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Mental Health and Gender Comparison in Compulsive and Non-Compulsive Internet Pornography Use among University Students in Malaysia

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Abstract

This research aimed to compare mental health status and gender differences between compulsive and non-compulsive internet pornography users, as well as to examine gender disparities in internet pornography consumption among Malaysian university students. Using a quantitative cross-sectional survey design, data were collected via an online questionnaire, which included demographic information, the Depression Anxiety and Stress Scale-21, and the Problematic Pornography Consumption Scale-18. A total of 102 participants (25 males, 77 females) were recruited through snowball sampling, with 12% showing compulsive pornography consumption. Results indicated no significant differences in depression, anxiety, or stress levels between compulsive and non-compulsive users. However, a notable difference in internet pornography use was observed between male and female participants ($p < 0.05$). In conclusion, while gender differences were evident in pornography use, there were no significant gender-based differences in mental health status, nor were there mental health disparities between compulsive and non-compulsive users among university students in Malaysia.

Keywords: mental health status, internet pornography use, gender differences

INTRODUCTION

Pornography is defined as any material that induces or enhances sexual emotions or thoughts, encompassing images, descriptions of sexual organs, and behaviors such as vaginal sex, oral sex, anal sex, masturbation, and even extreme acts like rape and bestiality. According to DSM-5 criteria, problematic pornography use (PPU) involves excessive engagement in sexual activities, difficulty in regulating such behaviors, using sex as a means of escapism or to avoid negative emotions, and experiencing functional impairment and distress as a result (Grant et al., 2012).

Historically, pornographic materials were accessed through magazines, video discs, and television. In today's digital age, advanced technology has made accessing pornography as easy as a single click, with the internet becoming the primary source, especially for those who view it privately (Hald & Mulya, 2013). In Malaysia, all forms of pornography are deemed illegal due to moral concerns rooted in societal norms, guided by principles such as Lord Devlin's Principle of Private Morality (Fairuz Annajwa Mohd Yunos & Nabeel Mahdi Althabhawi, 2021). Research suggests that pornography consumption is associated with more permissive attitudes towards premarital sex, engagement in premarital sexual activities, involvement with multiple sexual partners, and unsafe sexual practices (Manaf et al., 2014; Awaluddin et al., 2015).

Cognitive Behavioral Therapy (CBT), developed by Aaron Beck in the 1960s, posits that thoughts, emotions, physical sensations, and behaviors are interconnected, influencing one another. CBT has been widely used and proven effective in treating psychiatric disorders, including depression and anxiety (Suma P. et al., 2022). Negative thought patterns can lead to distress and maladaptive behaviors. When individuals experience psychological challenges, this impacts their thought processes and actions, often in ways that exacerbate their issues. For problematic pornography users, distorted and maladaptive thinking patterns can lead to addictive and compulsive behaviors that disrupt their daily lives and contribute to mental health issues. For example, problematic internet pornography use has been found to significantly correlate with psychological distress (Tan et al., 2022). CBT assumes that mental health problems stem from faulty cognitions, which can result from cognitive deficiencies or distortions in information processing (McLeod, 2019). CBT has also shown effectiveness for treating sexual disorders (Beck et al., 1983), depression (Hollon & Beck, 1994), and, to a moderate degree, anxiety (Beck, 1993).

Teenagers often view pornography as normal, driven by curiosity and the desire for self-gratification. Pornography stimulates brain pathways that release dopamine, fostering self-gratification and impulsivity (Brown & Wisco, 2019). Mental health issues are a global concern among university students, with stressors like academic pressures, financial difficulties, and social challenges impacting their well-being (Kamarunzaman et al., 2020). Among university students, pornography use has also been linked to mental health problems, especially when it conflicts with personal or religious beliefs, as observed among Muslim students in Malaysia (Tan et al., 2022). Students who recognize the moral dissonance in consuming pornography yet continue to engage in it tend to report higher rates of depression. In contrast, those who do not view pornography as morally wrong may use it as a coping mechanism for depression (Perry, 2018).

This study aims to determine differences in mental health status between compulsive and non-compulsive internet pornography users and to examine gender disparities in pornography use among Malaysian university students. The study hypotheses are as follows:

H_1: There is significant difference between depression, anxiety and stress with compulsive and non compulsive internet pornography use among university student in Malaysia.

