



## Adolescents in the Gaming Zone: A Study on Depression, Anxiety, Loneliness

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### ARTICLE INFO

*Keywords:* Online gaming, mental health, adolescents, depression, anxiety, loneliness

*Received :* 15 October

*Revised :* 12 November

*Accepted:* 20 December

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### ABSTRACT

This study explored the impact of online gaming addiction on adolescents' mental health in the Kathmandu Valley. With the advent of accessible gaming platforms, there was increasing concern about their potential negative effects. Using a cross-sectional, descriptive, and causal-comparative research design, data were collected from 207 students across four colleges through structured questionnaires. The study aimed to assess adolescents' perceptions of online gaming, investigate the relationship between gaming addiction and mental health, and examine its impacts on depression, anxiety, and loneliness. The findings revealed a significant correlation between online gaming addiction and adverse mental health outcomes among adolescents. Increased gaming addiction was associated with higher levels of depression, anxiety, and loneliness. The study highlighted the detrimental effects of excessive gaming on social relationships, academic performance, and overall well-being. This research addressed a critical gap by focusing on the Kathmandu Valley, providing new insights into the localized effects of gaming addiction and underscoring the need for targeted interventions and preventive measures to support adolescent mental health.

## **INTRODUCTION**

In today's digital age, the Internet has become an integral part of everyday life, providing access to a vast array of information (Zul & Wok, 2020). The number of Internet users has been steadily increasing, with online gaming emerging as one of the most addictive activities in recent years (Wan & Chiou, 2006).

Azim, Zam, and Rahman (2015), expressed that 95% of Internet users are adults holding college or graduate degrees. Globally, online games have gained immense popularity, particularly among younger generations, contributing to the rising issue of online game addiction. In the last decade, online games have become the predominant form of the entertainment worldwide, it's no longer confined to arcades or home, but can be found almost everywhere. There is no single factor that makes online games so appealing to adolescents but there is something about the games that keeps them fascinated (Prakash, 2018).

Newzoo (2020), mentioned that, over two billion individuals engage in online gaming during their free time. This popularity stems from the entertainment and enjoyment these games provide, which can sometimes lead to addiction. Players are often challenged with tasks that require problem-solving and progression. To advance to higher levels, they must achieve success, and losing allows for repeated attempts to win. However, this cycle of continuous play can potentially cause both physical and mental health issues.

The popularity of online gaming is rapidly increasing throughout Asia, a region well-known for its enthusiasm for gaming. While each country in Asia has its unique preferences when it comes to recreational activities, the enjoyment of gaming remains universally undeniable (Larry, 2024). In Nepal as well, online gaming has seen a significant rise in popularity in recent years. It provides an easily accessible and convenient form of entertainment and social interaction, attracting individuals of all ages and backgrounds (Giri, 2024).

While online gaming fulfills various individual needs, its addictive nature can result in detrimental effects, particularly for adolescents, significantly impacting their mental health (Batmaz, Türk, & Doğrusever, 2021). Among this age group, online gaming addiction has been linked to issues such as increased depression, anxiety, and loneliness, disrupted family relationships, lower quality of life, social phobia, poor academic performance, and sleep deprivation (Chamarro, 2020).

Online games, though widely embraced, have raised growing concerns, particularly among youths, due to their addictive potential. Technology addiction often involves maladaptive psychological patterns, with the level of adaptability varying depending on the type of online games, some of which foster obsessive-compulsive behaviors that can drive players to neglect essential life responsibilities (Zul & Wok, 2020).

Jeong and Kim (2007) observed that many adolescents today prefer the virtual world over reality to fulfill their gaming desires. As such, addiction to Internet gaming is recognized as a mental disorder with various descriptions. Griffiths (2019) asserted that addiction stems from bio-psychosocial mechanisms, which are evident in behaviors like mood regulation, tolerance,

withdrawal symptoms when the activity stops, and challenges arising at both interpersonal and intrapersonal levels due to the individual's actions and experiences.

