

A Study on Online Gaming Addiction on Youth's Mental Health

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ABSTRACT

Especially among the youth, playing online games has turned into a hobby, from which young people benefit greatly. The game industry promotes it as a way of entertainment, gaining new skills, and interacting with others. Yet, like any other activity, playing video games has its disadvantages when it is done excessively. The problem of gaming addiction has become one of the most serious ones in the modern world. This study aims to analyse the relationships between online gaming addiction and the mental health of the youth. The research will be quantitative since the results will be based on the collected numerical data. There is a need to explore the influence of gaming on stress, anxiety, depression levels, sleep patterns, social life, and studies of the youth. The study will be conducted by distributing questionnaires among the target population to collect quantitative data. The main finding of this research is that gaming addiction has negative impacts on the mental health of the youth. The results also demonstrate that gaming can be beneficial for the well-being of the youth when it is taken in moderation. As the research shows, it is necessary to spread awareness about healthy gaming habits and encourage the target population to implement them. This study can serve as the basis for future research in this domain and assist various communities in comprehending the impact of online gaming on the mental health of the youth.

Keywords: Online Gaming Addiction, Youth, Mental Health, Psychological Well-being, Anxiety, Depression, Stress, Social Isolation, Academic Performance, Gaming Behaviour.

INTRODUCTION

Think back to the last time you were around a teenager or a young adult glued to their phone, lost in a video game. Chances are you've seen it before because playing video games online has become one of the most common ways for young people all over the world to occupy their time. Every day, millions of youths sit down at their computers and phones to play games. While playing video games can be an extremely fun activity for young people, as well as provide social interaction with friends, there is a growing issue within the medical community and parents alike about the potential dangers video gaming can pose for developing minds. Many teens and young adults are becoming addicted to gaming, which is having severe mental health effects on those addicted. Video Gaming Addiction refers to a phenomenon wherein an individual is addicted to playing online video games to such an extent that it negatively impacts their daily life. Doctors have classified video game addiction as Internet Gaming Disorder, which is a condition where the afflicted individual cannot control the amount of time or frequency they spend playing video games. In addition, those who suffer from video game addiction tend to have constant anxiety when they are unable to play and can have detrimental effects on relationships, schoolwork, and overall personal well-being. The World Health Organisation, which is the international regulatory body that recognises diseases, has classified Gaming Addiction as a mental disorder comparable to conditions such as depression or anxiety. The most concerning part about gaming addiction is its prevalence rate. Experts estimate that between 8 and 10% of the global population who play video games suffer from some form of gaming addiction. In countries such as Asia, the rate can be as high as 20%. Imagine if you had a group of 100 individuals; 2 of those individuals would have a severe addiction to video games.

With the rise of smartphones and the affordability of the internet, video games have become extremely accessible and convenient for young people to play anywhere at any time. What worries psychologists and doctors is the detrimental effects gaming addiction can have on an individual, especially adolescents. Studies show that individuals who suffer from video game addiction have higher chances of developing depression or anxiety. Not only do these individuals tend to have poor or unhealthy sleeping habits, but they also show poor academic performance and anti-social tendencies. Some teens have even confessed to feeling suicidal due to the depression caused by gaming addiction. Video gaming addiction is not a beneficial activity for the mental well-being of young people. Scientists have studied the effects video game addiction has on the human brain, and they've found that video game addiction is very similar to drug addiction. When playing video games, the human brain releases certain chemicals that create a feeling of happiness and satisfaction within the body. This causes the individual to crave that "happy feeling" again and again, which explains why some people fall victim to the addiction. Researchers classify video game addiction as an actual type of addiction and state that it has similar characteristics to drug addiction. The purpose of this research paper is to discuss and explain what video game addiction is, the prevalence of video game addiction, the potential causes of video game addiction, as well as the effect video game addiction can have on the mental health of adolescents. This research can help parents, teachers, and psychologists identify symptoms of video game addiction and help those afflicted properly understand and cope with the addiction.

