

Inclusion of Gaming Disorder in ICD has more advantages than disadvantages

Commentary on: Scholars' open debate paper on the World Health Organization ICD-11 Gaming Disorder proposal (Aarseth et al.)

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This paper is a response to a recent debate paper in which Aarseth et al. argue that the inclusion of a formal diagnosis and categories for problematic video gaming or Gaming Disorder (GD) in the World Health Organization's 11th Revision of the International Classification of Diseases (ICD-11) is premature and therefore the proposal should be removed. The present authors systematically address all the six main arguments presented by Aarseth et al. and argue that, even though some of the concerns presented in the debate paper are legitimate, the inclusion of GD in ICD-11 has more advantages than disadvantages. Furthermore, the present authors also argue that the two GD subtypes ("GD, predominantly online" and "GD, predominantly offline") are unnecessary and rather problematic; the main category for GD would be perfectly sufficient.

Keywords: Gaming Disorder, ICD-11, DSM-5, diagnosis, video game addiction, problematic gaming

INTRODUCTION

In a recent debate paper on the World Health Organization's (WHO) 11th Revision of the International Classification of Diseases (ICD-11) Gaming Disorder (GD) proposal, Aarseth et al. (2016) argue that the inclusion of a formal diagnosis and categories for problematic video gaming or GD is premature and therefore the proposal should be removed. Their argumentation comprises six main arguments. The first three refer to their concerns regarding the quality of the proposal, or more specifically, the quality of the research supporting the proposal, whereas the last three refer to the possible negative consequences of the inclusion. In short, the authors claim that (i) the quality of research supporting the proposal is low, (ii) the current operationalization of GD leans too heavily on the criteria of traditional addictive disorders, and (iii) there is no consensus among scholars regarding the symptomatology and assessment of the problem behavior. Furthermore, the authors worry that the formal diagnosis would bring about (iv) the stigmatization and (v) (possibly forced) treatment of engaged but healthy gamers (i.e., the false-positive cases), and (vi) would hinder exploratory research needed to truly understand the phenomenology of problematic gaming.

The present authors acknowledge that majority of these concerns are important and need to be addressed in the future. However, we argue that the inclusion of GD in the upcoming ICD still has more benefits than harm. In this paper, we comment on the main concerns raised in the debate paper and draw a conclusion summarizing our

opinion in this question. Furthermore, we also seize the opportunity to raise one concern regarding the subtypes of GD in the proposal (i.e., predominantly online and predominantly offline).

COMMENTS TO THE DEBATE PAPER

The present authors agree that *the overall quality of the research in the field of problematic gaming should be improved* as, to date, survey studies are disproportionately overrepresented, while there is a general lack of clinical and longitudinal studies, as well as qualitative ones. Biomarkers (e.g., related to the highly debated withdrawal symptoms) should also be explored and cross-cultural comparisons have to be made. However, the few qualitative and clinical studies conducted to date clearly demonstrate that a minority of gamers experience significant functional and psychological impairment related to their excessive gaming (e.g., Chappell, Eatough, Davies, & Griffiths, 2006; Ko et al., 2014); therefore, it can be claimed with certainty that the problematic behavior exists. Moreover, despite the scholarly debate regarding the conceptualization, criteria, and assessment of problematic gaming, scholars tend to agree in this question (even the

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authors of the debate paper themselves) (Griffiths et al., 2016; Király, Griffiths, & Demetrovics, 2015).

The second issue raised in the debate paper is that *the construct of GD leans too heavily on traditional addictive disorder criteria* (Griffiths et al., 2016; Király, Griffiths, et al., 2015). The present authors fully agree that alternative theoretical models (other than the one of behavioral addictions) may also be useful to understand the phenomenon and therefore research in this direction is important. However, we argue that the behavioral addictions framework is useful and suitable enough to theorize problematic video gaming behavior at the moment. Problem behaviors, such as gambling or GD, hold great similarities in symptomology and neurobiology with traditional substance-related disorders even if important differences exist as well (Hellman, Schoenmakers, Nordstrom, & van Holst, 2013). Moreover, significant differences also exist between different substances, such as heroin (depressant), cocaine (stimulant), and LSD (hallucinogen) for instance, still all fit well with the theory of addiction. Similarly, despite the contextual differences, the addiction framework appears to work fairly well in the case of behaviors, such as gambling and video gaming.

