# Students@nmji

# Looking behind the 'Winner winner chicken dinner'

### **ARCHISMAN MAZUMDER**

#### **ABSTRACT**

In today's world, video games have become an integral part of our lives, even for adults. While gaming disorder is now recognized as a disease, the literature is still not extensive regarding various aspects of the obsessive playing of video games. Taking the Player-Unknown's Battlegrounds as an example, this article provides a medical student's perspective on the effects of excessive playing of video games and some positive aspects of video games, which are less talked about.

## Natl Med J India 2021;34:111-13

The American novelist Ernest Cline once said, 'To keep our minds and bodies healthy, we have to simulate those old ways in the midst of our modern, technological lives. Thankfully, the technology that created this problem also gave rise to its solution—video games.' Many people have embraced this solution that Cline talks about, as is evident, if we ask ourselves a simple question—how many people can we find in our day-to-day lives who are unaware of popular games such as Player-Unknown's Battlegrounds (PUBG)? This question has various aspects to it that merit discussion.

First, while it may seem that a larger urban population should be aware about these trending games, this may not be true. According to an InMobi report, most of Indian mobile gamers are from non-metropolitan locations, possibly due to proliferation of low-cost smartphones, causing a surge in mobile gaming. In a study conducted in the USA, both the non-urban and urban populations have comparable percentage of gamers. However, problem-gaming is more prevalent in urban areas. The possible reasons can be differences in the kind of games played because of differential access to high-speed internet and high-end gaming computers.

Second, the number of gamers varies with age, with the younger population being more well-informed about online games. In a 2016 survey of 8136 Indian urban online gamers, 59% of respondents were below 24 years of age.<sup>3</sup> A multi-country survey showed that gamers aged 26–35 years spent the most time playing video games at 8.21 hours a week, followed by 18–25 years at 7.78 hours a week.<sup>5</sup> However, when it comes to Battle Royale games such as PUBG, people aged 18–25 years spent the most time playing at 1.47 hours a week. This average gaming time decreased with increasing age.<sup>5</sup> In another survey conducted by Jana on its mCent browser app in December 2018, nearly 62% of the 1047 Indian respondents played PUBG.<sup>6</sup> The demographics of the responders, while may be subject to voluntary bias, is interesting because 92.1% were men and 83.1% were in the age group of 16–24 years, which differs from

Room 43, Hostel 4, Gents' Hostel, AIIMS Campus, All India Institute of Medical Sciences, New Delhi 110029, India; amazumder311@gmail.com

© The National Medical Journal of India 2021

the InMobi report data where 43% of all mobile gamers were women.<sup>2</sup> This corroborates with previous studies that show male gamers in India are more involved in games of the action genre compared to their female counterparts.<sup>3</sup>

Next, we may ask whether gamers are aware of the effects of excessive playing of these games? In my personal experience, when asked this question, many people say that they know the detrimental effects of overindulging in these recreations. In spite of this, a good number of people play these games to the point where it starts affecting their lives negatively. This brings us to what is called gaming disorder. The definition according to the International Classification of Diseases-11 (ICD-11) can be interpreted as an uncontrolled gaming behaviour where the person gives more importance to gaming than other activities despite the negative consequences. There is considerable impairment of personal, family, social, educational, occupational and other areas of functioning.

Uncontrollable urges despite the negative effects is also a feature of substance abuse. Many experts believe that gaming addiction results in reward-motivated behaviour-dopamine is released, thus stimulating the brain's reward centres, similar to what happens in drug addicts. However, others believe that 'pathologizing' it is wrong and can lead to social stigma about gaming.8 This disorder needs to be studied properly, and much work has not been done, though we know enough to state that changes occur in the neurobiology of a person with gaming disorder; this has been validated by studies that suggest that compared to healthy controls, gaming addicts have poorer emotional control and have difficulty with cognition, memory (particularly working memory), and seeing and hearing, apart from the defect in their neuronal reward system. <sup>9</sup>Gaming disorder has been associated with anxiety, isolation and depression,10 obesity, sleeping disorders and stress, all classical symptoms of addiction.<sup>11</sup> Gaming addiction akin to gambling addiction is a behavioural addiction.<sup>11</sup> Genetic predisposition to gaming disorder has not been studied extensively, but other behavioural addictions and substance addictions have been shown to have common genetic variations.12

A person who constantly thinks about a game would not be able to concentrate and perform to their full potential. For a student, this can mean performing poorly in the examinations and for a medical student, it can even mean decreased quality of patient care. Addiction often leads to the person not taking care of their own health, which again can directly affect the person's work.