REVIEW OF LITERATURE

Young's 1998 study was among the first ones to investigate Internet addiction. The results helped recognise the phenomenon as a serious problem signalling several dangerous symptoms. According to Young, people who spend too much time on the Internet risk facing social isolation, anxiety, and other undesirable consequences. The author also stated that addictive behaviour may interfere with everyday responsibilities like work and studies, negatively affecting one's mood, productivity, and overall well-being. Griffith's 2005 research was an empirical analysis of behavioural addictions, particularly gaming addiction. The author analysed the key features of video game addiction and discussed the potential damage it could cause to the mental health of adolescents and young adults. According to Griffith, gaming addiction often involves the development of withdrawal and relapse mechanisms, which makes it physically and emotionally challenging to quit the activity. The article also highlighted the fact that video games often lead to emotional instability and unhealthy patterns of behaviour. Although games are mostly harmless, excessive gaming may lead to several severe consequences. For instance, Lemmens et al.'s study from 2009 resulted in the creation of the Gaming Addiction Scale, which helped understand how adolescents interact with video games and what negative effects they may have. The researchers stated that gaming addiction was associated with several socio-emotional risks, such as social isolation and low self-esteem, and could have a detrimental effect on the well-being of adolescents. Gentile et al.'s study also demonstrated that there was a link between gaming addiction and several mental health concerns, such as depression and poor academic performance. According to the researchers, parents needed to pay more attention to their children's gaming habits. Finally, as Kuss & Griffiths analysis of the existing scientific literature suggests, extended gaming may lead to emotional instability, depression, anxiety, and social isolation. Researchers also found that online multiplayer games seemed to be the most addictive because they allowed players to interact with each other and engage in cooperative activities.

STATEMENT OF THE PROBLEM

Online gaming has become one of the most common behaviours among children and young people worldwide. With the ubiquity of gaming platforms and their accessibility through smartphones and the Internet, video gaming has become a mainstream leisure-time activity. However, excessive gaming has been associated with several adverse effects, including gaming addiction, which has become a global social concern. The current

paper discusses the phenomenon of gaming addiction and its impact on youth mental health. The problem of video gaming addiction has adverse consequences for young people, including depression, anxiety, insomnia, poor academic performance, and social isolation. The issue of video gaming addiction has received increasing research attention in recent years, as studies suggest that 8-10% of gamers globally, with higher prevalence rates in Asian countries, suffer from severe addiction. Gaming addiction is comparable to substance addiction in terms of molecular mechanisms and behaviours. Video gaming addiction is associated with a range of mental health problems, including depression and anxiety, which have serious individual and public health consequences. However, more research is needed to understand the mechanisms involved in the development of video gaming addiction, as well as how this type of addiction affects mental health and what individual and environmental factors contribute to it. The current paper will examine the relationships between online gaming addiction and youth mental health.

NEED FOR THE STUDY

Public Health Significance: The fact that gaming addiction has officially been recognised as a mental health disorder by the World Health Organisation (WHO) makes understanding its health significance a matter of urgency. **Clinical Implications:** The relationships between gaming addiction and mental health must be established to facilitate the development of appropriate interventions, diagnostic criteria, and treatment methods for clinicians. **Youth Mental Health Crisis:** Youth mental health has become a major concern as there has been a reported increase in the incidence of depression and anxiety worldwide. Understanding the role of gaming addiction in mental health is essential if effective measures are to be developed. **Early Intervention:** Adolescence and young adult years are often critical periods that determine the mental health of an individual throughout life. Intervening early in cases of gaming addiction can help prevent further mental health complications. **Parental and Educator Awareness and Involvement:** Parents, teachers, and educators need to be aware of the implications of gaming addiction and how it affects their children's mental health to provide effective early intervention services. **Informing and educating parents and teachers about gaming addiction is a vital step in combating the condition.** **Policy:** The findings of such studies hold great potential to shape policies concerning technology, the video game industry, and public health in general. **Protective Factors:** The identification of protective factors in relation to gaming addiction can also have significant policy implications. Understanding protective factors can facilitate the development of preventative measures and early intervention programs for youth mental health issues in general.