The third concern of Aarseth et al. refers to *the lack of consensus among scholars regarding the symptomatology and assessment of problematic gaming*. Indeed, a recent study by Griffiths et al. (2016) (coauthored by the present authors as well as several authors of the debate paper) examined the nine IGD criteria from the DSM-5 and listed the main concerns of scholars regarding each of them. However, when taking a closer look to the GD proposal, it turns out that the most debated IGD criteria (i.e., preoccupation, withdrawal, tolerance, deception, and escape) were not included in the proposal. In fact, the GD proposal comprises only the less-debated criteria (i.e., behavioral salience, losing interest in and reducing other recreational activities) and those with a strong general support (i.e., loss of control, continuation of the playing behavior despite negative consequences, and risking/losing relationships and opportunities). The proposed definition claims:

“Gaming disorder is manifested by a persistent or recurrent gaming behaviour (i.e., ‘digital gaming’ or ‘video-gaming’) characterised by an impaired control over gaming, increasing priority given to gaming over other activities to the extent that gaming takes precedence over other interests and daily activities and continuation of gaming despite the occurrence of negative consequences. The behaviour pattern is of sufficient severity to result in significant impairment in personal, family, social, educational, occupational or other important areas of functioning. These features and the underlying pattern of gaming are normally evident over a period of at least 12 months in order for a diagnosis to be assigned, although the required duration may be shortened if all diagnostic requirements are met and symptoms are severe.” (WHO, 2017)

Consequently, the GD proposal appears as an attempt to unify distinct opinions in the field by the sole inclusion of the criteria with strong (or at least medium) support (see Griffiths et al., 2016). Therefore, the present authors hope that a formal diagnosis like this will contribute to the

unification of the field by creating a common ground for assessment and clinical diagnosis. Furthermore, the present authors do not agree that the inclusion of GD in ICD would hinder researchers to further test the highly debated criteria, especially, because the next revision of the DSM encourages such studies.

On the other hand, a certain degree of controversy is allowable and most probably will always be there, as full consensus in such questions is rare. Other psychiatric disorders, such as depression or schizophrenia, are also debated (e.g., Cuesta, Bastera, Sanchez-Torres, & Peralta, 2009; DeLisi, 2003; Ebmeier, Donaghey, & Steele, 2006; Ruscio & Ruscio, 2000), even if they seem as consensual based on their presence in the diagnostic manuals.

The fourth and sixth concerns of Aarseth et al. are that the inclusion would stigmatize the millions of healthy gamers and would contribute to the (possibly forced) treatment of abundant false-positive cases or in other words, engaged but healthy gamers. The present authors argue that although legitimate concerns, they have little to do with the inclusion per se. Moral panics and stigmatization related to video games are mostly induced and maintained by media scaremongering (Ferguson, 2010) and the differences in mentality of the younger and older generations (i.e., generation gap) and not the existence of a formal diagnosis. The media inherently simplifies the stories with complex background and often presents them as “facts.” For instance, news reporting gaming-related tragedies often attribute (or directly relate) the death of the person to game addiction without examining the real and complex reasons (see, e.g., “Video game addict dies after 19-hr gaming session,” FoxNews.com, 2015). Furthermore, we argue that on the contrary, a formal diagnosis might even decrease stigmatization by viewing problematic gaming as a disorder and not a personal weakness, bad character, or a lack of interest in important life matters. This is similar to depression considered a mental disorder rather than laziness, or problem gambling viewed as a mental illness rather than a moral failure or character problem (Hing, Russell, & Gainsbury, 2016).

