



GAMING ADDICTION AND ITS ASSOCIATION WITH DEPRESSION, **ANXIETY AND LONELINESS AMONG UNIVERSITY STUDENTS IN MALAYSIA**

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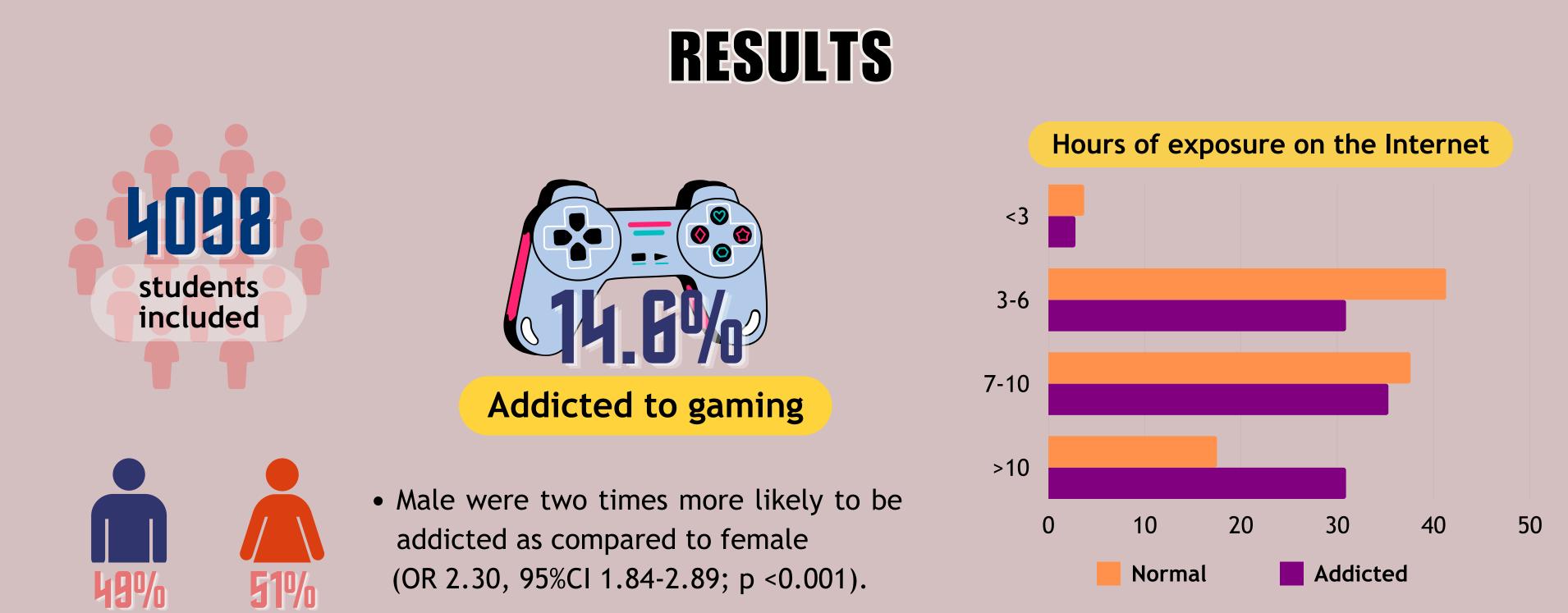
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Gaming addiction is considered as a behavioural mental health problem that may negatively impact an individual's daily functions. This study aimed to identify the association between depressions, anxiety and loneliness with gaming addiction among university students in Malaysia. A cross-sectional study was conducted using a two-stage stratified cluster sampling design. The findings showed that depression, anxiety and loneliness were found to be associated with gaming addiction among the university students in Malaysia. The evidence from this study may help to understand how gaming addiction may hinder youths' social development and the need to provide some guidance for mental health education practice in the future.

MATERIALS & METHODS

A cross-sectional study was conducted between January and December 2022 in 20 public universities in Malaysia. Two-stage stratified cluster sampling design was used, by faculty and student year. The first stage of sampling was the selection of faculties and the second stage was the selection of student year. All students in the selected year were recruited to participate in this study. Four validated assessment scales were used to collect information on gaming addiction, depression, anxiety and loneliness. A statistical software tool, SPSS version 22 was used to conduct data analysis. Descriptive analysis used for frequency was of sociodemographic characteristics and proportions of gaming addiction, severity of depression, anxiety and loneliness among the students. Chi-square test was conducted to observe the association between the variables. Further analysis using multiple logistic regression was performed for any significant univariate associations.

Gaming addiction is defined as compulsive or excessive use of online or offline gaming that has negative impact on a person's physical, psychological, and social functions (1). It is recognized as one of behavioral mental health disorders. The Internet Users Survey reported in 2020 by Malaysian Communications and Multimedia Commission (MCMC) showed that 46% of the users were in their twenties and 43% of them used internet for gaming purposes (2). Social, media and psychological factors including depression, anxiety and loneliness contentment play major roles in gaming addiction (3). It was believed that to overcome the feeling of distress and loneliness, people spend time playing games, especially through online, and at some point, they feel more comfortable in their virtual life until it becomes an addiction (4). Therefore, this study aimed to identify the association between depressions, anxiety and loneliness with gaming addiction among public university students in Malaysia.



- 75.6% HAD DEPRESSION
- 73.1% HAD ANXIETY
- 94.3% WERE LONELY

- Students with depression were five times more likely to be addicted as compared to those without depression (OR 5.38, 95% CI 4.41-6.57; p < 0.001).
- Students with anxiety were four times more likely to be addicted as compared to those without anxiety (OR 4.60, 95% CI 3.79-5.58; p < 0.001).
- Students who were lonely were three times more likely to be addicted with gaming as compared to those who were not lonely (OR 3.59, 95% CI 2.51-5.13; p <0.001).
- Spending less than 3 hours on the Internet was less likely to be addicted as compared to those spending more than 10 hours (OR 0.65, 95% CI 0.50-0.84; p <0.001).
- Students who had social media were more likely to be addicted as compared to those who had no social media (OR 2.60, 95% CI 1.66-4.08; p <0.001).



From the results obtained, depression, anxiety and loneliness were found to be associated with gaming addiction among the university students in Malaysia. A previous study had demonstrated that video game addicts suffered poorer mental health and cognitive functioning with increased emotional difficulties, such as enhanced depression and anxiety, as well as more social isolation (5). The study further stated that adolescents and young adults were more vulnerable to Internet-related addiction because of their psychological and developmental characteristics and the easy access to the Internet with a portable device, hence the positive expectation of gaming.



This study showed that depression, addiction and loneliness is one of mental health problem among university students in Malaysia. The findings may provide evidence on the status of mental health problems and behavioural addictions among university students and help to understand how gaming addiction may hinder youths' social development. Hence, the need to provide some guidance for mental health education practice in the future is important.

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