedt et al., 2019). The target population was X citizens of Indonesia aged between 13 and 28 years old who watch pornography, with 384 respondents selected by purposive sampling. The sample size of 384 is computed by taking into account the estimates given by Lemeshow et al. (1990) under 95% confidence and 5% margin of error, considered sufficient as it exceeds the minimum requirement of SEM-PLS. The theory of planned behavior (Ajzen, 1991), cultivation theory (Gerbner, G., & Gross, 1976), risk perception theory (Slovic, 1987), and self-control theory (Gottfredson, M. R., & Hirschi, 1990), are among the theoretical frameworks. Data collection was conducted using a six-point Likert-scale questionnaire (Hapsari & Yoma Bagus Pamungkas, 2024), followed by analysis with SmartPLS V4, which included assessments of the outer model, model fit, and internal model metrics (R^2 , Q^2). The results examined direct, indirect, and interaction effects, resulting in the formulation of a model that is valid, reliable, and predictive, while also addressing knowledge gaps and informing policies and interventions designed to mitigate risky sexual behavior in the digital context.

Results And Discussion

Result

Respondent Description

Table 1 shows the demographic information of the Generation Z participants who took part in this study. The data was gathered using an online survey sent out through Google Forms. The platform made it easy to collect data and reach people from different backgrounds and places.

Table 1

Demographic Characteristics of Social Media User Respondents in Indonesia (n = 384)

Demographics	Description	Percentage (%)
Gender	Male	62.5%
	Female	37.5%
Age Group	13-16	7.8%

	17-20	31.3%
	21-24	45.6%
	25-28	15.4%
Educational Level	Senior High School or Equivalent	90.9%
	Diploma (D3/D4)	2.6%
	Bachelor's degree (S1) or Higher	6.5%
Work	Student	61.5%
	Civil Servant	2.6%
	Private Sector Employee	10.4%
	Entrepreneur	2.1%
	Other	23.4%
The Use of Social Media X	Often (> 6 hours a day)	51.6%
	Quite Often (5-6 hours a day)	18.5%
	Rarely (< 1 hours a day)	14.6%
	Quite Rarely (1-2 hours a day)	15.4%

Note. Processed Data

The respondents in this study are Generation Z, respondents aged between 1997 and 2012, and are described as "digital natives" due to early experiences in social media as well as technology. Description of respondents by gender shows a majority of male respondents, who totaled 62.5% of the whole sample, compared to female respondents who totaled 37.5% in total. When considering age, respondents, who were 21-24 years old constituted 45.6%, 13-20 years old 31.3%, and 25-28 years old 15.4%, respectively. Most of the people who answered (90.9%) had graduated from high school or an equivalent level of education. Meanwhile, 2.6% of respondents had a diploma (D3/D4) educational background, and 6.5% had completed a bachelor's degree or higher. Looking at job categories, students were the largest group in the sample, with a percentage of 61.5%. The remaining respondents were private employees (10.4%), civil servants (2.6%), entrepreneurs (2.1%), and respondents with other occupations (23.4%). The information indicates that Generation Z has a remarkably higher level of engagement in social media, not only as a means of communication, but as well as a source of entertainment and information discovery. This condition is an important basis for analyzing exposure to digital content, including risky content such as pornography, as well as the role of risk perception and self-control.

Evaluation Of the Measurement Model

The measurement model was examined to ensure the validity and reliability of the constructs before examining the structural model and testing the hypotheses. Subsequent tests were conducted to assess the model's fit, prediction accuracy, and the significance of the variable correlations. The analysis was conducted using a variance-based SEM approach with SmartPLS v4 software, which allows for simultaneous path estimation, mediation and moderation testing, and model evaluation.