Consequently, the present authors doubt that a formal diagnosis would amplify the moral panic and stigmatization related to video games. On the contrary, it might help clarify and popularize the difference between high engagement or healthy enthusiasm and GD; namely, that functional and psychological impairment has to be present, gaming time alone is not suitable to decide whether the person has a disorder or not (Demetrovics & Király, 2016; Király, Tóth, Urbán, Demetrovics, & Maraz, 2017) as often suggested in news reports as the one mentioned before. We would hereby also seize the opportunity to point out that it is the researchers’ responsibility to emphasize and popularize the finding that intense video gaming is not essentially problematic, and we can only speak about GD when serious negative effects are present – otherwise we face high engagement, which has nothing to do with disorders but rather adds to life as Griffiths (2005) also suggests.

Finally, the last issue raised in the debate paper is that *research will be locked into a confirmatory approach,*

considering the theories of substance use disorder as the valid basis for problematic gaming-related behavior. In our view, alternative exploratory models and theories can (and will) still be explored if the inclusion happens. Both diagnostic manuals (i.e., the DSM and the ICD) are regularly revised, thus characterized by permanent change. The case of problem gambling is one of the best examples. In the DSM-IV (American Psychiatric Association [APA], 1994, 2000), this behavior was considered an impulse-control disorder; and accordingly, it appeared in the *Impulse-Control Disorders Not Elsewhere Classified* section as pathological gambling. However, in the most recent version, the DSM-5 (APA, 2013) was moved into the expanded *Substance-Related and Addictive Disorders* section as an addictive disorder; and accordingly, it was labeled as gambling disorder. The main aim of agreeing upon a formal diagnosis and criteria is to provide a common starting point for research, which will – most probably – evolve further in the future due to ongoing research and monitoring.

GD PREDOMINANTLY ONLINE/OFFLINE

The ICD-11 proposal for GD has two subtypes (i.e., *7D61.1 GD, predominantly online* and *7D61.2 GD, predominantly offline*). The difference between them is that the first refers to gaming behavior that is primarily conducted over the Internet, whereas the second refers to a gaming behavior that is *not* primarily conducted over the Internet. The present authors argue that these subtypes are unnecessary and rather problematic; the main category for GD would be perfectly sufficient.

Empirical research suggests that online games (and specific types of these) have a “higher addictive potential” than offline games, mainly due to the social interaction, social comparison, and player versus player competition they provide (e.g., Lemmens & Hendriks, 2016). However, the fact that a game is played over the Internet does not necessarily mean that it provides social interaction. For instance, some flash games are completely single player, although they are played in an Internet browser. Or several online games have their campaign modes (i.e., a series of individual adventures resembling offline games), and some players only play those. Furthermore, players choose the games based on their content rather than how they are played (through the Internet or offline). Therefore, we argue that creating subtypes for the GD diagnosis along such a classification (i.e., predominantly online or offline) does not make much sense because it does not provide accurate information regarding the addictive potential of the games. Moreover, such a distinction is not related to the criteria in any way (i.e., the rest of the diagnosis is the same for both subtypes), and most probably, it gets even more outdated in a couple of years due to rapid technological change and constant innovation.

Nevertheless, exploring the structural characteristics of the games (e.g., the reinforcement mechanisms they use) may be helpful during the diagnostic and treatment process. Although it is impossible to include these in the GD definition itself, it is important to explore what basic

needs and motivations specific games satisfy in the case of each patient (Ballabio et al., 2017; Király, Urbán, et al., 2015). However, the online or offline nature of games adds nothing useful to the diagnosis because it is too vague to provide information about personal needs and motives.

CONCLUSIONS

Video gaming is an integral part of our modern culture, one of the main leisure time activities for a continuously growing community and as such, it is a healthy hobby for the majority – hundreds of millions of gamers around the world. However, there is a small (but still considerable) group of gamers who play in such a manner that they experience significant functional and psychological impairment related to their gaming (Griffiths, Király, Pontes, & Demetrovics, 2015; Király, Nagygyörgy, Griffiths, & Demetrovics, 2014). It appears that no debate exists among scholars in any of these questions.

