

## Inclusion of gaming disorder in the diagnostic classifications and promotion of public health response

### *Commentary to the “Scholars’ open debate paper on the World Health Organization ICD-11 Gaming Disorder proposal”: A perspective from Iran*

BEHRANG SHADLOO<sup>1</sup>, RABERT FARNAM<sup>1</sup>, MASOUMEH AMIN-ESMAEILI<sup>1</sup>, MARZIYEH HAMZEHZADEH<sup>1</sup>, HOSEIN RAFIEMANESH<sup>2,1</sup>, MARAL MARDANEH JOBEHDAR<sup>3,1</sup>, KAMYAR GHANI<sup>3,1</sup>, NADER CHARKHGARD<sup>3,1</sup> and AFARIN RAHIMI-MOVAGHAR<sup>1\*</sup>

<sup>1</sup>Iranian National Center for Addiction Studies (INCAS), Tehran University of Medical Sciences, Tehran, Iran

<sup>2</sup>Department of Epidemiology, School of Public Health, Shahid Beheshti University of Medical Sciences, Tehran, Iran

<sup>3</sup>Department of Neuroscience and Addiction Studies, School of Advanced Technologies in Medicine, Tehran University of Medical Sciences, Tehran, Iran

(Received: February 13, 2017; revised manuscript received: June 13, 2017; accepted: June 18, 2017)

---

There are ongoing controversies regarding the upcoming ICD-11 concept of gaming disorder. Recently, Aarseth et al. have put this diagnostic entity into scrutiny. Although we, a group of Iranian researchers and clinicians, acknowledge some of Aarseth et al.’s concerns, believe that the inclusion of gaming disorder in the upcoming ICD-11 would facilitate necessary steps to raise public awareness, enhance development of proper diagnostic approaches and treatment interventions, and improve health and non-health policies.

**Keywords:** addictive behaviors, non-substance-related disorders, behavioral addictions

---

Aarseth et al. (2016) have criticized the new clinical ICD-11 entity of gaming disorder, proposed by the World Health Organization (WHO). Their letter discusses the controversies around gaming disorder on solid grounds, raises serious considerations regarding its diagnostic validity, and the possibility of overdiagnosis of healthy gamers. In Iran, the consequences of excessive gaming have become the center of public attention. We, a group of Iranian clinicians and researchers, acknowledge the concerns raised by Aarseth et al.; however, we disagree with some of the suggested aspects and are going to elaborate our point of view.

The virtues of gaming and Internet use are undeniable. There is general consensus that Internet use and its related activities, such as gaming, are considered as normal behaviors. We emphasize that no system of classification of diseases should jeopardize this reality. Gaming, which is somehow the subject of this controversy, enhances motor, cognitive, and psychological coping skills (Granic, Lobel, & Engels, 2014; Griffiths, 2002; Sublette & Mullan, 2012), and has been used as an educational tool in learning (De Freitas & Griffiths, 2007). In addition, we, at our centers, have extensively used computer interface and gaming, along with other psychosocial interventions, for rehabilitation of people with substance use disorders, especially those affected by new emerging drugs in our country, such as amphetamine-type stimulants.

One should bear in mind that for some specific behaviors, the behavior is at first healthy and adaptive, but then it might evolve into a pathologic and maladaptive pattern, such as eating and sexual behavior, gambling, or caffeine use. In Iran, gaming is a quite common behavior (Iran Computer and Video Games Foundation, 2016) and simultaneously, prevalence studies on youth indicate that problematic gaming is not a rare condition (Ahmadi et al., 2014; Koohi, 2014; Zamani, Kheradmand, Cheshmi, Abedi, & Hedayati, 2011). More importantly, clinicians from our country face increasing treatment demand for problematic cases who suffer from significant social/financial/occupational, or school function impairment due to gaming. It seems that the gaming technology is rapidly evolving and developers are promoting excessive and constant interaction with the game interface. This might act as an underlying mechanism for the observed increase in the number of problematic cases. But unfortunately, due to ambiguities around the diagnosis, treatment protocols have remained underdeveloped and clients and their families cannot benefit from insurance coverage.

---

\* Corresponding author: Dr. Afarin Rahimi-Movaghar, MD, MPH; Iranian National Center for Addiction Studies (INCAS), Tehran University of Medical Sciences, No. 486, Qazvin Square, South Karegar Avenue, Tehran 13366-16357, Iran; Phone: +98 21 55421155; Fax: +98 21 55412232; E-mail: [rahimia@tums.ac.ir](mailto:rahimia@tums.ac.ir)

---

This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium for non-commercial purposes, provided the original author and source are credited.

---

This also leads to insufficient capacity in the healthcare system for providing required services.

There is also another reason why healthcare system should take the initiative in intervening for problematic gaming. Some countries, such as China (Stone, 2009) and Korea (Fackler, 2007), have exercised harsh disciplinary approaches including residential camps. Iran is another example that has filtered several online games (Dehghan, 2016; Lumb, 2016). We believe that in the absence of proper diagnostic guidelines and preponderance of diagnostic-orphan cases, there is the possibility of overuse of restrictive and discriminative approaches, such as involvement of judiciary systems and law enforcement agencies in some countries. As we have seen for the case of substance use disorders in our country, medicalization facilitated destigmatization process and led to proper scale-up of healthcare services (Razzaghi, Nassirimanesh, Afshar, & Ohiri, 2006). We believe this can also be applicable for emerging behavioral addictions like gaming disorder.