Going back to the example of PUBG, there is a feature wherein a gamer can chat online with another player, who may be a total stranger with whom the gamer would never meet in real life. This leads to an uninhibited conversation that in many cases involves the use of cuss words. The profanity can psychologically affect the person. <sup>13</sup> Such conversations can also entertain prejudices

leading to xenophobia, sexism and homophobia. 14,15 These games may also desensitize gamers to violence, homicide and looting. Online chats within games have increased the incidence of online harassment, which is a cyber-crime. 14-16

Once, my friend was playing PUBG and because of a mistake that he made while playing, another player started cussing him and passed lewd comments that hurt him so much that he stopped playing the game. Such behaviour is unacceptable as no one should hurt anyone in this manner. Unfortunately, such incidents are widespread. In a study by Anti-Defamation League on 1045 respondents of 18–45 years, 65% of online video gamers have faced physical threats, stalking and sustained harassment. PUBG was one of the top five games where respondents faced the most harassment, with 75% of the gamers saying that they experienced some form of harassment.

Rules of conduct have been laid down by the PUBG Corporation that have defined misconduct in gaming and the punishment for such practices, which includes permanent ban from playing the game.<sup>17</sup> According to this policy effective from 6 May 2020, action would be taken for racial or sexual discrimination, inappropriate nicknaming, online stalking using the game, and unauthorized sharing of another's personal information. It remains to be seen how effective this policy would be in improving the gaming experience.

While no one can deny the harmful effects of excessive playing of online video games and their addictive potential, there is another aspect of this story that is less discussed. We often miss the point that not every gamer suffers from gaming disorder. Through the ages, there have been moral panics about things that have caused drastic societal changes and now video games have come into negative light in the same way.<sup>18</sup> These have been scrutinized by stakeholders and policy-makers and their negative effects have been overly publicized though the research done is unbalanced and focuses more on the negative effects than positive ones. Most of the studies in gamers focus on psychological methods to analyse behavioural changes such as increased aggression or release of repressed aggression. 19,20 As noted by Chhina,21 all these studies ignore the broader cultural context of the video games in India and its relevance in a person's life.

If we can decrease problem gaming and appreciate the full potential of video games, these can be effective tools for learning because one can see how gamers effortlessly learn details related to the virtual world of the game. From a medical perspective, video games have been designed to increase disease knowledge and medical adherence in patients, for pain management, smoking cessation, cognitive behavioural therapy for depression, and they may improve cognitive functions. Regive an example, in a study, a test group of patients with Parkinson disease, who were made to play Xbox-based exercise games showed more improvement than controls. Another example is a video game for children with juvenile diabetes that models the actions that are needed for the child's health and inculcating health-seeking behaviour. However, these applications have not received widespread acceptance.

The Government of Gujarat banned PUBG in 2020 and some people were arrested because they were found playing PUBG in public.<sup>25</sup> A short Google search reveals that this act of banning games is a common practice by governments and various games are banned in various countries. The most common reasons cited relate to violence, cultural defamation and inappropriate gameplay. In the case of the PUBG ban in

Gujarat, which is the first of its kind in India, the state department cited increased violence in the youth. While compulsive playing of games and the effects of gaming disorder is a serious public health issue, the government should not act based on anecdotal evidence. There are insufficient data to either support or oppose the ban. While there is some evidence to suggest that some kinds of games can increase aggression, 19,20 studies should be done on the specific game in question before we can say anything because some games can also help decrease stress, increase self-esteem and leadership in gamers.<sup>26,27</sup> Addiction to these games is often due to peer pressure,3 and some people would probably abstain from playing it after this ban, but this might also lead to an increase in piracy and illegal gaming. Hence, the effectiveness of such bans remains doubtful. Gambling restrictions have shown that governmental interventions can increase problem gambling if not accompanied by laying down the infrastructure for social responsibility.28