Adolescents' perceptions of online gaming are complex and influenced by a multitude of factors. While many view gaming positively for its entertainment value, social opportunities, and skill-building potential, others and society at large remain cautious due to concerns about addiction, socialization, and health. Understanding these varied perspectives is crucial for fostering healthy attitudes towards gaming and supporting adolescents in making informed choices about their gaming habits though there has negative perceptions of online gaming among adolescents towards mental health like depression, anxiety and loneliness.

Playing online games continuously does not automatically qualify as a disease. Rather, it becomes a mental health issue when individuals engage in online gaming for prolonged periods to the point where it disrupts their daily functioning. Online gaming addiction causes players to prioritize gaming above all other interests and responsibilities, persisting despite the adverse effects it may have on their lives. These negative consequences can include impairments in social interactions, academic performance, and family relationships (Rettner, 2019).

Understanding the impact of online gaming addiction on adolescents' mental health is crucial due to its pervasive influence on various aspects of their lives. Adolescents are particularly vulnerable to the allure of online gaming, which can lead to addiction and subsequent detrimental effects on their psychological well-being i.e. suffering from depression, anxiety and loneliness.

As gaming platforms and technologies have advanced, the immersive and interactive nature of these games can captivate young minds, potentially leading to excessive gaming habits. This addiction can manifest in various mental health issues such as depression, anxiety, and stress, as gaming becomes a primary coping mechanism or escape from real-life challenges. Recognizing these multifaceted impacts is essential for developing effective strategies for prevention, intervention, and treatment. By addressing these issues holistically, we can mitigate the adverse effects of online gaming addiction on adolescents' mental health, thereby promoting their overall well-being and development. For performing this research, the below mentioned questions and objectives are prepared to recognize and understand the multifaceted impacts of online gaming addiction on adolescent's mental health more clearly.

#### *Research Objectives*

- To access the perception of adolescent's regarding online gaming and mental health.
- To examine the relationship between online gaming and mental health.
- To analyse the impact of online gaming addiction on adolescent's mental health.

*Research Hypothesis*

- H01: There is no significant relationship between online gaming and depression on adolescent's mental health.
- H02: There is no significant relationship between online gaming and anxiety on adolescent's mental health.
- H03: There is no significant relationship between online gaming and loneliness on adolescent's mental health.

*Conceptual Framework*

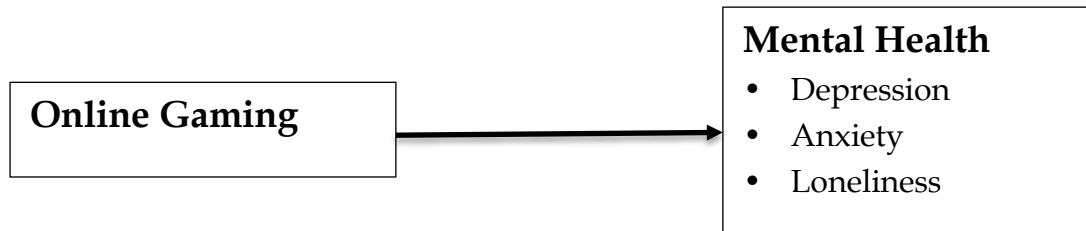


Figure 1: Conceptual Framework

The figure shows the relationship between Online Gaming (independent variable) and Mental Health (dependent variable), focusing on three aspects: Depression, Anxiety, and Loneliness. It implies that online gaming potentially impacts mental health by contributing to these psychological conditions, highlighting a possible link between gaming behavior and emotional well-being.

**LITERATURE REVIEW**

The literature review centers on five critical areas: online gaming addiction, mental health, depression, social anxiety, and loneliness. The effects of online gaming addiction on adolescents' mental health are primarily grouped into three major factors: depression, anxiety, and loneliness. Adolescents often view online gaming as a prevailing trend in electronic entertainment. Furthermore, Block (2008) notes that, in the absence of standardized criteria for diagnosing addiction, numerous studies approach online gaming addiction as a continuum, with varying levels of severity ranging from mild to extreme.