Loading Factor

Table 2 shows the loading factor values for each indicator representing the latent construct. The loading factor describes the level of correlation between the indicator and the latent construct it represents. (Hair et al., 2019) state that while loading factor values > 0.6 are still acceptable in exploratory research, a loading factor value ≥ 0.708 is ideal since it shows that the construct can explain more than 50% of

the variance of its indicators. Indicators with a loading factor value below the threshold were eliminated so that only valid indicators were used to represent the latent construct, ensuring that the construct was well-measured and consistent in the SEM-PLS analysis

Table 2

Loading Factor Results

Indicator	Consumption of Pornographic Content	Sexual Behavior	Risk Perception	Self- Control	Description
FA1	0.917				Valid
FA2	0.875				Valid
JK1	0.869				Valid
JK2	0.899				Valid
DA1	0.900				Valid
FAS1		0.911			Valid
FAS2		0.849			Valid
FAS3		0.880			Valid
STH1		0.874			Valid
STH2		0.885			Valid
STH3		0.845			Valid
PK1		0.857			Valid
PK2		0.827			Valid
PK3		0.858			Valid
GTK1			0.925		Valid
GTK3			0.885		Valid
KTR1			0.901		Valid
KTR2			0.936		Valid
KTR3			0.902		Valid
PTR1			0.923		Valid
KMI1				0.877	Valid
KMI2				0.816	Valid
KMK1				0.894	Valid
KMK2				0.907	Valid
KPK2				0.903	Valid

Note. Processed data

Cronbach's alpha, Composite Reliability, AVE

Table 3 shows that all of the constructs have Cronbach's Alpha values > 0.90, Composite Reliability > 0.94, and AVE > 0.74. Hair et al. (2019) state that a reliability coefficient higher than 0.70 shows a very satisfactory internal consistency level, whereas an average variance extracted (AVE) value higher than 0.50 shows the satisfaction of convergent validity. Thus, the entire construct is reliable and valid. The research instrument, then, is in a position to utilize in subsequent stages of structural analysis.

Table 3

Cronbach's alpha, Composite Reliability, and AVE results

Construct	Cronbach's alpha	Composite Reliability	Average variance extracted (AVE)	Description
Consumption of Pornographic Content	0.936	0.951	0.796	Valid
Sexual Behavior	0.958	0.964	0.749	Valid
Risk Perception	0.960	0.967	0.832	Valid
Self-Control	0.928	0.945	0.775	Valid

Note. Processed data

HTMT

Table 4 shows the results of the discriminant validity test using the Heterotrait-Monotrait Ratio (HTMT) on the constructs of pornography consumption, sexual behavior, risk perception, and self-control. HTMT is employed to evaluate the degree of distinctiveness among constructs within a model, where a value criterion of < 0.90 signifies sufficient discriminant validity (Hair et al., 2019; Henseler et al., 2015). The analysis results indicate that all HTMT values are below 0.90, so it can be concluded that each construct in this study is different from the others. This finding confirms that the research instrument meets discriminant validity and is suitable for SEM-PLS analysis.

Table 4
HTMT Results

Construct	Consumption of Pornographic Content	Self-Control	Sexual Behavior	Risk Perception
Self-Control	0.041			
Sexual Behavior	0.675	0.212		
Risk Perception	0.722	0.051	0.712	
Self-Control x Consumption of Pornographic Content	0.012	0.050	0.243	0.067

Note. Processed data

Model Fit

The fitness of the model was assessed based on three important indicators: Standardized Root Mean Square Residual (SRMR), normed fit index (NFI), and goodness of fit (GoF). These indicators are all-round in terms of assessing fitness in regard to residual error, weight fit, and construct clarity. Table 5 shows that the SRMR value of 0.033 (<0.10), the NFI value of 0.956 (close to 1), and the GoF value of 0.654

(>0.36) have met the established criteria. These results indicate that the research model has an excellent fit, guarantyd construct reliability and validity, and is suitable for further structural relationship testing in explaining the phenomenon under study.

Table 5

FIT Model Results

Parameter	Parameter Value	Description
SRMR	0.033	Fit
NFI	0.956	Fit
GoF	0.654	Fit

Note. Processed data

Coefficient of Determination (R^2)

The Coefficient of Determination (R^2) in PLS-SEM quantifies the degree to which latent independent variables account for the variability of latent dependent variables. The R^2 value signifies the model's overall predictive capability. The R^2 value spans from 0 to 1, with a higher value signifying an enhanced capacity of the model to elucidate the variance of the endogenous variable (Hair et al., 2019).

