



## REVIEW ON FINDING IMPACT OF ONLINE GAMES

Harshit Tiwari<sup>1</sup>, Devansh Agarwal<sup>2</sup>, Ms. Kusum Yadav<sup>3</sup>

<sup>1</sup>Student, Department of Information Technology, JECRC, Jaipur, India

<sup>2</sup>Student, Department of Information Technology, JECRC, Jaipur, India

<sup>3</sup>Assistant Professor, Department of Information Technology, JECRC, Jaipur, India

---

### ABSTRACT

Online games have had a significant impact on both individuals and society as a whole. To find the impact certain methods are involved such as surveys, interviews, observations, longitudinal surveys. Additionally, some research has suggested that certain types of online games can improve cognitive function and problem-solving skills. The findings of the review reveal that excessive online gaming can lead to addiction, depression, and social isolation. This paper focuses on defining the framework of study and getting deep dive in behavioural domains. Overall, this paper provides a comprehensive overview of the current state of research on the impact of online gaming and what areas to continue one future researches.

**Keywords:** cognitive ability, internet gaming disorder, video games, FPS, positive, negative.

---

### [1] INTRODUCTION

In terms of social interaction, online games have provided players with a way to connect and interact with people from all around the world. This has led to the formation of online Communities and friendships, and has allowed for people who may have difficulty connecting with others in person to find a sense of belonging. This can be particularly beneficial for individuals who may have difficulty forming in-person relationships, such as

Harshit Tiwari, Devansh Agarwal, Ms. Kusum Yadav

those with social anxiety or autism. However, it's important to note that the impact of online games can be complex and multifaceted, and research on the topic is ongoing. When it comes to the positive impact of online games, research has shown that they can provide a sense of community and social interaction for players. Online games can also provide a way to relax and unwind, and can also potentially improve cognitive function and problem-solving skills. On the negative side, over the top utilization of web-based games can prompt dependence and diminished execution in different everyday issues [2]. Additionally, there are concerns about the impact of online gaming on physical health, as prolonged sitting and lack of physical activity can lead to a variety of health problems. This can be especially disturbing for kids and youngsters, who might be more helpless to the habit-forming nature of internet games [4]. Controlling video game addiction starts with setting limits on the amount of time we spend playing games. Establish a schedule for playing games and stick to it. Take regular breaks during long gaming sessions to rest your eyes and mind. Prioritize other activities such as exercise, reading or spending time with friends and family. Find other hobbies or interests that you enjoy, and make sure to participate in them regularly [8]. On the off chance that your habit is serious, consider looking for help from an advisor or guide who has practical experience in treating gaming compulsion. It's memorable' s essential that control is critical and that it is feasible to appreciate computer games while as yet keeping a decent way of life [1,5].

## **[2] RELATED WORK**

As the interest of serious games keeps on developing, it isn't is business as usual that a few specialists have started to investigate the probability of involving video games such as FPS, MMORPGs, Story-Based games for training [8]. Albeit this thought seems promising as it supports social communication among students, little has been finished to look at mental burden issues while playing such games. To find the impact of online games certain methods are applied namely: Surveys which can be used to gather information about the frequency and duration of game players well as players' attitudes and perceptions of the game. Interviews can be conducted with players to gather more in-depth information about their experiences and perceptions of the game [1]. Other methodologies can be stated as observations in which players can be observed to study and gather information about their observations and interactions. In the recent studies it has been observed that Longitudinal studies which is conducted to track the impact of online games over time, which can be

useful in identifying patterns and trends in a player behaviour and outcomes [7]. It is also important to know how cognitive loads are handled in FPS, MMORPGs, etc., types of games. In order to study the impact a simple study has been conducted based on the game VALORANT, which is a tactical 5v5 online shooter game with different modes available. The game basically runs on a match which has win condition on which first team to score 13 rounds win apart from going into overtime [9]. Surveys conducted consisted of questionnaire such as total amount played in a day, how was one reacting with the teammates, voice chat used or not, was toxic or good behavioural with the teammates [2 ,5,6]. Questionnaire was prepared such that it could be easily understood by the players and also to save time of the respondents. Another way to gather the data was from selective websites [11]. Certain straight questions were asked to both males and females in interviews in how games have affected their eyesight, sleep schedule, how the players can relate with fantasies and real world, how the games have affected their academic grades, do they feel isolated/alone and fill their happiness by playing video games, how does their cognitive ability develop, how has their communication ability has developed, are they self-aware about themselves and situational mindfulness [5]. These questionnaires were performed on both male and female players. However, the majority of the votes were from males. Both positive and negative impacts were weighted equally. 51% of the respondents said their eyesight was not impacted at all and 66% votes said their sleep was not impacted at all [9]. A pie chart shows how the grades have been affected of a player in Figure 1:

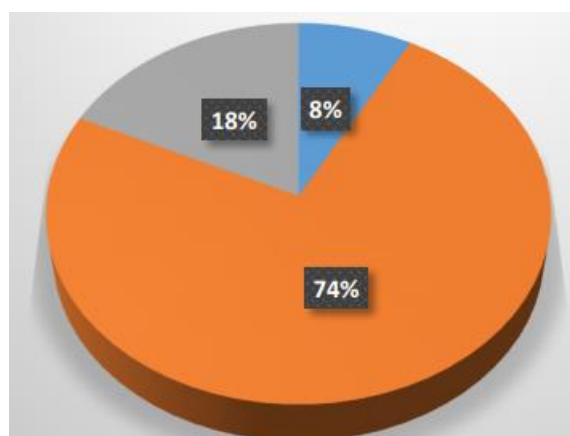


Fig 1: Grades of respondents

74% has no impact at all while 8% shows positive impact and 18% shows negative impact. This study was conducted on people of age group from 16-27 and on 100 people [8].

### [3] COMPARATIVE ANALYSIS

Empirical research on the impact of online games has produced a mixed body of results, with some studies finding negative effects, while others have found positive effects or no effects at all.

Table 1: Comparative Analysis

S. No	Author/Year	Proposed Work	Method Used	Results
[1]	Matthew Barr, Alicia Copeland-Stewart / 2022	How games were used during the lockdown and what habits and effects were shown by the well-beings.	Analysis, Participants, Procedure	Games playing time was increased about 71% in respondent while 58% shown effect impact on them.
[2]	HazalDuman, BehcetYalinOzkara / 2021	This research focused on finding connection between FoMO causes and relationship between social identity and online gaming.	Ethics Statements, Behavioural Data collection.	There was significant difference between light gamers and heavy gamers with relation about 95% of having FoMO. There was only a moderate path in the relation.
[3]	Liu, L., Yao, Y., Li, C. R., Zhang, J., Xia, C., Lan, J. / 2018	This research was done on Internet Gaming Disorders (IGD). It has been researched the relation between IGD and depression symptoms.	Longitudinal Survey.	In certain scenarios it is concluded that the decreased connectivity between different brain parts closely related to depression.
[4]	Sala, G., Tatlidil, K. S., &Gobet, F. / 2017	This research model shows weak relationship between cognitive ability and video games. Random Effect models were used to for overall analytic means.	Literature Research, Inclusion Criteria, Sensitive Analysis.	Potential effects of MMORPG, FPS, Story Based Games was calculated with analytic effect of 95%.
[5]	Gabbiadini, T. Greitemeyer / 2017	A positive significant association between strategy video game play and controlling the effects of personality traits.	A set of studies.	Participants provided self- ratings of self-regulations and personality differences such as life satisfaction risk- taking.
[6]	V. Kovess-Masfety / 2016	Child mental health was assessed by parents and teachers using the	Difficulty Questionnaires.	Children living in Western Europe had less video game usage comparative to other countries

Harshit Tiwari, Devansh Agarwal, Ms. Kusum Yadav

		Strengths by children themselves with the Dominic Interactive		(9.66% vs 20.49%). This research was on children age 6-11.
[7]	Granic, A. Lobel, R.C.M.E Engels / 2014	Research on positive effects namely: cognitive, motivational, emotional, social domains.	Intervention Researches.	Since the games have become more realistic and social in nature the research fosters real-world psychological benefits.
[8]	Sublette, V. A., & Mullan, B. / 2012	Examining the types of overloads from different types of games, effect of online socializing, life satisfaction, Number of hours played on different games. (e.g., World of Warcraft, League of Legends)	Search Study, Inclusion and Exclusion Criteria.	Males play more video games than females and males also derived greater rewards than females. In terms of preference offline friendship was favoured. However, the study showed equal weightage of positive and negative impact on academic grades.
[9]	J.J Van Rooij / 2011	Providing indirect identification on small group of children on addiction and related disorders.	Questionnaire Scales on two large samples.	About 3% of addicted gamers at least 1.5% were of age 13-16.
[10]	Ang, C. S., Zaphiris, p., & Mahmood / 2006	An attempt to study the issue through the examination of players' cognitive loads when playing the game. It is so believed that higher cognitive level has low capacity.	Transcription and Analysis.	Although cognitive loads exist throughout the game especially as the player level increases, there are strategies that the participants can use, some of which are devised by the user whilst others are provided by the game.