H_2: There is significant difference between male and female in internet pornography use among university student in Malaysia

Prevalence of Using Mobile Phone and Internet Pornography Among Students

The use of mobile phones and the internet nowadays was a common thing and no longer foreign, especially for students. One of the reason they use mobile was because it gives a quick access to information, anywhere and anytime, interacting with friends and facilitating learning (Bağcı et al., 2018). In addition, various platforms and applications exist to make it easier for students to complete their work. For example, the students prefer to have more experience in mobile learning such as when doing homework using mobile devices, more activities on tablet computers and developing animation on tablet computers (Bağcı et al., 2018).

Nevertheless, undergraduate students use mobile phones and the internet not only for the purpose of communication and learning, but also for entertainment. Entertainment consists of various forms such as watching movies, playing games, social media or listening to music. A study conducted by Hossain and Ahmed (2016) in several developing countries on university students found that majority of them used the internet a few times a day on their smartphones for entering social media sites (60.1%), entertainment (37.9%) and listening to music (37.6%). In line with a study conducted in Turkey also stated that they use mobile phones for engaging with social network (67%), listening to music (67%), playing a game (65%), and watching short video content (64%) (Ataş et al., 2019). A study also showed that university students use mobile phones as their platform to browse pornography websites where in 50% of respondents rarely use the internet to pornography and 3.3% of respondents answered frequently use the internet to watch pornography and it caused by the easy access to the website, weak supervision and security (Puspita & Rohedi, 2018).

By looking at the research mentioned above, mobile phone and internet use has become common for university students to use it either for educational or entertainment purposes such as watching movies, playing games, social media, and listening to music. But what about from the point of view of prevalence in the use of internet pornography. According to a study conducted on undergraduate medical students showed a high percentage rate among male students where 12.5% of them consume pornography daily per week and more than 20 minutes of consumption per day (Kumar et al., 2021). Based on the research mentioned earlier, male students have a high prevalence rate compared to females. In line with a study they stated that the majority of men (>80%) have a high prevalence rate in using pornography and approximately half of them were younger men who were 25 or under and were weekly consumers (Miller et al., 2020). The prevalence rate was actually quite worrying when it reaches the level of daily or weekly pornography use. The reason was pornography use was pervasive, by highlighting the high prevalence and frequency of men's pornography use (Miller et al., 2020).

Mental health and gender comparison among university students with Compulsive Internet Pornography Among Students

The use of internet pornography among students has the potential to lead to addiction, which, in extreme cases, can progress into compulsive behavior. Addiction and compulsiveness, while similar, differ in that addiction is characterized by a need to engage in a behavior to experience pleasure or relieve discomfort, while compulsion involves an insatiable urge, often regardless of pleasure (Heather, 2017). At the compulsive stage, individuals experience a loss of behavioral freedom, as their actions are significantly constrained by the addiction, making control challenging and requiring substantial effort to change.

Compulsive engagement with internet pornography is classified as problematic pornography consumption. The Problematic Pornography Consumption Scale identifies key issues faced by individuals in this category, such as salience (where pornography becomes central to life), mood modification (using it for stress relief), conflict (leading to sexual and interpersonal problems), tolerance (requiring increased consumption for satisfaction), relapse (struggles in reducing consumption), and withdrawal symptoms (such as depression when unable to access pornography) (Bőthe et al., 2017). Excessive pornography consumption mirrors issues associated with other excessive behaviors or substance use, potentially leading to disruptions in the individual's life and functioning (Binnie & Reavey, 2019).

Beyond these behavioral impacts, pornography consumption can also influence mental health. It has been suggested that it may lead to feelings of guilt, social withdrawal, shame, objectified social interactions, avoidance of difficult emotions, hyper-sensory stimulation, and a loss of time that could otherwise be spent on constructive activities (Hambrick, 2018). Research has further highlighted psychological consequences such as changes in cognition, affect, and behavior linked to internet pornography addiction (Setyawati et al., 2020). Furthermore, studies indicate that compulsive behavior associated with internet pornography use is associated with mental health conditions, including depression, anxiety, and low self-esteem, which can exacerbate the cycle of addiction (Brand et al., 2019).

Gender also plays a role in the development and experience of compulsive internet pornography use. Research has found that men are generally more prone to develop compulsive behaviors associated with internet pornography than women, likely due to differences in socialization, attitudes toward sexual content, and access to such material (Grubbs et al., 2019). These gender-related differences in compulsive behavior reflect broader patterns observed in other compulsive disorders, where men exhibit higher tendencies toward behaviors like compulsive gambling and internet addiction (Chen et al., 2021). In contrast, non-problematic or normative pornography use lacks the compulsive characteristics associated with problematic consumption. This form of use does not cause significant impairment or disrupt functional behavior (Bőthe et al., 2020). To understand such behaviors, it is relevant to consider human cognition, which involves both automatic and controlled (non-automatic) processing. According to Heather (2017), automatic behaviors emerge from highly repetitive learning, whereas controlled behaviors require conscious attention (Schneider & Shiffrin, 1977). The addictive

or compulsive use of pornography likely falls within the realm of non-automatic cognitive processes, which are complex and harder to regulate consciously (Evans & Frankish, 2009; Heather, 2017).