Table 6

Coefficient of Determination Results

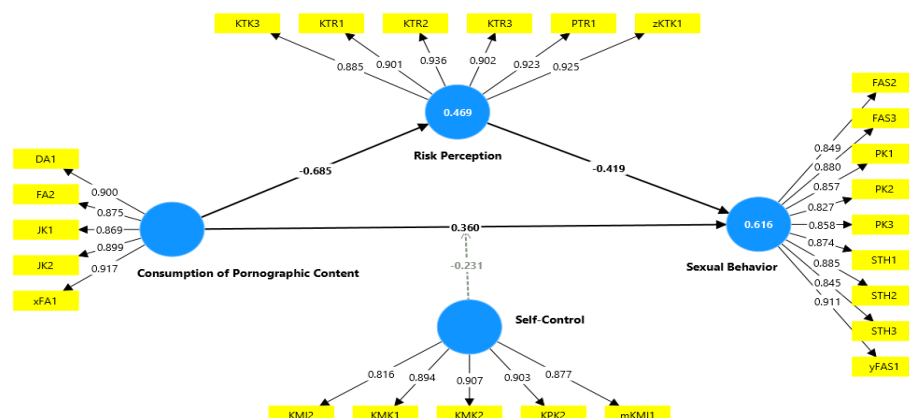
Dependent Variabel	R-Square	R-Square Adjusted	Description
Sexual Behavior	0.616	0.612	Strong
Risk Perception	0.469	0.468	Moderat

Note. Processed data

According to the test results, sexual behavior has an R^2 of 0.616. This means that 61.6% of the variance can be explained by the independent constructs, while 38.4% is affected by other factors, such as strong categories. The R^2 for risk perception is 0.469, which means that the constructs in the model, including moderate categories, explain 46.9% of the variance. The adjusted R^2 values (sexual behavior = 0.612; risk perception = 0.468) are very close to the pure R^2 values. This means that the model is stable, doesn't overfit, and can explain the dependent variables well. To see the R^2 of the research model, here is the output image from the PLS-SEM algorithm:

Figure 2

Output of the PLS SEM Algorithm Model, Personal Data Processing



Predictive Relevance (Q²)

The study analyzed the results of Predictive Relevance (Q²) using blindfolding procedures. Nilai Q² is used to assess the predictive model's relevance to the endogenous variable; a value > 0 indicates that the model has a strong predictive ability (Hair et al., 2019). The results of the analysis indicate that the sexual behavior variable has a Q² of 0.457 and a risk perception of 0.387. As both of these values are above 0.35, it can be concluded that this research model has a high predictive power with respect to the endogenous variable under study.

Table 7
Predictive Relevance (Q²) Results

Construct	SSO	SSE	Q ² (=1-SSE/SSO)
Consumption of Pornographic Content	1920.000	1920.000	0.000
Self-Control	1920.000	1920.000	0.000
Sexual Behavior	3456.000	1876.976	0.457
Risk Perception	2304.000	1412.101	0.387

Note. Processed data

Direct Effect

Table 8 proves that consumption of pornographic content plays a significant role in sexual behavior, as it has been witnessed by a path coefficient (β) of 0.360, a T-statistic of 8.589 (> 1.96), and a value of p equal to 0.000 (< 0.05). The above shows that there is a relationship whereby consumption of pornographic content leads to a higher tendency towards sexual behavior. This result validates the theoretical hypothesis that consumption of pornographic content influences perceptions and attitudes. This finding also indicates that it increases the likelihood of young people adopting actual sexual behavior. Therefore, hypothesis H1, which states that pornography consumption affect Generation Z sexual behavior, is confirmed.