Cross-Cultural Comparisons and Considerations: Since gaming culture and its implications can vary from one region to another, examining the condition from a cross-cultural perspective can yield valuable insights.

OBJECTIVES OF STUDY

1. To identify and characterise the prevalence and severity of online gaming addiction among youth participants.
2. To assess the mental health status of participants, including depression, anxiety, sleep quality, and social functioning.
3. To examine the relationship between gaming addiction severity and specific mental health outcomes.
4. To identify demographic, psychological, and environmental risk factors contributing to gaming addiction.

HYPOTHESIS

Null Hypothesis (H₀): There is no significant relationship between online gaming addiction and mental health among youths.

Alternative Hypothesis (H_1): There is a significant relationship between online gaming addiction and mental health among youths.

RESEARCH METHODOLOGY

Research Design: I would conduct this research using a mixed sequential dominant design, which will allow me to gather both qualitative and quantitative data. Thus, the study will utilise both quantitative and qualitative research methods. I will use a cross-sectional research design for collecting quantitative data, and I will use the interview method for gathering qualitative data. The interview method will enable me to obtain in-depth information about my participants' experiences and the phenomenon I am studying.

Research Approach: The study will be based on a positivist research approach, as I will adopt a hypothesis-testing method. By using quantitative research methods, I will aim to identify the extent and severity of gaming addiction and its effect on participants' mental health. In addition, I will apply an interpretive approach to analyse qualitative data, as I want to understand participants' meaning-making processes.

Source Of Data

Primary Data: Primary data will be collected from the research participants through various methods such as Online Survey Questionnaire: An online survey will be administered to participants to measure the level of gaming addiction (using the IGDS-9), assess mental health status (using the PHQ-9 for depression and GAD-7 for anxiety), evaluate sleep quality (using the Pittsburgh Sleep Quality Index), and gather information on social functioning and demographics. The survey is estimated to take 20-30 minutes to complete.

Secondary Data refers to information that has already been collected and published by others. It includes research studies, books, journals, government data, census reports, corporate records, newspapers, and online resources. Secondary data is often easy to access and inexpensive to obtain, but it may not always address the specific research question at hand. By combining both primary and secondary data sources, researchers can enhance the credibility and depth of their findings.

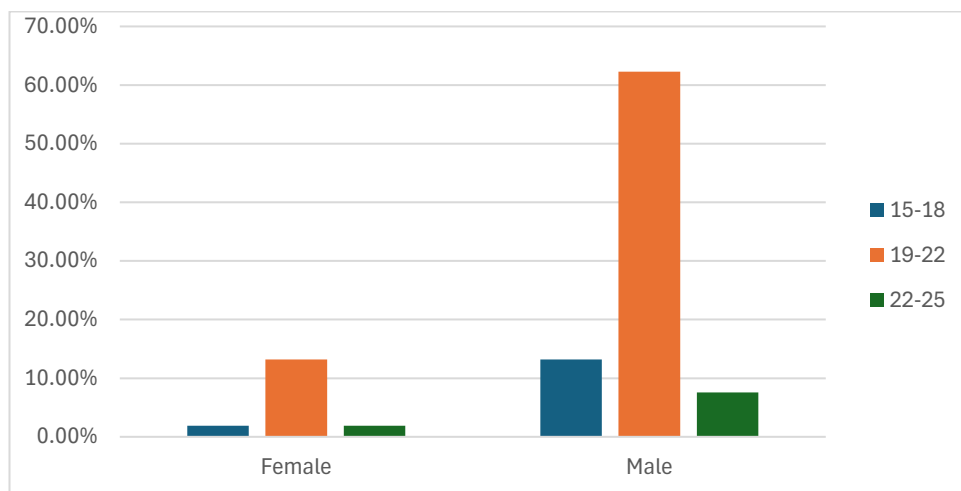
Sampling Method: The study will employ a multi-stage stratified random sampling technique. The sample will be stratified based on age groups (15-18 years, 19-22 years, and 22-25 years) and gender.