METHODOLOGY

Research Design

This study employed a quantitative cross-sectional survey to test its objectives by examining the relationships between variables in a specific context. The variables were measured using instruments that allowed for numerical data collection and subsequent analysis through statistical procedures (Creswell & Creswell, 2018).

The sample size was determined using G*Power Version 3.1 for correlation analysis (two-tailed, effect size d = 0.6, α error probability = .05, and power (1-β error probability) = 0.95). An additional 20% was added to the recommended sample size to account for potential missing values, resulting in a target sample of 200 Malaysian university students. However, only 102 participants completed the survey.

Instruments

Depression, Anxiety, and Stress Scale (DASS-21)

The DASS-21 is the short form of the DASS-42, a self-report scale designed to measure the negative emotional states of depression, anxiety and stress (Lovibond, & Lovibond, 1995). As the three scales of the DASS have been shown to have high internal consistency and to yield meaningful discriminations, the scales should meet the needs of both researchers and clinicians who wish to measure current state or change in state over time (e.g., in the course of treatment). This scale is suitable for clinical and non-clinical settings.

Problematic Pornography Consumption Scale.

The Problematic Pornography Use Scale (PPCS) is a tool that evaluates a person's porn consumption and damaging impact. This scale measures how frequently pornography is consumed, it's affect on relationships and how disturbed one may feel as a result. This is the gold standard to evaluate problematic porn use and the harm it may cause (Bothe, et al.,2017).

Procedures

The research was conducted via an online survey using a structured questionnaire created on Google Forms. The survey included an informed consent form, demographic questions, the 21-item Depression, Anxiety, and Stress Scale, and the 18-item Problematic Pornography Consumption Scale. Potential respondents were provided with a link or a QR code directing them to the survey, which they self-administered.

At the start of data collection, respondents provided informed consent before proceeding with the questionnaire. This process continued until the required sample size was achieved. Once the necessary sample was reached, responses that did not meet inclusion criteria were excluded. The Problematic Pornography Consumption Scale results categorize users as either compulsive or non-compulsive. The appropriate statistical analysis for comparisons between these categories is a t-test, using the Statistical Package for the Social Sciences (SPSS) for Windows, Version 23. Respondents were recruited through snowball sampling.

Data collection began after obtaining ethics approval from the Human Research Ethics Committee at Sultan Idris Education University (2022-0667-01). Participants received an anonymous link to the online survey, which did not collect any personal identifiers such as names, location, ID numbers, or emails. Survey data were analyzed in groups to further ensure anonymity, and responses cannot be traced back to individuals. Only the principal investigator has access to the survey data, which will remain confidential and not be released publicly unless required by law. The data are securely stored on the principal investigator's password-protected computer and will be deleted from both the

computer and survey server once the research is complete. Before beginning the survey, participants received an information sheet explaining the study's purpose, procedures, risks, benefits, confidentiality, and voluntary nature. A consent form followed, which included details on confidentiality, voluntary participation, and the right to withdraw at any time. After reviewing these, participants could agree to participate or withdraw at any point without penalty.

Participants

The study sample included 102 university students in Malaysia. As shown in Table 1, most respondents were female (75.5%, n = 77), with 24.5% (n = 25) being male. Ages ranged from 18 to 25, with the largest group between 21 and 23 years old (M = 2.07, ages 21–23). Most participants were Malay (86.3%, n = 88), followed by Chinese (10.8%, n = 11), Indian (2%, n = 2), and Bumiputera Sabah (1%, n = 1). A majority were affiliated with Universiti Pendidikan Sultan Idris (UPSI) (58.8%, n = 60).

Internet pornography usage varied from daily to three times per year. Most participants (58.8%, n = 60) reported never using it, followed by once per week (17.6%, n = 18), twice per week (9.8%, n = 10), more than three times per week (6.9%, n = 7), daily (4.9%, n = 5), and three times per year (1%, n = 1). Devices used included mobile phones (39.2%, n = 40), laptops, personal computers (each 1%, n = 1), or none for those reporting no use.