The study titled "*The Connection Between Anxiety, Depression, and Stress with Internet Gaming Disorder*" explores the association between internet gaming disorder and mental health issues such as depression, anxiety, and stress. Grounded in the I-PACE model, the study utilized instruments like the DASS-21, Fear of Missing Out Scale, and Internet Gaming Addiction Scale to assess 324 middle school students. Findings reveal that depression and stress are significantly linked to internet gaming disorder, with fear of missing out serving as a partial mediator. Conversely, anxiety does not exhibit a significant connection through full mediation. Additionally, the study highlights that stress and anxiety are stronger predictors of internet gaming disorder when mediated by fear of missing out (Yang Wang, 2022).

The research *"The Effects of Online Gaming Addiction on Mental Health Among IIUM Students"* by Zul and Wok (2020) in Malaysia employed a descriptive, quantitative method involving 210 undergraduate and postgraduate students. It examined the effects of online gaming addiction on students' mental health at the International Islamic University Malaysia (IIUM). Results showed PUBG as the most popular game, followed by Mobile Legend, Call of Duty, DOTA, and Free Fire. Although online gaming addiction and mental health issues were generally low, significant positive correlations were found between addiction and depression, anxiety, and loneliness. Grounded in social cognitive theory, the study supported all proposed hypotheses.

Online gaming addiction is recognized as a global issue affecting mental health. The research titled *"Association Between Internet Gaming Disorder, Psychopathology, and Social Adaptation in Italian Young Adults"* by Concetta De Pasquale (2020) explored the occurrence of Internet Gaming Disorder (IGD) among 566 Italian young adults, with a mean age of 22.74. The results showed that 5.3% met the clinical criteria for IGD. Greater gaming time correlated with higher levels of depression, anxiety, and psychoticism, and lower social and family relationships. Predictors of IGD included somatization, depression, and sleep disturbances. The study underscores the need for healthcare professionals to recognize the impact of online gaming addiction on mental health.

Internet Gaming Disorder (IGD) is now recognized as a mental health concern. Excessive online gaming, particularly among adolescents, has evolved into a lifestyle and is associated with psychological, social, and physical health issues. The research titled *"Effects of Online Game Addiction on Adolescent Mental Health: A Systematic Review and Meta-analysis"* examined the impact of online game addiction on adolescents by employing the Preferred Reporting Items for Systematic Reviews methodology. A literature search was conducted across PubMed, Sage, ScienceDirect, and Scopus databases using keywords such as "online game addiction," "mental health," and "youth." The inclusion criteria required full-text journal articles in English, published between 2011 and 2021. Results revealed a strong negative link between problematic online gaming and various health outcomes (Eni Purwaningsih, 2021).

### *Research Gap*

While numerous studies have investigated the impact of online gaming addiction on adolescent's mental health globally, but there is apparent lack of research examining the impact of online gaming on adolescent's mental health in Kathmandu valley? Addressing this gap would involve conducting research to better understand the impact on gaming addiction on adolescent's mental health inside Kathmandu valley.

## **METHODOLOGY**

This research aimed to acquire adolescents' perceptions regarding online gaming and to explore and examine the impact of online gaming addiction on their mental health. The study employed both descriptive and causal-comparative research designs, with a cross-sectional time horizon. The

descriptive aspect sought to portray adolescents' perceptions of online gaming, while the causal-comparative component aimed to identify and analyze potential cause-and-effect relationships between online gaming addiction and adolescents' mental health. By using a cross-sectional approach, the research collected data at a single point in time, providing a snapshot of the current situation among adolescents. Quantitative research methods were chosen for the study. The population consisted of students from four colleges in the Kathmandu Valley: College of Business Management, Global College of Management, Universal College, and Sahid Shukra Secondary School. A sample of 207 students was selected to ensure the findings could be generalized to a larger population. Data was gathered using a structured survey questionnaire, and analysis was performed with SPSS software, utilizing both descriptive and inferential statistical tools. Ethical considerations were crucial throughout the study. Participation was voluntary, with no coercion involved. Confidentiality was maintained, and participants' identities and responses were kept anonymous to protect their privacy. Additionally, appropriate approval was obtained from the concerned colleges, and informed consent was secured from all participants, ensuring they were fully aware of the study's objectives and procedures.

**RESEARCH RESULT**

This section presents the demographic information, perception of online gaming on mental health, the correlation between online gaming and mental health, and the overall impact of online gaming on mental health.