#### [4] CONCLUSION

From the comparative analysis in the Table 1 it is concluded that the impact of online games on individuals is a complex and multifaceted issue. Another important aspect to consider is the type of online game being played. Different genres of games, such as first-person shooter(FPS) games or massively multiplayer online role-playing games (MMORPGs) may have different effects on players. Furthermore, the content of the game, such as violence or aggression, can also affect the impact of the game. Understanding the impact of online games on individuals and society is a complex and ongoing process that requires a multi-disciplinary approach.

Certainly, online gaming can have both positive and negative impacts on individuals.

Negative effects that have been found include:

1. Increased aggression and violent behaviour
2. Decreased academic performance and engagement
3. Increased sedentary behaviour and obesity
4. Isolation and social problems
5. Increased risk of addiction

Positive effects that have been found include:

1. Improved cognitive function, particularly in areas such as attention, memory, and problem-solving
2. Increased social interaction and teamwork skills
3. Improved mood and reduced stress
4. Increased motivation and engagement learning.

It's important to consider the individual characteristics of players, the type of game being played, and the context in which the game is played. Additionally, it's essential to continue researching the effects of online gaming and providing education and guidelines for responsible gaming.

## REFERENCES

- [1] Matthew Barr, Alicia Copeland-Stewart, Playing Video Games during the COVID-19 Pandemic and Effects on Players' Well-Being (2022).
- [2] Hazal Duman, Behcet Yalin Ozkara The impact of social identity on online game addiction: the mediating role of the fear of missing out (FoMO) and the moderating role of the need to belong., 2021
- [3] Presley Arnold Lobo. Dr.Nishikanth Jha., (2020) A Study on the Impact of Video Games on Youth.
- [4] Liu, L., Yao, Y., Li, C. R., Zhang, J., Xia, C., Lan, J., Fang, X. (2018). The comorbidity between internet gaming disorder and depression: interrelationship and neural mechanisms. *Frontiers in Psychiatry*, 9, 1-10. DOI: 10.3389/fpsy.2018.00154.
- [5] Sala, G., Tatlidil, K. S., & Gobet, F. (2017, December 14). Video Game Training Does Not Enhance Cognitive Ability.
- [6] Gabbiadini and T. Greitemeyer, "Uncovering the association between strategy video games and self-regulation: A correlational study," *Personal. Individ. Differ.*, vol. 104, pp. 129–136, Jan. 2017.

- [7] Kovess-Masfety et al., "Is time spent playing video games associated with mental health, cognitive and social skills in young children," *Soc. Psychiatry Psychiatr. Epidemiol.*, vol. 51, no. 3, pp. 349–357, Mar. 2016.
- [8] J. S. Lemmens and S. J. F. Hendriks, "Addictive Online Games: Examining the Relationship Between Game Genres and Internet Gaming Disorder," *Cyberpsychology Behav. Soc. Netw.*, vol. 19, no. 4, pp. 270–276, Apr. 2016.
- [9] Granic, A. Lobel, and R. C. M. E. Engels, "The benefits of playing video games," *Am. Psychol.*, vol. 69, no. 1, pp. 66–78, 2014.
- [10] "Online gaming addiction and its association with emotional, social, and psychological problems among adolescents" by X. Liu, et al. (2013)
- [11] Sublette, V. A., & Mullan, B. (2012). Consequences of Play: A Systematic Review of the Effects of Online Gaming. *International Journal of Mental Health and Addiction*, 10(1), 3- 23.
- [12] J.J Van Rooij (2011) Online video game addiction: identification of addicted adolescent gamers.
- [13] Ang, C. S., Zaphiris, p., & Mahmood (2006) A model of cognitive loads in massively multiplayer online role-playing games