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Debate: Behavioral addictions in the ICD-11

COMMENTARY



Behavioral addictions in the ICD-11: An important debate that is anticipated to continue for some time

Commentary to the debate: “Behavioral addictions in the ICD-11”

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ABSTRACT

The *Journal of Behavioral Addictions* featured a debate on the topic of “behavioral addictions in ICD-11” in 2022. Three main debate papers were published and a total of eleven commentaries. One main topic of considerations in the three debate papers and in the majority of commentaries was compulsive sexual behavior disorder. The debate was balanced, collegial and conducted at a high scientific level. Although there are some disagreements regarding specific details, all authors consider more research on behavioral addictions as important. This scientific debate has been and continues to be enormously important to behavioral addiction research and clinical practice.

KEYWORDS

addictive behaviors, ICD-11, gaming disorder, compulsive sexual behavior disorder, other specified disorders due to addictive behaviors, classification, DSM-5, problematic pornography use

Ten years ago, the DSM-5 was published by the [American Psychiatric Association \(2013\)](#), bringing significant changes to the field of behavioral addictions research. For the first time, gambling disorder was considered a behavioral addiction, and (internet) gaming disorder was described as a potential behavioral addiction for which further research was needed. This continues to be the case in the text revision of DSM-5 ([American Psychiatric Association, 2022](#)), with the explicit inclusion that gaming disorder must be associated with significant impairment or distress. In 2019, the World Health Organization adopted the eleventh version of the ICD ([World Health Organization, 2019](#)), with its jurisdictional permissible since January 2022. The ICD-11 includes the category “disorders due to addictive behaviors” with gambling disorder and gaming disorder as the two behavioral addictions that are now officially recognized. Prior to the inclusion of gaming disorder in ICD-11, there have been sometimes heated debates in academia and society. In 2022, the *Journal of Behavioral Addictions* featured a debate on the topic of “behavioral addictions in ICD-11.” This scientific debate has been and continues to be important to the field of behavioral addictions.

Three main debate papers were published and a total of eleven commentaries. One debate paper focuses on meta-criteria for the consideration of further potential disorders due to addictive

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behaviors (Brand et al., 2022). The second debate paper deals with the ICD-11 criteria for compulsive sexual behavior disorder (CSBD) (Gola et al., 2022). The third debate paper also concentrates on CSBD and concluded that there is currently not enough empirical support for considering CSBD a behavioral addiction (Sassover & Weinstein, 2022). Of the eleven commentaries, seven relate to CSBD (Borgogna & Aita, 2022; Briken & Turner, 2022; Bóthe, Koós, & Demetrovics, 2022; Castro-Calvo et al., 2022; Jennings, Gleason, & Kraus, 2022; Lew-Starowicz & Coleman, 2022; Rumpf & Montag, 2022) and four to the meta-level criteria (Griffiths, 2022; Gullo, Wood, & Saunders, 2022; Kuss & Lopez-Fernandez, 2022; Stein & Lochner, 2022), although there are also commentaries which included both a discussion of the meta-criteria and related topics and a discussion of specific criteria for CSBD (e.g., Borgogna & Aita, 2022; Griffiths, 2022; Jennings et al., 2022; Rumpf & Montag, 2022). This overlap is not surprising given that CSBD (or problematic pornography use or “pornography-use disorder” more specifically) is one example of a potential disorder to be considered as “other specified disorders due to addictive behaviors” in the debate paper on meta-criteria (Brand et al., 2022). One commentary on CSBD considerations (Borgogna & Aita, 2022) was published two months after the other commentaries and included a discussion of the debate papers, considering also some of the other commentaries.

The debate demonstrates that after inclusion of gambling disorder and gaming disorder as disorders due to addictive behaviors in the ICD-11, there is much attention to CSBD and to the discussion of whether or not CSBD may be more appropriately understood a behavioral addiction or impulse control disorder (as currently classified in the ICD-11) and whether or not problematic pornography use may be most appropriately considered a sub-condition of CSBD or an own entity among gambling and gaming disorders.

The debate was balanced, collegial, and conducted at a high scientific level. Although there were some disagreements on specific points across the debate papers and the commentaries, as expected and desired in a debate to move the field forward, there were also agreements and consensus. Disagreements – or constructive arguments for additional perspectives and future challenges – relate to, for example, which criteria may be most appropriate for classifying addictive behaviors, how transdiagnostic features should be considered, and how the clinical validity of diagnostic procedures can be optimized (see next sections). The largest consensus, which is also a consensus that can be reached easily in academia, is that we need more research to better understand CSBD and other potential addictive disorders beyond gambling and gaming disorders.

