Pertanika Proceedings 1 (4): 51 - 56 (2025)

PERTANIKA JOURNALS

PERTANIKA PROCEEDINGS

Journal homepage: http://www.pertanika.upm.edu.my/

Digital Dependencies: The Impact of Online Gaming Addiction on Mental Health and Social Well-Being Among Malaysian Youths

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ABSTRACT

The rising prevalence of online gaming addiction among Malaysian adolescents raises concerns about its psychological, academic, and social effects. This study aims to investigate how attitudes towards gaming, subjective norms, and perceived behavioural control contribute to addiction by utilising the Theory of Planned Behaviour (TPB). A quantitative survey was conducted with 750 adolescents (aged 13-18) from five secondary schools in Selangor, using validated instruments such as the Internet Gaming Disorder Scale and DSM-5 criteria. Statistical analyses revealed significant relationships ($p < 0.05$) between gaming addiction and positive attitudes ($r = 0.45$), subjective norms ($r = 0.38$), and low perceived behavioural control ($r = -0.45$). Chi-square tests indicated significant negative associations ($p < 0.05$) between higher levels of gaming addiction and academic performance ($x^2 = 8.12$) and family relationships ($x^2 = 6.45$). These findings highlight the influence of internal attitudes and social pressures on addiction, particularly among adolescents struggling with self-regulation. While significant correlations were found, this study does not establish causality. The results underscore the urgent need for targeted interventions, such as integrating digital literacy into school curricula and enhancing family communication, to address gaming addiction and promote healthier adolescent development.

Keywords: Academic performance, adolescents, good health and well-being, mental health, online gaming addiction, psychological disorder syndrome, quality education, theory of planned behaviour

ARTICLE INFO

Article history:
Received: 13 June 2025
Published: 13 August 2025

DOI: https://doi.org/10.47836/pp.1.4.011

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INTRODUCTION

The rise of online gaming addiction among Malaysian adolescents is a significant public health concern. While gaming can improve digital literacy and social engagement, excessive use may lead to mental health issues, academic decline, and strained

family relationships (Cash et al., 2023). Globally, 10-15% of adolescent gamers exhibit addiction symptoms, a trend reflected in Malaysia (Chin & Chow, 2023). However, there is limited localised research, as most studies focussed on Western populations, hindering the understanding of cultural influences on gaming behaviour (Parrott et al., 2020). Existing studies mainly addressed mental health impacts, with few examining long-term educational effects (Subbiah & Ibrahim, 2011) or tailored interventions for Malaysian youth. Table 1 highlights these gaps in relation to the TPB.

Table 1
Summary of key studies on gaming addiction, TPB constructs, and gaps

Author(s)	Key Findings & TPB Construct (**)	Gap in Literature
Silva & Diaz, 2023	Gaming addiction linked to depression and anxiety. **(Attitude)	Lacks cultural context in non-Western settings.
Veldkamp et al., 2020	Problematic gaming tied to subjective norms. **(Subjective Norms)	Does not address long-term educational impacts.
Hussein et al., 2019	CBT effective but overlooks social factors. **(Subjective Norms)	Needs interventions considering social influences in Malaysia.
Nadeak, 2021	Positive attitudes increase addiction likelihood. **(Attitude)	Lacks localised research on cultural attitudes in Malaysia.
Schettler et al., 2022	Low self-control predicts addiction. **(Perceived Control)	Does not explore cultural variations in perceived control.
Hooshyar et al., 2021	Subjective norms maintains gaming behaviors. **(Subjective Norms)	Fails to consider family dynamics in addiction.
Novo et al., 2024	CBT shows short-term efficacy. **(Perceived Control)	Lacks longitudinal studies on intervention effectiveness.

Integrating the TPB was crucial in understanding gaming addiction, providing a framework to analyse how attitudes, subjective norms, and perceived behavioural control influenced gaming behaviours. This study aimed to address these gaps and offer insights to inform policies and support systems for Malaysian youth.

METHODOLODY

This quantitative study examined online gaming addiction among 750 Malaysian adolescents aged 13-18 from five selected secondary schools in Selangor. These samples were selected via the stratified random sampling (Hughes et al., 2023). A structured questionnaire assessed attitudes towards gaming, subjective norms, and perceived behavioural control based on the TPB. Gaming addiction was measured using the Internet Gaming Disorder Scale (IGDS), aligned with DSM-5 criteria, focussing on loss of control, prioritisation of gaming, and continued gaming despite negative consequences (Culliford & Bradbury, 2020). The study tested several hypotheses:

H1: Adolescents with positive attitudes towards gaming exhibited higher levels of gaming addiction.
H2: Adolescents experiencing higher subjective norms demonstrated increased levels of gaming addiction.
H3: Adolescents with lower perceived behavioural control experienced higher levels of gaming addiction.