*Demographic Information*

Table 1: Demographic Information

		Frequency		Percent	
<b>Valid</b>	Male	129		62.31	
	Female	78		37.68	
	Total	207		100	
<b>Class</b>	11.00	60		28.98	
	12.00	148		71.49	
	Total	207		100	
<b>Faculty</b>	Management	148		71.49	
	Science	46		22.22	
	3.00	13		6.28	
	Total	207		100	
	N	Minimum	Maximum	Mean	Std. Deviation
Age	207	14.00	20.00	17.0725	1.06560

Source: Field survey, 2024

In the above tables, the study shows demographic breakdown of a sample of 207 individuals across several categories: gender, class, faculty and age. The gender distribution shows 62.31% male and 37.68% female participants. In terms of class, 28.98% are in class 11, while 71.49% are in class 12. The faculty distribution reveals that 71.49% belong to the Management, 22.22% to the Science, and 6.28% are from A levels. Additionally, the age distribution of the participants ranges from 14 to 20 years, with an average age of 17.07 and a standard deviation of 1.07, indicating the sample's age variability.

*Descriptive Statistics*

Descriptive statistics reveal students' perceptions of online gaming, depression, anxiety, and loneliness.

**Online games**

The table presents eight questions (AP1 to AP8) related to adolescents' online gaming, each rated on a 1 to 5 scale. For each variable, the data provides the number of valid observations (N=207), along with the minimum, maximum, mean, and standard deviation values.

Table 2: Descriptive statistics related to playing online games

	N	Minimum	Maximum	Mean	Std. Deviation
AP1	207	1.00	5.00	3.4396	1.20072
AP2	207	1.00	5.00	2.7005	1.16049
AP3	207	1.00	5.00	1.9227	1.07659
AP4	207	1.00	5.00	2.0000	1.12345
AP5	207	1.00	5.00	2.3092	1.24287
AP6	207	1.00	5.00	1.8357	.99126
AP7	207	1.00	5.00	2.0242	1.13821
AP8	207	1.00	5.00	1.6377	.90796

Source: Field visit 2024

AP1: "I will make sure that the internet connection is always good so that I can play online games." This has a mean score of 3.4396 and a standard deviation of 1.20072, indicating a relatively high priority on maintaining a good internet connection for gaming.

AP2: "I always find a way to play online games." The mean score is 2.7005 with a standard deviation of 1.16049, suggesting a moderate level of effort to find ways to play online games.

AP3: "I spend my whole night by playing online games." This question has a mean of 1.9227 and a standard deviation of 1.07659, indicating a lower frequency of spending entire nights gaming.

AP4: "I spend a longer time playing online games rather than communicating with my family." The mean score is 2.0000 with a standard deviation of 1.12345, suggesting a balanced approach between gaming and

family communication, with a slight lean towards not prioritizing gaming over family.

AP5: "I will only see my friends to play online games." This has a mean score of 2.3092 and a standard deviation of 1.24287, indicating a moderate agreement with socializing mainly for gaming purposes.

AP6: "I keep on thinking about playing online games all day long." The mean score is 1.8357 with a standard deviation of 0.99126, reflecting a generally low tendency to constantly think about gaming.

AP7: "I frequently neglected important activities (e.g., class, study, assignment) to play online games." This has a mean score of 2.0242 and a standard deviation of 1.13821, indicating a low frequency of neglecting important activities for gaming.

AP8: "I always skip my meals because I want to play online games." The mean score is 1.6377 with a standard deviation of 0.90796, showing a strong disagreement with skipping meals for gaming.

Overall, the data reveals that while some participant exhibit behaviors indicative of gaming, such as prioritizing internet connectivity for gaming and occasionally socializing primarily for gaming, other behaviors such as spending entire nights gaming or neglecting important activities are less prevalent. This indicates a varied level of gaming among the participants.

### Depression

This table represents seven questions (MHD1 to MHD7) concerning the emotional and behavioral impacts of playing online games among 207 participants resulting depression.