Table 8
Direct Effect Results

Path (Direct Effect)	Path Coefficient (β)	T-Statistics	P-Values	Description
Consumption of Pornographic Content -> Sexual Behavior	0.360	8.589	0.000	Significant

Note. Processed data

Indirect Effect (Mediation Analysis)

The bootstrapping test results indicate that the consumption of pornographic content significantly influences sexual behavior through risk perception (β = 0.287; T = 9.338; P = 0.000). The observed indirect effect was significant, thereby supporting the research hypothesis. The findings indicate that the direct relationship between pornography content consumption and sexual behavior is significant, suggesting that risk perception partially mediates this relationship. Consequently, hypothesis H2, which asserts that risk perception mediates the association between pornography use on social media X and the sexual behavior of Generation Z, is confirmed.

Table 9*Indirect Effect Results*

Path (Indirect Effect)	Path Coefficient (β)	T-Statistics	P-Values	Description
Consumption of Pornographic Content -> Risk Perception -> Sexual Behavior	0.287	9.338	0.000	Significant

Note. Processed data**Moderating Effect**

The analysis indicates that the interplay between self-control and pornographic content Consumption significantly influences Sexual Behavior ($\beta = -0.231$; $T = 6.374$; $p < 0.001$). Self-control has been demonstrated to affect the relationship between pornography consumption and sexual behavior. The negative coefficient signifies that increased self-control correlates with a diminished impact of pornography consumption on sexual behavior. Self-control serves as a mitigating factor that diminishes the adverse impacts of pornography consumption on the sexual behavior tendencies of Generation Z. Therefore, hypothesis H3, which posits that self-control affects the correlation between pornography consumption and the sexual behavior of Generation Z, is confirmed.

Table 10*Moderating Effect Results*

Path (Moderating Effect)	Path Coefficient (β)	T-Statistics	P-Values	Description
Self-Control x Consumption of Pornographic Content -> Sexual Behavior	-0.231	6.374	0.000	Significant

Note. Processed data

The results of SEM-PLS indicate that this research model meets measurement standards, possessing high loading factors, reliability (Cronbach's Alpha, Composite Reliability, AVE), as well as discriminant validity (HTMT). The values of R^2 and Q^2 demonstrate that a predictive explanation is possible from the model, and prediction is possible from it, whereas values from SRMR, NFI, and GoF demonstrate a satisfactory fit from a model. These results enhance the validity and reliability of a model, as well as add to its theory, practice, and preventive communication strategies toward Generation Z behavior.

Discussion

This study's results indicate that pornography consumption on social media significantly influences the sexual behavior of Generation Z ($\beta = 0.360$; $p < 0.05$). The results support Cultivation Theory (Gerbner, G., & Gross, 1976), which asserts that repeated exposure to media shapes attitudes and behaviors, particularly in relation to sexual behavior. Consequently, Generation Z, characterized by frequent exposure, exhibits more permissive tendencies. This result is consistent with the Theory of

Planned Behavior (Ajzen, 1991), which states that behavior is influenced by attitudes, subjective norms, and perceived behavioral control, so that exposure to pornography reinforces permissive attitudes and peer norms. Previous studies also support this, such as Pirrone et al. (2022), who found that pornography consumption accelerates the exploration and development of adolescent sexual behavior. Mori et al. (2023), reported that exposure to sexual content is related to problematic sexual behavior, while Yunengsih & Setiawan (2021), in Indonesia showed that exposure to pornography increases risky sexual behavior, which confirms that pornography acts as an active agent in the socialization of sexual behavior among Generation Z.

This study also reveals that risk perception significantly influences outcomes ($\beta = 0.287$; $T = 9.338$; $p < 0.05$). Individuals who consume greater amounts of pornography perceive a reduced risk associated with sexual outcomes, thereby increasing their likelihood of engaging in sexual behavior. This supports Risk Perception Theory (Slovic, 1987), which asserts that inadequate risk perception can lead to dangerous behavior. Meanwhile, Pathmendra et al. (2023), also verified the interconnection of watching pornography and having unprotected sex, adolescent pregnancy, and sexually transmitted diseases. Moreover, Lin et al. (2020) stated that adolescents often exposed to sexual material tend to experiment sexually early in their lives and have many sexual partners as young adults. Correspondingly, Baams et al. (2015) revealed that if sexual material appears to be realistic, permissive attitudes tend to be strongly shaped by it. Thus, these findings indicate that risk perception is a significant mental variable that interlinks watching pornography with the sexual activity of Generation Z.