Table 1: *Demographic Information*

Demographic Information	N	Percent (%)
Age		
18-20	19	18.6
21-23	56	54.9
24-25	27	26.5
Gender		
Male	25	24.5
Female	77	75.5
Races		
Malay	88	86.3
Chinese	11	10.8
Indian	2	2.0
Bumiputera Sabah	1	1.0
Frequency of Internet Pornography		
Once per week	18	17.6
Twice per week	10	9.8
More than three times per week	7	6.9
Everyday	5	4.9
Never	60	58.8
Once per month	1	1.0
Three times a year	1	1.0
Device Use for Internet Pornography		
Mobile phone	40	39.2
Laptop	1	1.0
Personal Computer	1	1.0
None	60	58.0

RESULT

Level of Mental Health Status Among University Students in Malaysia

Mental health status was measured using the Depression Anxiety Stress Scale-21. For depression, scores above 11 indicated severe to extremely severe levels, while scores below 11 were considered normal. Among the participants, 84.3% (n = 86) were classified as normal, and 15.7% (n = 16) as having severe to extremely severe depression. For anxiety, scores above 8 indicated severe to extremely severe levels, with 69.6% (n = 71) classified as normal and 30.4% (n = 31) as having severe to extremely severe anxiety. For stress, scores above 13 indicated severe to extremely severe levels; 87.3% (n = 89) were classified as normal, and 12.7% (n = 13) as having severe to extremely severe stress.

Table 2: *Summary of the level of mental health status of university students in Malaysia (n = 102).*

Variable	***Total score***	***N***	***Percentage (%)***	***Status***
Depression	*<11*	*86*	*84.3*	*Non-Symptomatic*
	>11	*16*	*15.7*	*Symptomatic*
Anxiety	*<8*	*71*	*69.6*	*Non-Symptomatic*
	>8	*31*	*30.4*	*Symptomatic*
Stress	*<13*	*89*	*87.3*	*Non-symptomatic*
	>13	*13*	*12.7*	*Symptomatic*

Level of Internet Pornography Used Among University Students in Malaysia

The level of internet pornography use among the sample was measured using the Problematic Pornography Consumption Scale-18 (PPCS-18), with a mean score of 1.51 (SD = 0.84), a minimum score of 1.00, and a maximum score of 5.44. Based on the cut-off score of 76 suggested by Griffiths (2005), participants scoring 76 or higher were categorized as compulsive users, while those scoring below 76 were categorized as non-compulsive users. Results showed that 88.2% (n = 90) of participants were non-compulsive users, while 11.8% (n = 12) were classified as compulsive users.

Comparison in Internet Pornography Use between Male and Female University Students in Malaysia

An independent t-test was conducted to address the research objective, determine the differences in internet pornography use between male and female university students in Malaysia. Table 43presents the internet pornography use (PPCS-18) scores for each gender. For internet pornography use (PPCS-18), mean scores were M = 1.79 (SD = 1.08) for males and M = 1.43 (SD = 0.73) for females, suggesting a slightly higher usage among males. The t-test revealed a significant difference, $t(100) = -1.89$, $p = 0.06$ ($p < 0.05$), leading to the rejection of the null hypothesis and indicating significant gender-based differences in internet pornography use among university students in Malaysia.

Table 3: *Gender comparison on the Internet Pornography Use (n=102)*

	Male N=25		**Female** N=77				
	M	SD	M	SD	df	t	Sig.
PPCS-18	1.79	1.08	1.43	.73	100	1.89	.05*

Note: *P<0.05

Comparison in Level of Depression, Anxiety and Stress between Compulsive and Non-compulsive Internet Pornography Use Among University Student in Malaysia

As shown in Table 4, the mean depression score was 1.00 (SD = 0.00) for compulsive participants and 1.16 (SD = 0.37) for non-compulsive participants. For anxiety, the mean score was 1.30 (SD = 0.58) for compulsive participants and 1.30 (SD = 0.46) for non-compulsive participants. For stress, the mean score was 1.00 (SD = 0.00) for compulsive participants and 1.13 (SD = 0.33) for non-compulsive participants. The independent samples t-test revealed no significant difference in depression scores between compulsive and non-compulsive participants, t(100) = 0.75, p = .45. Similarly, there was no significant difference in anxiety scores, t(100) = -0.11, p = .91, or in stress scores, t(100) = 0.67, p = .51, between the two groups. All dimensions were not statistically significant (p>0.05) which indicates there was not much difference in the mental health in all dimensions. Therefore, the null hypothesis was accepted and there were no significant differences in depression, anxiety, or stress between compulsive and non-compulsive internet pornography use among university students in Malaysia.