Table 3: Descriptive statistics related to depression

	N	Minimum	Maximum	Mean	Std. Deviation
MHD1	207	1.00	5.00	2.7633	1.34273
MHD2	207	1.00	5.00	3.0097	1.25021
MHD3	207	1.00	5.00	2.3478	1.30152
MHD4	207	1.00	5.00	2.4348	1.29012
MHD5	207	1.00	5.00	2.1256	1.16739
MHD6	207	1.00	5.00	1.9855	1.09933
MHD7	207	1.00	7.00	2.2367	1.32453

Source: Field visit 2024

MHD1: "I will get angry if people call me during the time when I play online games." This has a mean score of 2.7633 and a standard deviation of 1.34273, indicating a moderately negative emotional response to interruptions during gaming.

MHD2: "I often feel upset whenever I can't connect with the internet to play online games." The mean score is 3.0097 with a standard deviation of 1.25021, showing a neutral to slightly negative response to internet connectivity issues impacting gaming.

MHD3: "I will curse others if I lose when playing online games." This question has a mean of 2.3478 and a standard deviation of 1.30152, indicating a generally low tendency to curse others when losing games.

MHD4: "I always get angry and tend to insult other players who make mistakes." The mean score is 2.4348 with a standard deviation of 1.29012, suggesting a similar low tendency to insult other players for mistakes.

MHD5: "I always had arguments with others (e.g., family, friends) over my time spent on online games." The mean score is 2.1256 with a standard deviation of 1.16739, indicating infrequent arguments over gaming time.

MHD6: "I rarely talk to my family if I cannot connect with the Internet to play online games." This question has a mean of 1.9855 and a standard deviation of 1.09933, showing that most respondents do not typically avoid talking to their family due to internet issues.

MHD7: "I feel my life is nothing if I cannot connect with the Internet to play online games." This has a mean score of 2.2367 and a standard deviation of 1.32453, reflecting a generally low sense of dependency on internet connectivity for gaming.

Overall, the data indicates that while some respondents exhibit emotional responses to interruptions and connectivity issues, there is a lower tendency towards aggressive behaviors and arguments related to online gaming. The responses suggest varied levels of emotional impact, with more intense reactions being less common resulting depression.

### Anxiety

This table represents six questions (MHA1 to MHA6) concerning the impacts of playing online games among 207 participants resulting Anxiety.

Table 4: Descriptive statistics related to Anxiety

	N	Minimum	Maximum	Mean	Std. Deviation
MHA1	207	1.00	5.00	3.1014	1.18418
MHA2	207	1.00	5.00	2.8792	1.19461
MHA3	207	1.00	5.00	2.3527	1.25655
MHA4	207	1.00	5.00	2.0242	1.09916
MHA5	207	1.00	5.00	1.9275	1.06103
MHA6	207	1.00	5.00	1.9855	1.10374

Source: Field visit 2024

MHA1: "I always feel that other people are better at playing online games." This has a mean score of 3.1014 and a standard deviation of 1.18418, indicating a moderate level of self-perceived inferiority in gaming skills.

MHA2: "I have changes in mood that I cannot explain while playing online games." The mean score is 2.8792 with a standard deviation of 1.19461, showing a tendency towards mood changes during gaming.

MHA3: "I am afraid that life without online games would be boring, empty, and joyless." This question has a mean of 2.3527 and a standard deviation of 1.25655, suggesting a moderate level of fear about life without gaming.

MHA4: "I get anxious if I cannot play online games." The mean score is 2.0242 with a standard deviation of 1.09916, indicating a lower level of anxiety about not being able to play online games.

MHA5: "I feel worried and nervous if I cannot play online games." This has a mean score of 1.9275 and a standard deviation of 1.06103, showing a generally low level of worry and nervousness related to not playing games.

MHA6: "I am not able to stop or control worrying if I cannot play online games." The mean score is 1.9855 with a standard deviation of 1.10374, indicating that most respondents do not experience uncontrollable worrying about not being able to play online games.

Overall, the data reveals varying degrees of anxiety related to online gaming. The highest mean score is associated with feeling inferior to others in gaming skills, while the lowest scores indicate relatively low anxiety and worry about not being able to play games. This suggests that while some aspects of gaming may trigger anxiety, the overall impact is moderate.

#### Loneliness

This table represents six questions (MHL1 to MHL6) concerning the impacts of playing online games among 207 participants resulting loneliness.