Furthermore, self-control was found to moderate the association between viewing pornography and sexual behavior ($\beta = -0.231$; $T = 6.374$; $p < 0.05$). The negative sign indicates that individuals with higher levels of self-control are able to resist sexual temptation caused by viewing pornography, while those with lower levels have greater vulnerability. This finding is consistent with Self-Control Theory (Gottfredson, M. R., & Hirschi, 1990), which asserts that diminished self-control is associated with impulsive and risky behaviors. Empirical studies substantiate these findings, including Lee, (2010), which demonstrated that self-control moderates the relationship between pornography exposure and adolescent sexual impulsivity, Magnusson et al. (2019), who found that low self-control is associated with early sexual behavior, and Grubbs et al. (2019), who confirmed that low self-control increases the risk of pornography addiction. Busche et al. (2022) also highlight the failure of self-regulation as the main mechanism of problematic pornography use. Furthermore, Fakhruddiana et al. (2022) proved that self-control training effectively reduces the intensity of pornography access, while Simak et al. (2023) showed that self-control can suppress the negative influence of pornography addiction on adolescent sexual behavior. Thus, self-control functions as a protective moderator that weakens the negative impact of pornography consumption on sexual behavior.

The outcomes of this study are consistent and further augment the understanding that pornography's influence is neither singular nor unilateral but is instead mediated by value frameworks to which individuals conform. In Western cultures, those who have been exposed to pornography generally present with permissiveness and sexual exploratory tendency (Peter & Valkenburg, 2016), while some present with moral conflictedness when said behaviors are at odds with personal

convictions (Grubbs et al., 2019). Conversely, among Malaysian teenagers, religious convictions and their perspectives regarding pornography greatly mediate unique sexual experiences (Tan et al., 2022), whereby religious norms provide an interpretive critical lens through which materials are understood (Andrie et al., 2021). The situation in Indonesia further exhibits differences among those who are exposed: those who are enrolled in public schools are exposed to pornography with less difficulty when compared to those enrolled in religious schools (Khasanah & Mubarakah, 2024), while those who are *santri* are likely to restrict access based upon adherence to firmer religious convictions (Hutagalung, 2020). In truth, those who present with lower religiosity coupled with pornography exposure and lack of parental supervision are at a significantly higher risk to participate in premarital sexual habits (Wijayanti et al., 2020). Thus, aside from psychological variables like risk perception and self-management, religious and societal values ingrained in an individual become a key determinant regarding how pornography has an effect upon sexual behavior.

This study recommends integrating cultivation theory, planned behavior theory, risk perception theory, and self-control theory to understand sexuality in the digital age. It is advisable to expand the sample through a longitudinal design and to include variables such as digital literacy, cultural norms, or religiosity. These findings highlight the policy salience of digital literacy, comprehensive sex education, and youth self-control training. Interventions that enhance risk awareness, promote healthy norms, and cultivate self-control may effectively prevent exposure to pornography. This study advances theoretical understanding and provides a practical basis for sexual health policy and interventions targeting youth in Indonesia.

Conclusion

The results of the study indicate that pornography consumption on social media has a significant positive effect on the sexual behavior of Generation Z, with risk perception as a mediator and self-control as a moderator. Pornography consumption increases permissive attitudes and risky sexual behavior, in line with cultivation theory and the theory of planned behavior. Low risk perception reinforces the tendency toward risky behavior as explained by risk perception theory, while strong self-control weakens the negative impact of pornography consumption in accordance with self-control theory. Consequently, hypotheses H1, H2, and H3 are validated, elucidating the interplay among pornography consumption, risk perception, and self-control in the sexual behavior of Generation Z.