I believe it is the duty of the people playing the game to be responsible gamers. At the same time, there should be organized efforts by game operators in decreasing problem gaming by providing proper customer care for problem gamers and referral services.<sup>29</sup> While in gambling, social responsibility has become important with proper guidelines by organizations such as the American Gaming Association,<sup>30</sup> proper guidelines are absent for online gaming, except rules of conduct by some game developers.<sup>17</sup> Legally binding codes of conduct for social responsibility should be established for both game developers and players which, if implemented, can reduce future needs for governmental interventions. Parents and teachers should also be made aware of gaming disorder and sensitized signals that indicate whether the child is becoming addicted to games.

Since video games have been found to alter neural pathways in a variety of ways,<sup>31</sup> and it is a field that requires more research, we do not know the entire spectrum of changes that can occur in the individual. There may be different effects depending on the type of games, target populations (e.g. healthy versus developmentally impaired) or the parameter being considered (better executive functions versus social skills). All these merit research with proper control groups and replicability in large populations. Rigorous scientific assessment should be done of games for both positive and negative effects, and developers should be transparent about such studies. The online gaming market in India is increasing at a rapid rate,<sup>3</sup> and it is bound to affect the Indian society in various ways and this opens up huge opportunities for research in this area, particularly in the Indian context.

Conflicts of interest. None declared

#### REFERENCES

- 1 Cline E. Foreword. In: Wilson DH, Adams JJ (eds). Press start to play. New York, PA: Vintage Books; 2015.
- 2 InMobi. The changing face of the Indian mobile user—2019 mobile marketing handbook. Available at www.thedmti.com/wp-content/uploads/2019/03/ India\_Mobile\_Marketing\_Handbook\_2019.pdf (accessed on 17 May 2020).
- 3 KPMG, Google. Online gaming in India: Reaching a new pinnacle. May 2017. Available at https://assets.kpmg/content/dam/kpmg/in/pdf/2017/05/online-gaming.pdf (accessed on 17 May 2020).
- 4 Shi J, Boak A, Mann R, Turner NE. Adolescent problem video gaming in urban and non-urban regions. Int J Ment Health Addiction 2019;17:817–27.
- 5 Limelight. The state of online gaming, 2019. Available at www.limelight.com/ resources/white-paper/state-of-online-gaming-2019 (accessed on 19 May 2020).
- 6 Bhattacharya A, Singh K. Charted: India's obsession with Chinese online game PUBG. Quartz India; 2018.
- 7 World Health Organization. Gaming disorder, 2018. Available at www.who.int/ news-room/q-a-detail/gaming-disorder (accessed on 7 Apr 2019).

STUDENTS@NMJI 113

- 8 Zastrow M. News feature: Is video game addiction really an addiction? Proc Natl Acad Sci U S A 2017;114:4268–72.
- 9 Kuss DJ, Pontes HM, Griffiths MD. Neurobiological correlates in internet gaming disorder: A systematic literature review. Front Psychiatry 2018;9:166.
- 10 Matthews T, Danese A, Wertz J, Odgers CL, Ambler A, Moffitt TE, et al. Social isolation, loneliness and depression in young adulthood: A behavioural genetic analysis. Soc Psychiatr Psychiatr Epidemiol 2016;51:339–48.
- 11 Kuss DJ. Internet gaming addiction: Current perspectives. Psychol Res Behav Manag 2013;6:125–37.
- 12 Olsen CM. Natural rewards, neuroplasticity, and non-drug addictions. Neuropharmacology 2011;61:1109-22.
- 13 Ivory AH, Kaestle CE. The effects of profanity in violent video games on players' hostile expectations, aggressive thoughts and feelings, and other responses. J Broadcasting Electron Med 2013;57:224–41.
- 14 Salter M. From geek masculinity to Gamergate: The technological rationality of online abuse. Crime Med Culture 2018;14:247–64.
- 15 League AD. Free to play. Hate, harassment, and positive social experiences in online games; 2019;25. Available at www.adl.org/free-to-play (accessed on 18 May 2020).
- 16 Tang WY, Reer F, Quandt T. Investigating sexual harassment in online video games: How personality and context factors are related to toxic sexual behaviors against fellow players. Aggress Behav 2020;46:127–35.
- 17 PUBG Corporation. Rules of conduct—Player Unknown's Battlegrounds. Available at www.pubg.com/rules-of-conduct/ (accessed on 12 Jun 2020).
- 18 Institute of Medicine. The neuroscience of gaming: Workshop in brief. Washington, DC:The National Academies Press; 2015.
- 19 Anderson CA, Bushman BJ. Effects of violent video games on aggressive behavior, aggressive cognition, aggressive affect, physiological arousal, and prosocial behavior: A meta-analytic review of the scientific literature. *Psychol Sci* 2001;12:353–9.