Sample Size: For the quantitative study (survey), a sample size of 500-600 participants is needed to ensure adequate power (typically 0.80) and precision (alpha level of 0.05). For the qualitative interviews, a purposeful sampling strategy will be used to recruit 50-60 participants with varying levels of gaming addiction.

DATA ANALYSIS

DEMOGRAPHIC QUESTIONS

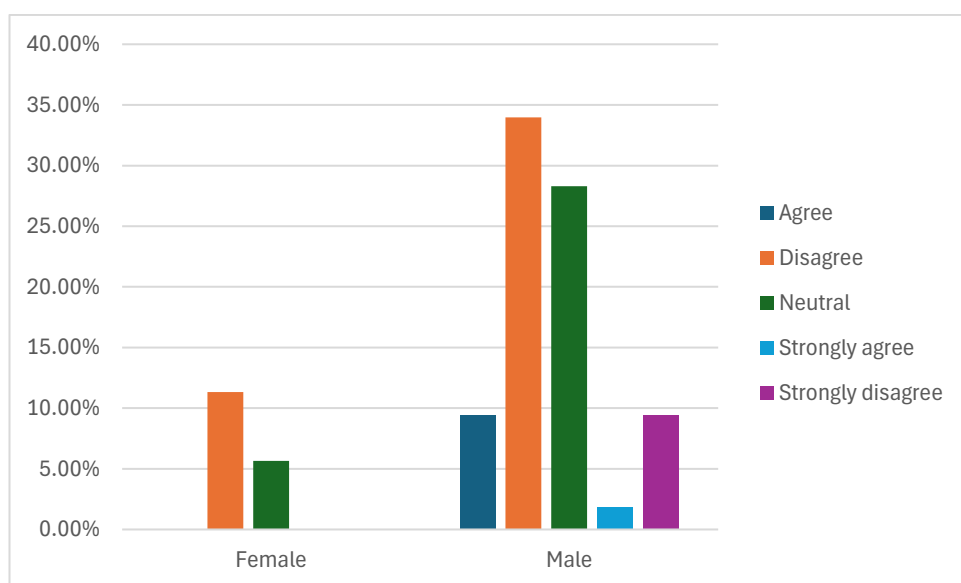
Age Group				
Row Labels	15-18	19-22	22-25	Grand Total
Female	1.89%	13.21%	1.89%	16.98%
Male	13.21%	62.26%	7.55%	83.02%
Grand Total	15.09%	75.47%	9.43%	100.00%



Interpretation: The table demonstrates that the biggest number of respondents belongs to the 19-22 age group, accounting for 75.47%. Thus, the age group distribution is uneven, with more participants being male (83.02%) compared to females (16.98%). Of those who participated in the survey, the most numerous are males aged 19-22 years (62.26%), while the share of females was lower in each age group.

Analysis: Based on the table, it can be concluded that the primary representation is distributed among young males aged 19-22 years. This indicates that the sample was not selected in accordance with the principles of representativity. In particular, there is a lack of participation of females and persons aged 22-25 years. As such, the results only reflect the opinions of young males, without considering the views of other population groups.

2. I spend more time playing online games than I intend to.						
Gender	Agree	Disagree	Neutral	Strongly agree	Strongly disagree	Grand Total
Female	0.00%	11.32%	5.66%	0.00%	0.00%	16.98%
Male	9.43%	33.96%	28.30%	1.89%	9.43%	83.02%
Grand Total	9.43%	45.28%	33.96%	1.89%	9.43%	100.00%