This research combines four principal theories –cultivation theory, the theory of planned behavior, risk perception theory, and self-control theory –into a unified model. SEM-PLS V4 enables the analysis of complex relationships, including mediation and moderation, with improved accuracy and resilience to non-normal data. The findings are significant for communication and behavioral studies, particularly in relation to sensitive topics such as pornography. Their initiatives include digital literacy programs, comprehensive sexuality education, and improving adolescents' self-regulation in managing exposure to pornography. This data is consistent with the findings of Jhe et al. (2023), which emphasize the importance of pornography literacy in relation to adolescent sexual health.

There are several restrictions on this study. The use of cross-sectional methodology primarily demonstrates the correlation of variables at a specific point, neglecting to consider longer-term trends. This study examines pornography use, risk

perceptions, and self-control, while omitting other significant factors, such as digital literacy, religiosity, and cultural norms. The emphasis on Generation Z in Indonesia restricts the generalizability of the findings to alternative cultural contexts. For future research, it is recommended that longitudinal studies be prioritized over cross-sectional designs, a broader range of variables be included, and cross-cultural analyses be applied. This methodology seeks to elucidate adolescent sexual behaviors within a digital framework by facilitating the examination of cultural standards, religious influences, familial structures, identity formation, and autonomy.

Acknowledgments

The author sincerely thanks Mr. Yoma Bagus Pamungkas, S.I.Kom., M.I.Kom., for valuable guidance throughout this research. Gratitude also goes to the author's parents and friends, Zusa, Ersas, Reva, Pira, Yusril, Hanna, and Abdan Hanif, for support and encouragement. The author is grateful to have overcome difficult times, which became a turning point to rise and complete this work with sincerity.

References

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Alruthaya, A., Nguyen, T.-T., & Lokuge, S. (2021). Association for Information Systems AIS Electronic Library (AISel) The Application of Digital Technology and the Learning Characteristics of Generation Z in Higher Education The Application of Digital Technology and the Learning. <https://aisel.aisnet.org/acis2021/65/>
- Andrie, E. K., Sakou, I. I., Tzavela, E. C., Richardson, C., & Tsitsika, A. K. (2021). Adolescents' online pornography exposure and its relationship to sociodemographic and psychopathological correlates: A cross-sectional study in six european countries. *Children*, 8(10). <https://doi.org/10.3390/children8100925>
- Antara News. (2024). Kemenkominfo kaji pemblokiran X imbas bolehkan konten pornografi. Antara News. <https://www.antaranews.com/berita/4152873/kemenkominfo-kaji-pemblokiran-x-imbasa-bolehkan-konten-pornografi>
- Ashton, S., McDonald, K., & Kirkman, M. (2019). What does 'pornography' mean in the digital age? Revisiting a definition for social science researchers. *Porn Studies*, 6(2), 144–168. <https://doi.org/10.1080/23268743.2018.1544096>
- Baams, L., Overbeek, G., Dubas, J. S., Doornwaard, S. M., Rommes, E., & van Aken, M. A. G. (2015). Perceived Realism Moderates the Relation Between Sexualized Media Consumption and Permissive Sexual Attitudes in Dutch Adolescents. *Archives of Sexual Behavior*, 44(3), 743–754. <https://doi.org/10.1007/s10508-014-0443-7>
- Büsche, K., Stark, R., Brand, M., & Antons, S. (2022). Self-regulatory Processes in Problematic Pornography Use. *Current Addiction Reports*, 9(4), 344–352. <https://doi.org/10.1007/s40429-022-00447-2>
- Chang, C. W., & Chang, S. H. (2023). The Impact of Digital Disruption: Influences of Digital Media and Social Networks on Forming Digital Natives' Attitude. *SAGE Open*, 13(3), 1–10. <https://doi.org/10.1177/21582440231191741>
- CNN Indonesia. (2024). Pengguna X melonjak usai konten porno resmi diizinkan. <https://www.cnnindonesia.com/teknologi/20240708084405-192->