Nevertheless, the argumentation of Aarseth et al. presented in the debate paper makes the impression that the authors consider the entire DSM and ICD useless and possibly harmful because it does not reflect a perfect consensus among scholars. Furthermore, it also creates the impression that behaviors listed in the diagnostic manuals lack their non-problematic (healthy) versions – which is obviously not the case. The majority of the conditions included should be interpreted on a continuum and have their perfectly healthy state along with their disordered version at the other end of the continuum (e.g., Gunderson, Links, & Reich, 1991; Widiger & Coker, 1997). For instance, both alcohol use and gambling are included in the DSM and ICD, but this does not make them disorders per se, it only means that a disordered pattern of the behavior exists as well (i.e., alcohol use disorder and gambling disorder). The question is whether the behavior is adaptive or maladaptive. In the latter case, the behavior should be viewed as a disorder.

Consequently, the present authors argue that the inclusion of GD in ICD as a formal diagnosis at this point has more advantages than disadvantages. Hopefully, it would improve the quality of research by providing a common ground and thus help clarify the controversies in the long run. However, we fully agree with Aarseth et al. that there are numerous important tasks for the future: there is a great need for more clinical, longitudinal, cross-cultural, and qualitative research as well as studies that examine the biomarkers related to problematic gaming. As the definitions of mental disorders are the products of temporary consensus among professionals and as such, they are dynamically changing entities, there will be possibility to smoothen or modify the criteria in the future based on new empirical results.