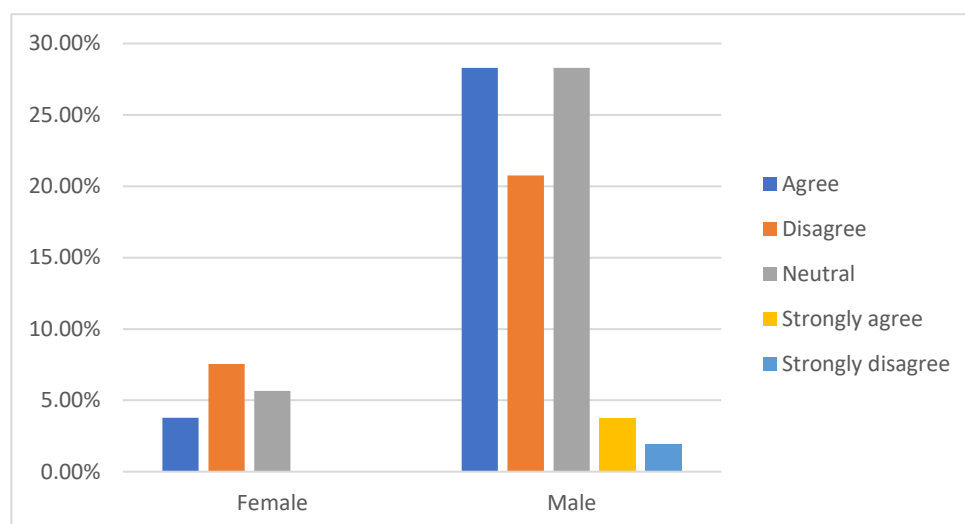


Interpretation: According to survey results presented in the table, 45.28% of respondents disagree that they spend more time playing online games than intended, while 33.96% are neutral about the issue. Meanwhile, 11.32% of participants agree with the statement, and only 1.89% strongly agree. Therefore, the majority of

individuals surveyed do not consider spending long hours playing online games as an issue. Nevertheless, there is a considerable proportion of persons who are unable to control the time spent on the activity. Moreover, there appears to be a gap between the attitudes of male and female respondents.

Analysis: The results suggest that the tendency to spend too much time playing online games is not an issue for the majority of respondents since almost half of them disagree with the statement and one-third are neutral. Meanwhile, the remaining 15.87% of participants either agree or strongly agree that they have difficulties limiting the time spent on the activity. It is also evident that the number of men surveyed significantly outweighs the number of women. Therefore, the results reflect the general tendency in the population not to spend too much time playing online games. Nevertheless, there is a considerable number of individuals who are unable to control their gaming activity.

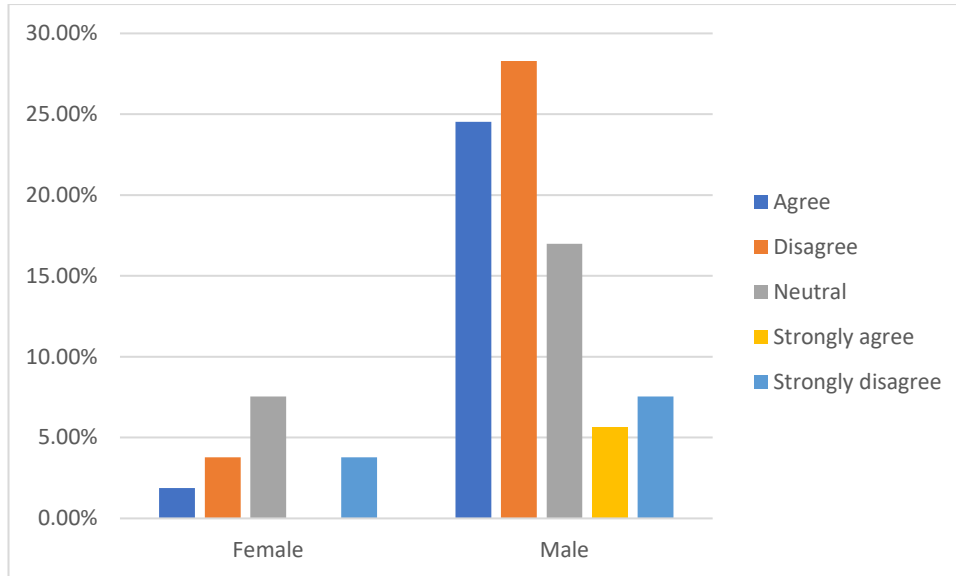
3. I find it difficult to reduce the amount of time I spend playing online games.	Column Labels					
Gender	Agree	Disagree	Neutral	Strongly agree	Strongly disagree	Grand Total
Female	3.77%	7.55%	5.66%	0.00%	0.00%	16.98%
Male	28.30%	20.75%	28.30%	3.77%	1.89%	83.02%
Grand Total	32.08%	28.30%	33.96%	3.77%	1.89%	100.00%