- 1118665/pengguna-x-melonjak-usai-konten-porno-resmi-diizinkan
- Fakhruddiana, F., Purnamasari, A., & Hidayati, E. (2022). Pelatihan Kontrol Diri untuk Mengurangi Intensitas Akses dengan Situs/Media Pornografi pada Remaja. *Gadjah Mada Journal of Professional Psychology (GamaJPP)*, 8(2), 155. <https://doi.org/10.22146/gamajpp.76746>
- Gerbner, G., & Gross, L. (1976). Living with Television: The Violence Profile. *Journal of Communication*, 26(2), 172–199. <https://doi.org/10.1111/j.1460-2466.1976.tb01397.x>
- Gottfredson, M. R., & Hirschi, T. (1990). *A general theory of crime*. Stanford University Press.
- Grubbs, J. B., Perry, S. L., Wilt, J. A., & Reid, R. C. (2019). Pornography Problems Due to Moral Incongruence: An Integrative Model with a Systematic Review and Meta-Analysis. *Archives of Sexual Behavior*, 48(2), 397–415. <https://doi.org/10.1007/s10508-018-1248-x>
- Gunnoo, A., & Powell, C. (2023). The Association Between Pornography Consumption and Perceived Realism in Adolescents: A Meta-analysis. *Sexuality and Culture*, 27(5), 1880–1893. <https://doi.org/10.1007/s12119-023-10095-x>
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2–24. <https://doi.org/10.1108/EBR-11-2018-0203>
- Hapsari, R., & Yoma Bagus Pamungkas. (2024). Audience Cognition Through Elaboration Likelihood Model Process: Instagram Content of Indonesian Health Ministry on Stunting Phenomenon. *INJECT (Interdisciplinary Journal of Communication)*, 9(1), 85–104. <https://doi.org/10.18326/inject.v9i1.1049>
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135. <https://doi.org/10.1007/s11747-014-0403-8>
- Husna, W. D. A., & Mubarakah, K. (2024). Perbedaan Sikap dan Perilaku Konsumsi Pornografi Online Pada Siswa SMP dan SMA di Kota Semarang. *Media Kesehatan Masyarakat Indonesia*, 23(4), 332–336. <https://doi.org/10.14710/mkmi.23.4.332-336>
- Hutagalung, I. (2020). Perilaku komunikasi santri Kota Tangerang terkait informasi pornografi melalui Internet. *Jurnal Kajian Komunikasi*, 8(2), 265. <https://doi.org/10.24198/jkk.v8i2.24552>
- Jhe, G. B., Addison, J., Lin, J., & Pluhar, E. (2023). Pornography use among adolescents and the role of primary care. *Family Medicine and Community Health*, 11(1), 1–6. <https://doi.org/10.1136/fmch-2022-001776>
- Khasanah, R. A. N., & Mubarakah, K. (2024). Studi Komparatif: Konsumsi Pornografi Online pada Remaja di Sekolah Umum dan Berbasis Agama, Semarang, Indonesia. *Media Kesehatan Masyarakat Indonesia*, 23(4), 337–343. <https://doi.org/10.14710/mkmi.23.4.337-343>
- Kraus, S. W., Martino, S., & Potenza, M. N. (2016). Clinical characteristics of men interested in seeking treatment for use of pornography. *Journal of Behavioral Addictions*, 5(2), 169–178. <https://doi.org/10.1556/2006.5.2016.036>
- Lee, J. . (2010). *The relationship between adolescents' pornography contact and sexual impulsivity: Moderating effects of self-control, parent-adolescent communication, and*