Additionally, the study explored two outcome-based hypotheses:
H4: Gaming addiction negatively impacted academic performance.
H5: Gaming addiction negatively influenced family relationships.

Data analysis was performed using the SPSS software, applying Pearson correlation, t-tests, and Chi-square tests. Significance was determined at a threshold of $p < 0.05$. Ethical guidelines were strictly adhered to, including informed consent from participants and ensuring their anonymity.

ANALYSIS AND RESULTS

Figure 1 summarises the demographic characteristics and gaming preferences of the respondents. The analysis revealed that most participants were male (54%), aged 13-15 (60%), and 73% gamed daily, primarily on mobile devices (65%). Significant positive correlations were found between positive gaming attitudes ($r = 0.45$, $p = 0.003$) and subjective norms ($r = 0.38$, $p = 0.001$) with gaming addiction, while perceived behavioural control negatively correlated with addiction ($r = -0.45$, $p = 0.002$). Gaming addiction also significantly affected academic performance ($x^2 = 8.12$, $p = 0.000$) and family relationships ($x^2 = 6.34$, $p = 0.004$), with all results statistically significant at $p < 0.05$.

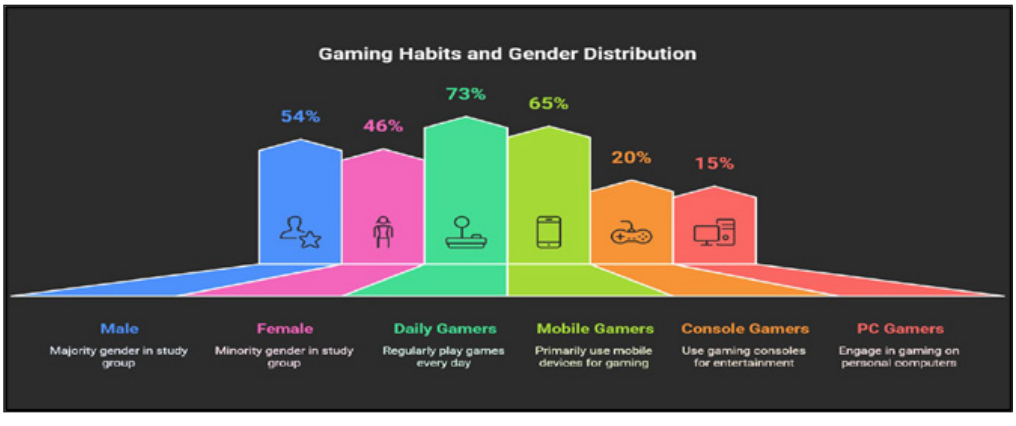

Figure 1. Results on gaming habits and gender distribution

The statistical analyses tested five hypotheses based on the TPB, as summarised in Table 2. All hypotheses were supported with statistically significant results ($p < 0.05$), demonstrating clear relationships between gaming addiction, attitudes, subjective norms, perceived behavioural control, academic performance, and family relationships.

Table 2
Summary of hypothesis testing and statistical results

Hypothesis	Test Applied	Statistic Value	p-value	Significance	Result
H1: Positive attitudes towards gaming are positively associated with higher gaming addiction levels.	Pearson Correlation	$r = 0.45$	0.003	Significant ($p < 0.05$)	Supported
H2: Subjective norms significantly predicts gaming addiction.	Pearson Correlation	$r = 0.38$	0.001	Significant ($p < 0.05$)	Supported
H3: Lower perceived behavioural control correlates with higher levels of gaming addiction.	Pearson Correlation	$r = -0.45$	0.002	Significant ($p < 0.05$)	Supported
H4: High gaming addiction levels negatively impact academic performance.	Chi-square Test	$x^2 = 8.12$	0.000	Significant ($p < 0.05$)	Supported
H5: Gaming addiction negatively influenced family relationships	Chi-square Test	$x^2 = 6.34$	0.004	Significant	Supported

The analysis revealed significant correlations between positive gaming attitudes, subjective norms, and low perceived behavioural control, all linked to higher gaming addiction levels (Table 2). These findings support the TPB, showing that adolescents with favourable gaming attitudes and weaker self-regulation are more prone to addiction (Almeida & Simoes, 2019). Gaming addiction also correlates with lower academic performance and strained family relationships, highlighting the need for targeted interventions like digital literacy programmes and parental involvement to enhance behavioural control and address external influences.

CONCLUSION

This study investigated online gaming addiction among Malaysian adolescents using the TPB. It is found that positive gaming attitudes, social influences, and low perceived control are linked to higher addiction levels, which negatively impact academic performance and family relationships. To promote healthier gaming habits, the study recommends digital literacy programmes, parental involvement, and peer support. This research enhances

understanding of gaming addiction and provides insights for educators and policymakers, suggesting future studies explore long-term effects and cultural differences.

ACKNOWLEDGEMENT

The authors gratefully acknowledges the supported facilities provided by the Management and Science University (MSU).

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