Interpretation: The table shows respondents' evaluations of whether they find it hard to cut down on the time they spend playing online games. Most of the participants, 33.96%, were neutral about the statement. The number of those who agreed was 32.08%. Around 28.30% disagreed, meaning that they do not have problems limiting their gaming time. Thus, a significant part of the participants can control the time spent on the activity. The gender difference suggests that men tend to have more issues with it. For instance, 28.30% of male respondents agreed, and 3.77% strongly agreed.

Analysis: In general, it is possible to conclude that the majority of participants have some difficulties restricting their gaming time. Those difficulties seem to be higher among male respondents. It might be explained by the fact that they comprised the bigger part of the sample. As a result, 32.08% agreed, and 28.30% strongly agreed. On the contrary, female respondents were less likely to admit that they had issues with limiting their gaming time. Only 3.77% of them agreed, and most of them were neutral or disagreed. In conclusion, the survey has shown in the table.

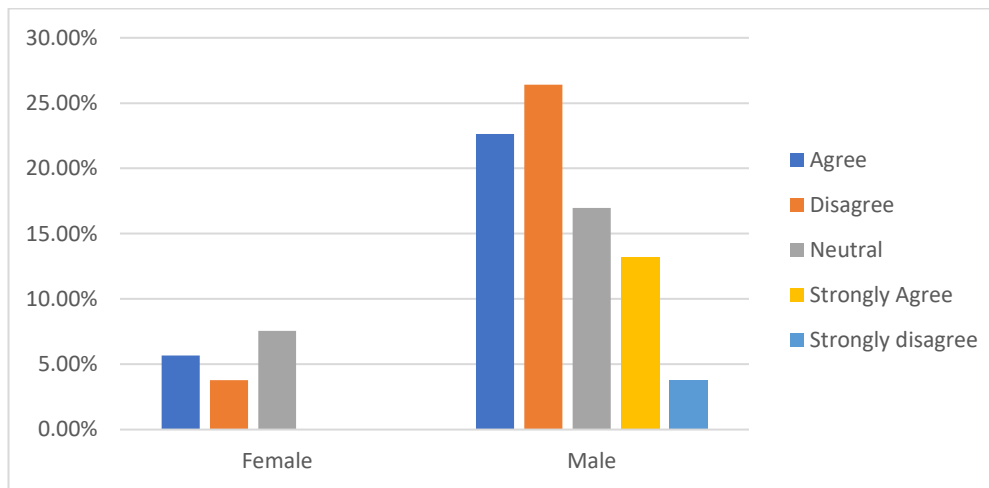
4. My sleep is disturbed because I spend time playing online games.						
Gender	Agree	Disagree	Neutral	Strongly agree	Strongly disagree	Grand Total
Female	1.89%	3.77%	7.55%	0.00%	3.77%	16.98%
Male	24.53%	28.30%	16.98%	5.66%	7.55%	83.02%
Grand Total	26.42%	32.08%	24.53%	5.66%	11.32%	100.00%



Interpretation: According to the pie chart, 32.08% of respondents disagree that their sleep is disturbed due to spending time playing online games. It implies that almost a third of the respondents do not experience negative effects on their sleep schedule due to gaming. However, 26.42% of respondents agree with the statement, and 5.66% strongly agree. It implies that nearly a quarter of the respondents experience some negative effects on their sleep due to gaming. Interestingly, male respondents who agree with the statement are almost double (24.53%) than those who disagree.

