


# The prevalence of internet gaming disorders and the associated psychosocial risk factors among adolescents in Malaysian secondary schools

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## Abstract

Internet Gaming Disorder (IGD) has been placed under the conditions for further study segment in DSM-5. The purpose of the current study was to develop a preliminary psychosocial model as a reference for providing appropriate intervention, particularly for adolescents with IGD. A total of 5290 adolescents from secondary schools in seven states in Malaysia were recruited by using proportionate random sampling. A standardized set of validated questionnaires such as DASS-21, BIS-11, and IGDS9-SF were distributed to participants that fulfilled the inclusion criteria. The prevalence of IGD among Malaysian adolescents was 3.5%. The bivariate analysis summarized that factors such as stress, impulsivity, gender, time spent using the internet, and relationship with parents and friends; have statistically significant associations with IGD. The logistic regression model revealed that adolescents with IGD were 9 times more likely to experience extremely severe stress ( $p < 0.001$ ). Several psychosocial factors were associated strongly with IGD in the current study, however, mental health shows the most significant issues among adolescents with IGD. Immediate intervention through a psychological approach to internet gaming is needed from parents, schools,

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and also respective stakeholders. IGD may become one of the addictions diseases that cause deterioration in many aspects of an adolescent's future life without serious intervention.

## Keywords

Internet gaming disorder, adolescents, stress, impulsiveness, psychosocial risk factors

## Introduction

Globally, 1–10% of individuals who play online games suffers from compulsive addiction (Hull, 2021). A recent study that suggested the increasing percentage of adolescents playing online computer games has led to growing public concerns about potential detrimental effects, especially gaming addiction (Sugaya et al., 2019). Besides that, there is an increase in the prevalence of gaming addiction associated with problematic behaviors such as externalizing problem behaviors (e.g., substance use and sexual intercourse) and internalizing problem behaviors (e.g., depression and social anxiety) (Hu et al., 2017). This trend is worrying, in parallel to the statistics by the Malaysia Communications and Multimedia Commission (MCMC) in 2018 which indicates that the national percentage of Internet users climbed from 76.9% in 2016 to 87.4% in 2018 (Zul Kamal & Wok, 2020).

According to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition Text Revision (DSM-5-TR), Internet gaming addiction (IGD) is defined as “persistent and recurrent use of the Internet to engage in games, often with other players, leading to clinically significant impairment or distress as indicated by five (or more) of the criteria in a one-to-2-month period” (American Psychiatric Association, 2022). The proposed criteria include preoccupation with Internet games, withdrawal symptoms, tolerance, unsuccessful attempts to control the participation in Internet games, loss of interest in previous hobbies and entertainment, continued excessive use of games despite knowledge of psychosocial problems, having deceived someone regarding the amount of Internet gaming, use of games to escape or relieve a negative mood, and having jeopardized or lost a significant relationship, job, or educational or career opportunity (American Psychiatric Association, 2022; Milani et al., 2018).

Upon the inclusion of IGD in the section measures of DSM-5, researchers have raised their arguments on whether IGD is fit to be included in DSM-5. Dullur and Starcevic (2018) publicly argued that problematic online gaming associated with interruption of functioning may not suggest the presence of mental disorder since it could only be a consequence of excessive gaming. They also argued that the unclear distinction between “high engagement” and problematic online gaming, as well as the low diagnostic threshold for IGD, could lead to overdiagnosing the condition besides pathologizing and stigmatizing average gamers. This could result in the utilization of inappropriate and potentially dangerous treatments, such as coercive techniques to modify gaming behaviour or some medications (Dullur & Starcevic, 2018).

However, King et al. (2018) counter argued that IGD should be qualified as a mental disorder since DSM-5 and ICD-11 both has referred IGD with the important concept of “loss of control” apart from other diagnosis criteria and considerations. King et al. (2018) also argued that when evaluating various functional impairments and evidence of impaired control over gaming, which would not be typical of normal gaming, evidence about the intensity and frequency of conduct is typically evaluated in parallel. An expert clinician should be able to distinguish between “normal” gaming and IGD based on the research done to date. The obvious needs of persons seeking therapy