

Video Games: A Pain in the Neck

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Introduction

In 2018, the 11th Edition of the International Classification of Diseases for Mortality and Morbidity Statistics, with the help of the members of the World Health Organization, will be published. What makes this particular edition, ICD-11-MMS, noteworthy, is a single addition to the collection of feared plagues that few imagine could be considered morbid: “Gaming Disorder.” From iPhone apps to MMORPGs—that’s jargon for Massively Multiplayer Online Role-Playing Game—videogames are consuming the time and minds of youth globally, let alone in the United States, a first world country with a currently prosperous economy (World, 2018). As the World Health Organization has yet to completely revise their definition of “Gaming Disorder,” Americans question whether or not Gaming Disorder has a solid basis, and how severe the symptoms of such a disorder are. Should Gaming Disorder be treated and dealt with like any other addiction? To answer that question, it is imperative to examine the physical effects of excessive gaming medicine has found mitigating the abilities of youth, and then we must compare such symptoms to similar disorders, as identified by the draft of the ICD-11 to be Gambling Disorder and Substance Abuse.

Unlisted Side Effects

Unlike drugs such as Oxycontin or tobacco, video games don’t come with a warning label mentioning back pain, carpal tunnel, obesity, or even death as a possible externality, but they certainly could. Although death is a most extreme consequence of hard-core gaming, it is not as uncommon an event in recent days. In 2015, as reported by CNN’s office in Hong Kong, two independent occurrences of death following video-gaming marathons occurred at Taiwanese internet cafes (Hunt, 2015). Such occurrences should be a red flag for families. Clearly

malnutrition and lack of sleep, proclaimed causes of death for the poor Taiwanese victim of video gaming addiction, can go unnoticed until ailments indicate harm being done. Even without the dangers of death being a threat to the average American, musculoskeletal issues too can disrupt the suppleness of youth. With the added pressure on the wrists and palms of the hand, experts of biomechanics at New York University suggest that issues could arise within youth's joints in the form of neuropathy and carpal tunnel (Gillespie, 2006). Moreover, back pain and poor posture also frequently result from excessive gaming behind the screen or when using a console, as observed by an article on harmful effect of video games in the Encyclopedia of Human Development (Gentile, 2006). Furthermore, researchers with specialties in technology and health published an academic paper in the *New Directions for Child and Adolescent Development* journal relating the childhood obesity crisis to a lack of activity caused by video gaming (Calvert, 2014).

Ecstasy Despite Pain

With all these physical problems associated with gaming, why do gamers continue their hobby? A study published in 2017 by a team of neuroscientists in the Cognitive NeuroLab of the Universitat Oberta de Catalunya, Barcelona, Spain, a team that also published three other gaming-addiction based papers, explains that gaming addiction is a result of certain reward systems in the brain being triggered by video games in those who enjoy playing them (Zastrow, 2017). As Mark Zastrow explains in his article published by PubMed Central, the National Institute of Health's digital Library of Medicine, the activity patterns observed in the brain rewarding a video gamer for their games can be compared to that of a drug addict in that in both cases, dopamine is released in the brain (Zastrow, 2017). The reason for drug addiction and the

relapse of drug addict, as published in the National Institute of Health's website for the National Institute on Drug Abuse, can be attributed to the brain's yen for dopamine (NIDA, 2014). In that respect, it makes sense to categorize gaming as a psychological disease based on medical evidence. With repeated doses, video gaming can become just as addictive as smoking for some. Moreover, in some countries, such addiction is commonplace and detrimental to the community. For example, in South Korea, one of the technological capitals of the world, 14% of children from ages 9 to 16 were classified as video games addicts. To retaliate, the Korean government imposed regulations for children under the age of 16, so that they could not play video games from midnight to six in the morning, and that they would need to produce IDs during these times at internet cafes (Lee, 2011).

The relationship between this physiological addiction and time spent video gaming has been seen in recent years. To begin research, my T.M.P. group and I discussed some of the concepts crucial to understanding the harms of video gaming, the duration of such activities being an important statistic. We were able to contact an employee of the eSport international video-gaming team, who wished to remain anonymous, and ask him a few questions. According to our source, a team member may spend around 7-8 hours a day behind a screen, training for his game (Saeed Tehrani, 2018). To relate this statistic to the typical American, one can examine the time Americans spend video gaming on a weekly basis per capita, as reported by the Bureau of Labor Statistics, a department of the U.S. government specialized in logging the activity of Americans in leisure and in labor based on random samples of Americans. The Bureau reports an average of 6 hours spent gaming a week for individuals from age 15 to 19 (Bureau, 2016). This may not seem like too much, until one realizes that basing statistics on a per capita average is