- 20 Saleem M, Anderson CA, Gentile DA. Effects of prosocial, neutral, and violent video games on college students' affect. Aggress Behav 2012;38:263–71.
- 21 Chhina GS. Video gaming parlours: The emerging field of video gaming in India. Doctoral dissertation, The University of Manchester, United Kingdom; 2016. Available at www.research.manchester.ac.uk/portal/files/54584781/FULL\_TEXT.PDF (accessed on 18 May 2020).
- 22 Anguera JA, Boccanfuso J, Rintoul JL, Al-Hashimi O, Faraji F, Janowich J, et al. Video game training enhances cognitive control in older adults. *Nature* 2013; 501:97–101.
- 23 Özgönenel L, Çaðýrýcý S, Çabalar M, Durmuþoðlu G. Use of game console for rehabilitation of Parkinson's disease. Balkan Med J 2016;33:396–400.
- 24 Brown SJ, Lieberman DA, Germeny BA, Fan YC, Wilson DM, Pasta DJ. Educational video game for juvenile diabetes: Results of a controlled trial. *Med Inform (Lond)* 1997;22:77–89.
- 25 PUBG mobile ban: You will get arrested for playing the battle royal game in these cities in India. *News18* (accessed on 13 Apr 2019).
- 26 Olsen C. Children's motivation for video game play in the context of normal development. Rev General Psychol 2010;14:180–7.
- 27 Granic I, Lobel A, Engels RC. The benefits of playing video games. Am Psychol 2014;69:66.
- 28 Collins P. Gambling and governance. In: Smith G, Hodgins D, Williams R (eds). Research and measurement issues in gambling studies. New York:Elsevier; 2007:617–39.
- 29 Van Rooij AJ, Meerkerk GJ, Schoenmakers TM, Griffiths MD, Van de Mheen D. Video game addiction and social responsibility. Addict Res Theory 2010;18: 489–93.
- 30 American Gaming Association. Responsible Gaming Code of Conduct. Available at www.americangaming.org/responsibility/member-code-of-conduct/. (accessed on 18 May 2020).
- 31 Palaus M, Marron EM, Viejo-Sobera R, Redolar-Ripoll D. Neural basis of video gaming: A systematic review. *Front Hum Neurosci* 2017;**11**:248.

#### FORM IV

(See Rule 8)

1. Place of publication

2. Periodicity

 Printer's name (Whether citizen of India) Address

Publisher's name
(Whether citizen of India)
Address

 Editor's name (Whether citizen of India) Address

 Names and addresses of individuals who own the newspaper and partners or shareholders holding more than one per cent of the total capital All India Institute of Medical Sciences New Delhi 110029

Bi-monthly

Dr Peush Sahni Indian citizen All India Institute of Medical Sci

All India Institute of Medical Sciences New Delhi 110029

Dr Peush Sahni Indian citizen All India Institute of Medical Sciences New Delhi 110029

Dr Peush Sahni Indian citizen All India Institute of Medical Sciences New Delhi 110029

All India Institute of Medical Sciences New Delhi 110029

I, Dr PEUSH SAHNI, hereby declare that the particulars given above are true to the best of my knowledge and belief.

1 March 2021

Sd-Signature of publisher