Analysis: The analysis of the pie chart indicates that online gaming hurts the respondents' sleep schedule, which has implications for their overall well-being. A significant percentage of respondents who disagree with the statement are not negatively affected by online gaming. However, nearly a quarter of the respondents experience some adverse effects on their sleep due to gaming. Female respondents who agree with the statement are almost negligible at 0.00%. This implies that female respondents are less likely to experience negative effects on their sleep due to gaming than male respondents. In summary, online gaming hurts the sleep of some respondents. Therefore, it is important to avoid excessive gaming to ensure that sleep is not disturbed.

5. Overall, online gaming has negatively affected my academic performance.						
Gender	Agree	Disagree	Neutral	Strongly Agree	Strongly disagree	Grand Total
Female	5.66%	3.77%	7.55%	0.00%	0.00%	16.98%
Male	22.64%	26.42%	16.98%	13.21%	3.77%	83.02%
Grand Total	28.30%	30.19%	24.53%	13.21%	3.77%	100.00%



Interpretation: From the table, it can be argued that the respondents' beliefs about whether online gaming has negatively impacted their studies are divided. According to the data, 30.19% of the participants disagree with the statement, implying that such an activity has not adversely influenced them. On the other hand, 28.30% of the respondents agree, while 13.21% strongly agree with the statement. It suggests that the online activity has negatively affected the performance of more than a quarter of the respondents. In addition, it can be stated that male participants are more likely to hold positive perceptions towards the influence of online gaming on their studies than females. It is seen in the table that 22.64% of males agree with the statement, and 13.21% strongly agree.

Analysis: In conclusion, it can be argued that the online activity adversely influences the participants' performance, as close to a third of them agreed with the statement. On the other hand, a slightly higher portion of respondents reported disagreeing with it. It implies that a considerable part of the participants have successfully managed their gaming habits and studies. Nevertheless, certain respondents, mainly male ones, admitted that the activity negatively impacted their grades. It can be assumed that they failed to manage their gaming habits, leading to a deterioration in their performance. On the other hand, females are less likely to believe in the negative influence of online gaming on their studies.

SPPS TEST

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
12	The categories of 12. I continue playing online games even when I know it affects my studies. occur with equal probabilities.	One-Sample Chi-Square Test	.003	Reject the null hypothesis.
13	The categories of 13. I spend less time with my family and friends because of online gaming. occur with equal probabilities.	One-Sample Chi-Square Test	.003	Reject the null hypothesis.
14	The categories of 14. Online gaming has reduced my concentration on academic activities occur with equal probabilities.	One-Sample Chi-Square Test	.000	Reject the null hypothesis.
15	The categories of 15. Overall, online gaming has negatively affected my academic performance. occur with equal probabilities.	One-Sample Chi-Square Test	.010	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

N Par Tests

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
6. I spend more time playing online games than I intend to.	53	1	5	2.49	.869
8. I think about online games even when I am not playing.	53	1	5	3.00	1.074
9. I feel restless or irritated when I cannot play online games.	53	1	5	3.08	1.124
12. I continue playing online games even when I know it affects my studies.	53	1	5	2.94	1.064

14. Online gaming has reduced my concentration on academic activities	53	1	5	3.21	1.098
Valid N (listwise)	53				

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.474	1	3.474	2.858	.097 ^b
	Residual	61.998	51	1.216		
	Total	65.472	52			

- a. Dependent Variable: 15. Overall, online gaming has negatively affected my academic performance.
- b. Predictors: (Constant), 7. I find it difficult to reduce the amount of time I spend playing online games.

FINDINGS

- The majority of the participants fall within the 19-22 age bracket, accounting for 75.47%. This implies that most respondents were young adults.
- 83.02% of the participants identified as male, suggesting that females were underrepresented in the study.
- Most respondents indicated that they find it hard to cut down on the time spent playing online games. This suggests that many participants find it difficult to control the amount of time they invest in the games.
- Many respondents indicated that one cannot always be able to cut down on the time spent on online games. A large number of participants disagreed that one can spend too much time playing online games.
- The study established that some respondents had lost sleep due to online games. Some participants had indicated that they are experiencing poor sleep quality due to playing online games.
- Some respondents had indicated that online games have hurt their studies, while others indicated no effect.
- Males scored higher on the scale in all the aspects tested, including poor time management, poor sleep quality, and negative effect on studies. This implies that male participants experienced more adverse effects of online gaming than their female counterparts.
- The study established that online games affect the time young people spend on productive endeavours, their sleep quality, and their studies.