The validity of diagnostic guidelines is one of the main concerns of Aarseth et al. and the diagnostic validity of gaming disorders is challenged several times throughout their letter. Although this does not defy the concept of the disorder, we believe that this is a sound concern and should be meticulously exercised. This means that the criteria should be set in a way that healthy gamers are not pathologized and the diagnosis should benefit from adequate specificity. Although we favor the diagnosis of gaming disorder, we also insist that WHO and the affiliated work groups should adopt a conservative approach in developing diagnostic guidelines to prevent overdiagnosis and arbitrary inferences. To prevent unnecessary burden on families, healthcare system, and insurance providers, it should be ensured that the boundary with normality is clearly defined and only a minority of cases with significant impairment are diagnosed with gaming disorder.

Aarseth et al. have also mentioned lack of consensus on the symptomatology and consistency in assessment of gaming disorder. We, however, believe that the consensus exists to an acceptable extent and inconsistencies are not that prevalent. Waiting for all inconsistencies to be solved before making a valid diagnosis is not always achievable. This is also the case with a lot of other psychiatric disorders, such as substance use disorder itself.

Finally, it is important that adequate education and training should be provided for different target populations including healthcare staff, so that guidelines are properly implemented and the number of false-positive cases is minimized.

---

*Funding sources:* AR-M's contribution was supported by grant number: 132/676 with Tehran University of Medical Sciences.

*Authors' contribution:* All authors contributed to the scientific content of the letter; BS, MA-E, and AR-M developed the script.

*Conflict of interest:* AR-M is a member of the WHO International Advisory Group for the Revision of ICD-10 Mental and Behavioral Disorders and also a member of its Working Group on the Classification of Substance-Related and Addictive Disorders. She has also participated in two WHO meetings on behavioral disorders associated with excessive use of Internet, computers, and similar devices. In addition, the Iranian Center for Addiction Studies is a WHO-collaborating center for Research and training on substance use disorders and mental health.

---

## REFERENCES

- Aarseth, E., Bean, A. M., Boonen, H., Colder Carras, M., Coulson, M., Das, D., Deleuze, J., Dunkels, E., Edman, J., Ferguson, C. J., Haagsma, M. C., Bergmark, K. H., Hussain, Z., Jansz, J., Kardefelt-Winther, D., Kutner, L., Markey, P., Nielsen, R. K., Prause, N., Przybylski, A., Quandt, T., Schimmenti, A., Starcevic, V., Stutman, G., Van Looy, J., & Van Rooij, A. J. (2016). Scholars' open debate paper on the World Health Organization ICD-11 Gaming Disorder proposal. *Journal of Behavioral Addictions*. Advance online publication. doi:10.1556/2006.5.2016.088
- Ahmadi, J., Amiri, A., Ghanizadeh, A., Khademalhosseini, M., Khademalhosseini, Z., Gholami, Z., & Sharifian, M. (2014). Prevalence of addiction to the Internet, computer games, DVD, and video and its relationship to anxiety and depression in a sample of Iranian high school students. *Iranian Journal of Psychiatry and Behavioral Sciences*, 8(2), 75–80.
- De Freitas, S., & Griffiths, M. (2007). Online gaming as an educational tool in learning and training. *British Journal of Educational Technology*, 38(3), 535–537. doi:10.1111/j.1467-8535.2007.00720.x
- Dehghan, S. K. (2016). Iran bans Pokémon Go. Retrieved from <https://www.theguardian.com/world/2016/aug/08/iran-bans-pokemon-go> (February 8, 2017).
- Fackler, M. (2007). In Korea, a boot camp cure for web obsession. *The New York Times*. Retrieved from <http://www.nytimes.com/2007/11/18/technology/18rehab.html> (February 8, 2017).
- Granic, I., Lobel, A., & Engels, R. C. (2014). The benefits of playing video games. *American Psychologist*, 69(1), 66–78. doi:10.1037/a0034857
- Griffiths, M. (2002). The educational benefits of videogames. *Education and Health*, 20(3), 47–51.
- Iran Computer and Video Games Foundation. (2016). Iranian game market. Retrieved from <http://en.ircg.ir/news/47/Statistical-market-research-and-game-industry-structure-in-Iran-%28over-23-Million-Players%29> (February 8, 2017).
- Koohi, K. (2014). Youth and new media: An assessment of addiction to computer games and related factors in students. *Journal of Culture and Communications*, 15(60), 111–132.
- Lumb, D. (2016). Iran bans 'Clash of Clans' for encouraging tribal conflict. Retrieved from <https://www.engadget.com/2016/12/27/iran-bans-clash-of-clans-for-encouraging-tribal-conflict/> (February 8, 2017).
- Razzaghi, E., Nassirimanesh, B., Afshar, P., & Ohiri, K. (2006). HIV/AIDS harm reduction in Iran. *The Lancet*, 368(9534), 434–435. doi:10.1016/S0140-6736(06)69132-0

- Stone, R. (2009). China reins in wilder impulses in treatment of 'Internet addiction'. *Science*, 324(5935), 1630–1631. doi:[10.1126/science.324\\_1630](https://doi.org/10.1126/science.324_1630)
- 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. doi:[10.1007/s11469-010-9304-3](https://doi.org/10.1007/s11469-010-9304-3)
- Zamani, E., Kheradmand, A., Cheshmi, M., Abedi, A., & Hedayati, N. (2011). Comparing the social skills of students addicted to computer games with normal students. *Addiction and Health*, 2(3–4), 59–65. doi:[10.1016/S0924-9338\(12\)74212-8](https://doi.org/10.1016/S0924-9338(12)74212-8)