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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., Lundedal 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
- American Psychiatric Association [APA]. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: American Psychiatric Association.
- American Psychiatric Association [APA]. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: American Psychiatric Association.
- American Psychiatric Association [APA]. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed., text rev.). Washington, DC: American Psychiatric Association.
- Ballabio, M., Griffiths, M. D., Urbán, R., Quartiroli, A., Demetrovics, Z., & Király, O. (2017). Do gaming motives mediate between psychiatric symptoms and problematic gaming? An empirical survey study. *Addiction Research & Theory*. Advance online publication. doi:10.1080/16066359.2017.1305360
- Chappell, D., Eatough, V., Davies, M., & Griffiths, M. D. (2006). EverQuest – It's just a computer game right? An interpretative phenomenological analysis of online gaming addiction. *International Journal of Mental Health and Addiction*, 4(3), 205–216. doi:10.1007/s11469-006-9028-6
- Cuesta, M. J., Basterra, V., Sanchez-Torres, A., & Peralta, V. (2009). Controversies surrounding the diagnosis of schizophrenia and other psychoses. *Expert Review of Neurotherapeutics*, 9(10), 1475–1486. doi:10.1586/ern.09.102
- DeLisi, L. E. (2003). Introduction to current controversies in schizophrenia research. *Current Opinion in Psychiatry*, 16(2), 121–122. doi:10.1097/00001504-200303000-00001
- Demetrovics, Z., & Király, O. (2016). Internet/gaming addiction is more than heavy use over time: Commentary on Baggio and colleagues (2015). *Addiction*, 111(3), 523–524. doi:10.1111/add.13244
- Ebmeier, K. P., Donaghey, C., & Steele, J. D. (2006). Recent developments and current controversies in depression. *Lancet*, 367(9505), 153–167. doi:10.1016/s0140-6736(06)67964-6
- Ferguson, C. J. (2010). Blazing angels or resident evil? Can violent video games be a force for good? *Review of General Psychology*, 14(2), 68–81. doi:10.1037/a0018941
- FoxNews.com. (2015). Video game addict dies after 19-hour gaming session. Retrieved from <http://www.foxnews.com/health/2015/03/03/video-game-addict-dies-after-1-hour-gaming-session.html> (March 14, 2017).
- Griffiths, M. D. (2005). A 'components' model of addiction within a biopsychosocial framework. *Journal of Substance Use*, 10(4), 191–197. doi:10.1080/14659890500114359
- Griffiths, M. D., Király, O., Pontes, H. M., & Demetrovics, Z. (2015). An overview of problematic gaming. In V. Starcevic & E. Aboujaoude (Eds.), *Mental health in the digital age: Grave dangers, great promise* (pp. 27–45). Oxford, UK: Oxford University Press.
- Griffiths, M. D., van Rooij, A. J., Kardefelt-Winther, D., Starcevic, V., Király, O., Pallesen, S., Müller, K., Dreier, M., Carras, M., Prause, N., King, D. L., Aboujaoude, E., Kuss, D. J., Pontes, H. M., Lopez Fernandez, O., Nagygyörgy, K., Achab, S., Billieux, J., Quandt, T., Carbonell, X., Ferguson, C. J., Hoff, R. A., Derevensky, J., Haagsma, M. C., Delfabbro, P., Coulson, M., Hussain, Z., & Demetrovics, Z. (2016). Working towards an international consensus on criteria for assessing Internet gaming disorder: A critical commentary on Petry et al. (2014). *Addiction*, 111(1), 167–175. doi:10.1111/add.13057
- Gunderson, J. G., Links, P. S., & Reich, J. H. (1991). Competing models of personality disorders. *Journal of Personality Disorders*, 5(1), 60–68. doi:10.1521/pedi.1991.5.1.60
- Hellman, M., Schoenmakers, T. M., Nordstrom, B. R., & van Holst, R. J. (2013). Is there such a thing as online video game addiction? A cross-disciplinary review. *Addiction Research & Theory*, 21(2), 102–112. doi:10.3109/16066359.2012.693222
- Hing, N., Russell, A. M., & Gainsbury, S. M. (2016). Unpacking the public stigma of problem gambling: The process of stigma creation and predictors of social distancing. *Journal of Behavioral Addictions*, 5(3), 448–456. doi:10.1556/2006.5.2016.057
- Király, O., Griffiths, M. D., & Demetrovics, Z. (2015). Internet gaming disorder and the DSM-5: Conceptualization, debates, and controversies. *Current Addiction Reports*, 2(3), 254–262. doi:10.1007/s40429-015-0066-7
- Király, O., Nagygyörgy, K., Griffiths, M. D., & Demetrovics, Z. (2014). Problematic online gaming. In K. Rosenberg & L. Feder (Eds.), *Behavioral addictions: Criteria, evidence and treatment* (pp. 61–95). New York, NY: Elsevier.
- Király, O., Tóth, D., Urbán, R., Demetrovics, Z., & Maraz, A. (2017). *Intense video gaming is not essentially problematic*. Manuscript submitted for publication.
- Király, O., Urbán, R., Griffiths, M. D., Ágoston, C., Nagygyörgy, K., Kökönyei, G., & Demetrovics, Z. (2015). Psychiatric symptoms and problematic online gaming: The mediating effect of gaming motivation. *Journal of Medical Internet Research*, 17(4), e88. doi:10.2196/jmir.3515
- Ko, C. H., Yen, J. Y., Chen, S. H., Wang, P. W., Chen, C. C., & Yen, C. F. (2014). Evaluation of the diagnostic criteria of Internet gaming disorder in the DSM-5 among young adults in Taiwan. *Journal of Psychiatric Research*, 53, 103–110. doi:10.1016/j.jpsychires.2014.02.008
- Lemmens, J. S., & Hendriks, S. J. F. (2016). Addictive online games: Examining the relationship between game genres and Internet gaming disorder. *Cyberpsychology, Behavior, and*

- Social Networking*, 19(4), 270–276. doi:[10.1089/cyber.2015.0415](https://doi.org/10.1089/cyber.2015.0415)
- Ruscio, J., & Ruscio, A. M. (2000). Informing the continuity controversy: A taxometric analysis of depression. *Journal of Abnormal Psychology*, 109(3), 473–487. doi:[10.1037/0021-843X.109.3.473](https://doi.org/10.1037/0021-843X.109.3.473)
- Widiger, T. A., & Coker, L. A. (1997). Mental disorders as discrete clinical conditions: Dimensional versus categorical classification. In S. M. Turner & M. Hersen (Eds.), *Adult psychopathology and diagnosis* (pp. 3–23). New York, NY: Wiley.
- World Health Organization [WHO]. (2017). ICD-11 beta draft. Retrieved from <http://apps.who.int/classifications/icd11/browse/f/en#/http%3a%2f%2fid.who.int%2f%2fentity%2f1448597234> (July 9, 2017).