- school adjustment. 11(3), 1221–1236.
<https://doi.org/https://doi.org/10.15703/kjc.11.3.201009.1221>
- Lemeshow, S., Hosmer, D. W., Klar, J., & Lwanga, S. . (1990). *Adequacy of Sample Size in Health Studies*. World Health Organization.
- Lin, W. H., Liu, C. H., & Yi, C. C. (2020). Exposure to sexually explicit media in early adolescence is related to risky sexual behavior in emerging adulthood. *PLoS ONE*, 15(4), 1–26. <https://doi.org/10.1371/journal.pone.0230242>
- Magnusson, B. M., Crandall, A., & Evans, K. (2019). Early sexual debut and risky sex in young adults: The role of low self-control. *BMC Public Health*, 19(1), 1–8. <https://doi.org/10.1186/s12889-019-7734-9>
- Mori, C., Park, J., Racine, N., & Madigan, S. (2023). Exposure to sexual content and problematic sexual behaviors in children and adolescents: A systematic review and meta-analysis. *Child Abuse & Neglect*, 136, 106255. <https://doi.org/https://doi.org/10.1016/j.chiabu.2023.106255>
- Owens, E. W., Behun, R. J., Manning, J. C., & Reid, R. C. (2012). The Impact of Internet Pornography on Adolescents: A Review of the Research. *Sexual Addiction and Compulsivity*, 19(1–2), 99–122. <https://doi.org/10.1080/10720162.2012.660431>
- Pathmendra, P., Raggatt, M., Lim, M. S. C., Marino, J. L., & Skinner, S. R. (2023). Exposure to Pornography and Adolescent Sexual Behavior: Systematic Review. *Journal of Medical Internet Research*, 25. <https://doi.org/10.2196/43116>
- Peter, J., & Valkenburg, P. M. (2016). Adolescents and Pornography: A Review of 20 Years of Research. *Journal of Sex Research*, 53(4–5), 509–531. <https://doi.org/10.1080/00224499.2016.1143441>
- Pirrone, D., Zondervan-Zwijnenburg, M., Reitz, E., van den Eijnden, R. J. J. M., & ter Bogt, T. F. M. (2022). Pornography Use Profiles and the Emergence of Sexual Behaviors in Adolescence. *Archives of Sexual Behavior*, 51(2), 1141–1156. <https://doi.org/10.1007/s10508-021-02140-3>
- Sarstedt, M., Hair, J. F., Cheah, J. H., Becker, J. M., & Ringle, C. M. (2019). How to specify, estimate, and validate higher-order constructs in PLS-SEM. *Australasian Marketing Journal*, 27(3), 197–211. <https://doi.org/10.1016/j.ausmj.2019.05.003>
- Simak, V. F., Kristamuliana, & Meo, M. L. N. (2023). The Prevalence of Pornography Addiction, Self-Control, and Its Relationship with Dating Behaviour in Adolescents: A Cross-Sectional Study. *Caring: Indonesian Journal of Nursing Science*, 5(2), 101–107. <https://doi.org/10.32734/ijns.v5i2.14285>
- Similarweb. (2024). *X traffic peaked after election day in US. So did deactivations.* <https://www.similarweb.com/blog/insights/social-media-news/x-traffic-peak-deactivations/>
- Slovic, P. (1987). Perception of Risk Author (s): Paul Slovic Published by : American Association for the Advancement of Science Stable URL : <http://www.jstor.org/stable/1698637> . *Advancement Of Science*, 236(4799), 280–285. <http://adsabs.harvard.edu/abs/1985Sci...227..506K>
- SNPHAR. (2021). *Laporan Survei Nasional Pengalaman Hidup Anak dan Remaja (SNPHAR) 2021*. <https://repository.poltekesos.ac.id/handle/123456789/46>
- Suler, J. (2004). The online disinhibition effect. *Cyberpsychology and Behavior*, 7(3), 321–326. <https://doi.org/10.1089/1094931041291295>
- Tan, S., Goh, Y. S., Zaharim, N. M., Gan, S. W., Yap, C. C., Nainee, S., & Lee, L. K. (2022). *Problematic Internet Pornography Use and Psychological Distress among*

Emerging Adults in Malaysia : Gender as a Moderator.

- Wijayanti, Y. T., Martini, Prasetyowati, & Fairus, M. (2020). Religiosity, the role of teen parents and the exposure of pornography media to adolescent sexual behavior in East Lampung region high school. *Enfermeria Clinica*, 30(2019), 122–128. <https://doi.org/10.1016/j.enfcli.2019.11.037>
- Yunengsih, W., & Setiawan, A. (2021). Contribution of pornographic exposure and addiction to risky sexual behavior in adolescents. *Journal of Public Health Research*, 10, 6–11. <https://doi.org/10.4081/jphr.2021.2333>