like stating the average amount of football played by an NFL athlete can be estimated by distributing their time amongst every American: it's unreliable data for those who dedicate their time to it. If we decrease the margin of error to only people who "ever play video games," not even just dedicated gamers, as per the 50% of Americans who admitted to ever playing video games in a survey conducted by the Pew Research Center, we already double the amount of gaming done by participating Americans to 12 hours a week (Duggan, 2015). Note that the nonpartisan Pew Research Center performs many surveys about video gaming on an annual basis, using randomized design, and is thus an apt resource to use for video gaming information. This much time, even for the average American gamer, to be spent behind a screen allows for the physical dangers mentioned at the beginning of this paper to take effect.

Solutions and Limitations

Although it's true that some individuals may become addicted to excessive video gaming, it is important not to overreact by imagining *Overwatch* and *League of Legends* as cocaine or heroin. Just like any drug, as the National Institute on Drug Abuse affirms, each individual reacts to stimulation differently based on genetic and environmental factors (NIDA, 2016).

Furthermore, just as anyone who sips wine isn't an alcoholic, every videogamer cannot be automatically classified as diseased or in need of medical attention. It is for that very reason that the World Health Organization and the ICD joint task force is taking time to review the definition of gaming disorder. Just as clinical depression cannot be diagnosed by any layman, Gaming Disorder is a delicate clinical diagnoses that required attention to detail to confirm. The best way to deal with an obsessive order is to gradually separate from it. With moderation, and

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keeping tabs on how long one spends on the computer, gaming can become a healthy and exciting hobby instead of a dangerous addiction.

References

- Aarseth, E., Bean, A. M., Boonen, H., Carras, M. C., Coulson, M., Das, D., . . . van Rooij, A. J. (2017). Scholars' open debate paper on the world health organization ICD-11 gaming disorder proposal. *Journal of Behavioral Addictions, 6*(3).
- Bureau of Labor Statistics. (2016). Average daily time spent playing games and using computer for leisure per capita in the United States in 2016, by age group (in minutes) [Map].
- Calvert, S. L., Bond, B. J., & Staiano, A. E. (2013). Electronic gaming and the obesity crisis. *New Directions for Child and Adolescent Development, 2013*(139), 51-57.
- Duggan, M. (2015, December 15). Gaming and gamers. Retrieved from Pew Research Center database.
- Föcker, J., Mortazavi, M., Khoe, W., Hillyard, S. A., & Bavelier, D. (2017). Neural correlates of enhanced visual attentional control in action video game players: An event-related potential study [Abstract]. *Journal of Cognitive Neuroscience*.
- Gentile, D. (2009). Pathological video-game use among youth ages 8 to 18: A national study. *Psychological Science, 10*(5), 594-602.
- Gentile, D. A., & Anderson, C. A. (n.d.). Video games. In N. J. Salkind (Ed.), *Encyclopedia of Human Development* (Vol. 3, pp. 1303-1307). Thousand Oaks, CA: Sage.

Gillespie, R. M., Nordin, M., Halpern, M., Koenig, K., Warren, N., & Kim, M. (2006).

Musculoskeletal impact of computer and electronic game use on children and adolescents.

Hunt, K., & Ng, N. (2015, January 19). Man dies in Taiwan after 3-day online gaming binge.

CNN.

Kiraly, O., & Demetrovics, Z. (2017). Inclusion of Gaming Disorder in ICD has more

advantages than disadvantages. *Journal of Behavioral Addictions, 6(3).*

Lee, B. Y. (2017, December 24). Do you have ‘gaming disorder,’ a newly recognized mental

health condition. *Forbes.*

Lee, J. (2011, November 22). South Korea pulls plug on late-night adolescent online gamers.

CNN.

Palaus, M., Marron, E. M., Viejo-Sobera, R., & Redolar-Ripoll, D. (2017). Neural basis of video

gaming: A systematic review. *Frontiers in Human Neuroscience.*

[Personal interview by the author]. (2018, February 1).

reSTART. (2016). *Our guiding principles* [Fact sheet].

Tack, D. (2012, November 30). Studying player commitment to MMORPGs. *Forbes.*

van den Brink, W. (2017). ICD-11 gaming disorder: Needed and just in time or dangerous and

much too early? *Journal of Behavioral Addictions, 6(3).*

World Health Organization. (2018, January 22). *ICD-11 beta draft (mortality and morbidity statistics)* [Beta Draft].