Table 4: *Comparison of depression, stress and anxiety with compulsive and non-compulsive Internet pornography use among University Students in Malaysia (n=102)*

	Compulsive N=3		**Non-compulsive** N=99				
	M	SD	M	SD	df	t	Sig.
Depression	1.00	.00	1.16	.37	100	.75	.07
Anxiety	1.3	.58	1.30	.46	100	-.11	.84
Stress	1.00	.00	1.13	.33	100	.67	.12

*Note: *P<0.05*

DISCUSSION

Primary findings of this study was to assess mental health status and internet pornography use among university students in Malaysia. Results indicated that 15.7% (n=16) of respondents experienced severe to extremely severe levels of depression, 30.4% (n=31) reported high anxiety, and 12.7% (n=13) had high stress levels. Regarding internet pornography, 11.8% (n=12) of the 102 respondents exhibited compulsive use, while the remaining 88.2% (n=90) reported non-compulsive use. Previous research suggests that common academic pressures—such as deadlines, exams, financial challenges, and homesickness—may contribute to mental health issues among university students (Kamarunzaman et al., 2020). The current study's findings showed that more respondents had symptomatic mental health issues than those with compulsive internet pornography use, indicating that mental health challenges among non-compulsive users may stem from common student stressors rather than internet pornography use. Compulsive internet pornography users (11.8%, n=12) are likely to experience effects related to problematic pornography consumption, such as heightened salience, mood modification, and withdrawal (Bőthe et al., 2017). Salience, where pornography becomes central in a person's life, is particularly prominent among compulsive users, suggesting complex relationships between compulsive use and mental health.

The next aims of this study was to compare depression, anxiety, and stress levels between compulsive and non-compulsive internet pornography users. Findings revealed no significant differences between these groups; both exhibited similar mental health scores. This contrasts with previous studies, which often found mental health issues more pronounced among compulsive users, including depressive symptoms and concerns about sexual performance (Rishibha & Anjali, 2018; Camilleri et al., 2021). While prior research linked mental health problems with compulsive internet pornography, this study suggests that pornography use alone may not significantly impact mental health. This aligns with the American Association of Sexuality Educators, Counselors, and Therapists' (AASECT) findings that cultural or spiritual beliefs might influence perceived links between pornography and mental health issues (Jennifer, 2020). The uneven ratio of compulsive to non-compulsive users and sample size may also have influenced these results.

Whereas, the final objective examined differences in mental health status and internet pornography use between male and female students. Findings showed no significant gender differences in mental health but indicated that males (M=1.79, SD=1.08) reported higher pornography use than females (M=1.43, SD=.73; t(100)=-1.89, p=.06). This aligns with previous research indicating a higher tendency for internet pornography use among males, with males often initiating viewing earlier and with greater frequency than females (Romito & Beltramini, 2011). The absence of mental health disparities between genders in this study contrasts with broader literature that reports higher rates of mental illness symptoms, such as depression and anxiety, in females (Ahmed et al., 2020; Gao et al., 2020; Lei et al., 2020). Gender parity in mental health findings may be attributed to this study's undergraduate sample and specific cultural context, as previous research in Malaysia found no significant gender-related mental health differences (Dai et al., 2020).

Interestingly, this study highlights the need for more nuanced explorations into the mental health effects of internet pornography use, particularly by considering cultural and gender-specific factors within university settings. Research suggests that cultural contexts significantly influence perceptions and experiences related to mental health and pornography, which may impact study outcomes (Grubbs et al., 2019; Perry, 2019). Future studies could expand on these findings by examining broader, diverse samples that include a balanced ratio of compulsive and non-compulsive users, as well as diverse educational backgrounds and cultural settings, to strengthen generalizability (Bőthe et al., 2020). Further research might also benefit from longitudinal approaches to observe the potential cumulative effects of internet pornography on mental health over time, as longitudinal methods provide insight into developmental and temporal relationships between mental health and internet pornography use (Camilleri et al., 2021). Additionally, exploring the role of cultural, spiritual, and social perceptions of pornography use in mental health would offer valuable insights into the psychological impact of these factors on students in Malaysia and similar cultural contexts (Grubbs et al., 2019; Perry, 2019).

CONCLUSION

In summary, the results revealed no significant difference in mental health status between individuals with compulsive versus non-compulsive internet pornography use. In the Malaysian context, gender did not correlate with mental health differences, except in terms of internet pornography use patterns. Notably, male respondents reported higher rates of pornography use, though the sample size was limited. This finding underscores the need for targeted interventions, particularly for male students, at the university level to address potential negative impacts. Future research should further explore these areas and address current study limitations to enhance the validity of findings.

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