Table 5: Descriptive statistics related to loneliness

	N	Minimum	Maximum	Mean	Std. Deviation
MHL1	207	1.00	5.00	3.1884	1.24177
MHL2	207	1.00	5.00	3.0918	1.25268
MHL3	207	1.00	5.00	2.1546	1.18045
MHL4	207	1.00	5.00	2.4348	1.30136
MHL5	207	1.00	5.00	2.1401	1.23646
MHL6	207	1.00	5.00	1.7923	1.11492

Source: Field visit 2024

MHL1: "I play online games because I feel bored with almost everything else in life." This has a mean score of 3.1884 and a standard deviation of 1.24177, indicating a moderate agreement with playing online games due to boredom with other aspects of life.

MHL2: "I play online games because I feel unhappy doing so many things alone." The mean score is 3.0918 with a standard deviation of 1.25268, suggesting a moderate level of unhappiness with solitude leading to playing online games.

MHL3: "I play online games because I feel I do not have much to be proud of in my real life." This question has a mean of 2.1546 and a standard deviation of 1.18045, indicating a lower level of agreement with playing games due to a lack of pride in real life.

MHL4: "I play online games because nobody really understands me in real life." The mean score is 2.4348 with a standard deviation of 1.30136, suggesting a moderate level of feeling misunderstood in real life, leading to gaming.

MHL5: "I play online games because nobody cares about me." This has a mean score of 2.1401 and a standard deviation of 1.23646, indicating a lower level of agreement with playing games due to feeling uncared for.

MHL6: "I play online games because my family did not give me enough attention." The mean score is 1.7923 with a standard deviation of 1.11492, reflecting a low level of agreement with playing games due to lack of family attention.

Overall, the data suggests that while some participants turn to online gaming due to feelings of boredom and unhappiness with solitude, other factors such as feeling misunderstood and uncared for have a lower influence. This indicates that loneliness does play a role in online gaming behavior, but the degree of impact varies among different aspects of loneliness.

### *Correlation*

This table shows the Pearson correlation coefficients among four variables: online gaming (OG) addiction, depression, anxiety, and loneliness. The table includes significance levels and sample sizes for each pairwise correlation.

Online Gaming (OG) Addiction is positively correlated with all three psychological factors studied. There is a strong correlation with depression ( $r = 0.639$ ,  $p < 0.01$ ), indicating that individuals who are more addicted to online gaming tend to experience higher levels of depression.

Similarly, the correlation with anxiety ( $r = 0.593$ ,  $p < 0.01$ ) suggests that those with higher gaming addiction levels also experience greater anxiety. The relationship with loneliness ( $r = 0.466$ ,  $p < 0.01$ ) is somewhat weaker but still significant, indicating that higher addiction to online gaming is associated with increased feelings of loneliness.

Depression shows a strong positive correlation with anxiety ( $r = 0.652$ ,  $p < 0.01$ ), suggesting that individuals who experience higher levels of depression also tend to experience higher levels of anxiety. Depression is also significantly correlated with loneliness ( $r = 0.530$ ,  $p < 0.01$ ), indicating that those who are more depressed are likely to feel lonelier.

Anxiety has a significant positive correlation with loneliness ( $r = 0.568$ ,  $p < 0.01$ ), suggesting that higher levels of anxiety are associated with greater feelings of loneliness.

Overall, the data indicates that online gaming addiction, depression, anxiety, and loneliness are interrelated. Higher addiction to online gaming is linked with increased depression, anxiety, and loneliness, and these

psychological factors are also strongly interrelated among themselves. This pattern highlights the complex interplay between online gaming addiction and various aspects of mental health.

Table 6: Correlations

		OG	Depression	Anxiety	Loneliness
OG Addiction	Pearson Correlation	1	.639**	.593**	.466**
	Sig. (2-tailed)		.000	.000	.000
	N		207	207	207
Depression	Pearson Correlation		1	.652**	.530**
	Sig. (2-tailed)			.000	.000
	N			207	207
Anxiety	Pearson Correlation			1	.568**
	Sig. (2-tailed)				.000
	N				207
Loneliness	Pearson Correlation				1
	Sig. (2-tailed)				
	N				
**. Correlation is significant at the 0.01 level (2-tailed).					