CONCLUSION

The study concluded that online gaming has a significant impact on the respondents' behaviour, sleep patterns, and academic performance. While the majority of the participants can control their gaming habits, some respondents reported experiencing challenges managing their gaming time, affecting their sleep and studies. The negative effect of online gaming was more prominent among male respondents, particularly those aged 19–22 years. It is essential to note that a balanced approach to online gaming and proper time management can reduce the adverse impact of gaming on sleep patterns and studies.

SUGGESTIONS

- Students should limit engagement in online gaming to maintain a proper balance between online gaming, academic activities, as well as personal activities
- Time management tactics should be utilised to ensure that online gaming does not take over a student's life
- Awareness programs should be utilised to educate students on the effects of too much online gaming
- Parents, teachers and institutions should encourage students to limit the amount of time spent on online video games
- Students should set limits on their online gaming as a way of limiting the effects of online gaming on their studies and sleep patterns
- Schools should encourage students to spend more time on other activities such as sports, hobbies and socialisation to reduce excessive gaming
- Online gaming companies should develop features that remind gamers to take breaks and track the amount of time spent in online gaming.

BIBLIOGRAPHY

1. Anderson, C. A., & Dill, K. E. (2000). Video Games and Aggressive Thoughts, Feelings, and Behaviour in the Laboratory and in Life. *Journal of Personality and Social Psychology*, 78 (4), 772-790.
2. Griffiths, M. D. (2005). A 'Components' Model of Addiction within a Biopsychosocial Framework. *Journal of Substance Use*, 10 (4), 191-197.
3. Kuss, D. J., & Griffiths, M. D. (2012). Internet Gaming Addiction: A Systematic Review of Empirical Research. *International Journal of Mental Health and Addiction*, 10, 278–296.
4. Young, K. S. (1998). Internet Addiction: The Emergence of a New Clinical Disorder. *Cyber Psychology & Behaviour*, 1 (3), 237–244.
5. World Health Organisation. (2019). *International Classification of Diseases (ICD-11): Gaming Disorder*.
6. American Psychiatric Association (2013). *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)*. Arlington, VA: American Psychiatric Publishing
7. Gentile, D. A. (2009). Pathological Video-Game Use Among Youth Aged 8 to 18: A National Study. *Psychological Science*, 20 (5), 594-602.

8. Lemmens, J. S., Valkenburg, P. M., & Peter, J. (2009). Development and Validation of a Game Addiction Scale for Adolescents. *Media Psychology*, 12 (1), 77-95.
9. Przybylski, A. K., Weinstein, N., & Murayama, K. (2017). Internet Gaming Disorder: Investigating the Clinical Relevance of a New Phenomenon. *American Journal of Psychiatry*, 174 (3), 230-236.
10. King, D. L., & P. H. (2014). The Cognitive Psychology of Internet Gaming Disorder. *Clinical Psychology Review*, 34 (4), 298-308.
11. Chou, C., & Ting, C. C. (2003). The Role of Flow Experience in Cyber-Game Addiction. *Cyber Psychology & Behaviour*, 6 (6), 663-675.
12. Van Rooij, A. J., & Prause, N. (2011). A Critical Review of Internet Addiction Criteria with Suggestions for the Future. *Journal of Behavioural Addictions*, 1 (1), 1-11
13. Hussain, Z., & Griffiths, M. D. (2009). The Attitudes, Feelings, and Experiences of Online Gamers: A Qualitative Analysis. *Cyber Psychology & Behaviour*, 12 (6), 747-753.
14. Rehbein, F. & Kleimann, M., (2010). Prevalence and Risk Factors of Video Game Dependency in Adolescence. *International journal of mental health and addiction*, 8, 322-333.
15. The questionnaire survey was conducted for this study to determine the influence of online gaming on students' academics and lifestyle.