Source: Field visit 2024

*Impact of online gaming on Mental Health*

The regression analysis was conducted to evaluate how adolescents' perceptions of online gaming relate to their mental health.

Table 7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df 1	df 2	Sig. F Change	
1	.674 <sup>a</sup>	.454	.451	.52447	.454	170.379	1	205	.000	1.946
a. Predictors: (Constant), OG										
b. Dependent Variable: Mental health										

Source: Field visit 2024

The model, with an R-value of 0.674, indicates a strong positive correlation between online gaming addiction and mental health outcomes. Specifically, the

R-squared value of 0.454 shows that 45.4% of the variability in mental health among adolescents can be attributed to their level of online gaming addiction. This suggests that adolescents' perceptions of gaming as an influential factor in their mental health are significant, though not exhaustive of all factors affecting mental well-being.

The statistical significance of the model is reinforced by the R-squared change of 0.454 and an F Change value of 170.379 ( $p < 0.01$ ), demonstrating that online gaming addiction significantly contributes to understanding variations in mental health. The Durbin-Watson statistic of 1.946 supports that the model's residuals are independent, meeting key assumptions of regression analysis. Overall, the model highlights the substantial role of online gaming in shaping adolescents' mental health.

Table 8: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	46.866	1	46.866	170.379	.000 <sup>b</sup>
	Residual	56.389	205	.275		
	Total	103.255	206			
a. Dependent Variable: Mental health						
b. Predictors: (Constant), OG Addiction						

Source: Field visit 2024

This table assesses the relationship between online gaming addiction and mental health, as per the objective of exploring this connection. The regression model explains a significant portion of the variance in mental health, with the F-statistic of 170.379 ( $p < 0.01$ ) indicating that the model is highly significant. The Sum of Squares for Regression is 46.866, reflecting the variability in mental health explained by online gaming addiction, while the Residual Sum of Squares is 56.389, representing the unexplained variance. This significant F-value confirms that online gaming addiction is a strong predictor of mental health outcomes, validating the objective of understanding how online gaming impacts mental health.

Table 9: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Co-linearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.901	.122		7.383	.000		
	OG Addiction	.680	.052	.674	13.053	.000	1.000	1.000
a. Dependent Variable: Mental Health								

Source: Field visit 2024

The coefficients table provides detailed insights into the impact of online gaming addiction on adolescents' mental health, aligning with the objective of this analysis. The unstandardized coefficient for online gaming addiction ( $B = 0.680$ ) indicates that for each unit increase in online gaming addiction, mental health scores increase by 0.680 units. The standardized coefficient (Beta = 0.674) reflects the strength and direction of this relationship, showing a substantial positive effect. This suggests that higher levels of online gaming addiction are significantly associated with poorer mental health among adolescents.

The t-value of 13.053 ( $p < 0.01$ ) further confirms the statistical significance of the online gaming addiction predictor, indicating a robust and reliable impact on mental health. The constant term ( $B = 0.901$ ) provides the baseline level of mental health when online gaming addiction is zero. The co-linearity statistics, including a tolerance of 1.000 and a variance inflation factor (VIF) of 1.000, suggest no issues with multi-co-linearity in the model. Overall, the analysis clearly shows that online gaming addiction has a significant and impactful relationship with adolescents' mental health.

## **CONCLUSIONS**

This study finds that online gaming significantly impacts adolescents' mental health, particularly in relation to depression, anxiety, and loneliness. With the increasing accessibility of gaming platforms, the potential for these negative outcomes also continues to rise. The findings clearly demonstrate that excessive gaming can contribute to a decline in social relationships, academic performance, and overall well-being among adolescents. This research underscores the importance of raising awareness and implementing targeted interventions to mitigate these adverse effects. Educators, parents, and mental health professionals must collaborate to address the challenges posed by online gaming addiction, promoting healthier gaming habits and helping adolescents achieve a balance between their digital and real-world lives. By focusing on the Kathmandu Valley, this study offers valuable insights into the localized impact of a global issue, laying a foundation for future research and intervention strategies to enhance adolescent mental health in similar contexts.

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