The challenges for future research, however, were defined more specifically in the commentaries of this debate. Bóthe et al. (2022), for example, discussed the classification of CSBD as an impulse control disorder and noted specific contradictory criteria. Exemplarily, the rewarding nature of the behavior in the general definition of impulse control disorders versus the CSBD criterion “continued repetitive sexual behavior despite adverse consequences or deriving little or no satisfaction from it” might be more related to compulsivity – although such

apparent contradictions are observed in addictions and compulsivity has been considered an important feature of addictive disorders (Leeman & Potenza, 2012). They concluded that currently, not enough evidence exists for the determination of whether CSBD could be understood most appropriately as impulse control disorder, compulsivity-related disorder or addictive disorder and that more investigations of transdiagnostic features related to CSBD are necessary. This is without doubt important. However, given the relative involvement of both impulsivity and compulsivity in addictive disorders (as in impulse-control and compulsivity-related disorders), it is still debatable whether examining these transdiagnostic features would be sufficient. From the perspective of the authors of this current commentary, and we believe Bóthe et al. (2022) and many further authors would agree, we need a clear dimensional approach including more measures of convergent and divergent validity (e.g., features that theoretically should be involved more strongly in addictive disorders compared to impulse-control and compulsivity-related disorders and vice versa). This means, we need not only the consideration of transdiagnostic features, but we should also consider transtheoretical approaches and competitive model testing, which was also raised by Borgogna and Aita (2022). Consequently, we need more studies that directly compare underlying processes involved in impulse-control, compulsivity-related, and addictive disorders. We consider this important not only for CSBD, but also for other potential addictive behaviors, such as buying-shopping disorder, which is currently considered an example for other specified impulse control disorders (6C7Y). This is also consistent with some conclusions by Griffiths (2022), who argued that for pornography-use disorder, buying-shopping disorder, and social-networks-use disorder to be considered as formal addictive disorders, more high-quality research is needed. Griffiths also stated that compared to gambling and gaming disorders, there is a lack of neuroimaging studies in the field of other potential behavioral addictions. Finally, he concluded regarding problematic pornography use, buying-shopping, social-networks use and other problematic behaviors (exercise, work): “none of these behaviors is likely to be included in formal psychiatric manuals in the near future until there is further research collecting more high-quality data on all research fronts (e.g., epidemiological, neurobiological, psychological, and clinical)” (Griffiths, 2022, p. 183). Such information was critical with respect to, for example, the reclassification of gambling disorder together with substance-use disorders in the DSM-5 (Potenza, 2006; Potenza, Koran, & Pallanti, 2009). We agree with this impression, but also consider the current situation and the lack of sufficient high-quality research (including mechanistic experimental studies and neuroimaging studies) a challenge for the future. We are optimistic that once we have more solid evidence for the public health relevance of other disorders due to addictive behaviors and more robust empirical evidence showing similarities with gaming and gambling disorders, including high-quality multi-methodological data, inclusion of these addictive disorders in upcoming classification systems may be realistic. Such a debate demonstrates the high interest in the topic and highlights international research



activities. These activities (see also [Fineberg et al., 2022](#)) give hope that even more international research consortia will emerge (and be funded) and realize large-scale (also longitudinal) studies to better understand epidemiology, clinical relevance, and effects of prevention and treatment. New, larger consortia are already emerging in some countries; for example, the Research Unit *Affective and cognitive mechanisms of specific internet-use disorders* (ACSID) in Germany (see description in [Brand et al., 2021](#)). In the U.S., the extremely important and meaningfully large and multidisciplinary *Adolescent Brain Cognitive Development* (ABCD) study ([Volkow et al., 2018](#)) is another example. Nevertheless, it should be stated that the current good developments in the field of behavioral addiction research regarding broader consortia are still limited to either individual countries (and consequently limited resources and specific foci) or a focus on behavioral addictions, and especially CSBD, is limited (e.g., due to the breadth of the ABCD study, it is not possible to include many assessments of behavioral addiction research to gain insight into specific mechanisms).

Larger international consortia in the future could use the same protocols for gaining a larger database on the psychological and neurobiological mechanisms of potential behavioral addictions, which are in fact not yet clear in terms of causality and specificity (see for example discussion in [Brand, 2022](#)). Consistent with this, [Stein and Lochner \(2022\)](#) argued that the diagnostic validity and clinical utility of the classification of behavioral addictions may be supported but “this does not necessarily mean that causal mechanisms underlying these conditions are homogenous and uniform” ([Stein & Lochner, 2022](#), p. 188) and referred to the philosophy of medicine in terms of how mental disorders may be validated most appropriately. We agree with this conclusion and add to the debate that the clinical practice and empirical research addressing potential causal mechanisms are not mutually exclusive but should go hand in hand. Again, larger international consortia may have the chance to contribute to both science and practice and may include participants from multiple groups including those underrepresented in research, to date. International consortia may also have the chance to address cross-cultural effects in the context of behavioral addictions and multiple other important aspects of diversity to promote understanding of minority groups. The importance of considering minority-stress-related distress in the context of working with clients and assessing symptoms of behavioral addictions has been discussed exemplarily for lesbian, gay, bisexual, transgender, and queer clients in the commentary by [Jennings et al. \(2022\)](#).

In this commentary, we can only mention some specific examples that may be indicative for the variety of topics that have been addressed in the debate papers and particularly in the eleven commentaries. All these articles together demonstrate that these debates are important. Although there are some disagreements regarding specific details, all authors considered the inclusion of behavioral addictions in the ICD-11 as important, even though those behavioral addictions which have been included do not build a uniform rubric and although some authors advocate for inclusion of further potential behavioral addictions. The debate is

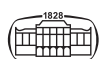
anticipated to continue for some time. As [Stein and Lochner \(2022, pp. 188–189\)](#) mentioned, “we should aim not for immediate resolution, but rather for ongoing rigorous consideration and practical judgment.” They further stated, “for any particular entity that is proposed as a behavioral addiction, we can expect and should encourage debate as to the presence and nature of any underlying dysfunction” ([Stein & Lochner, 2022](#), p. 189). From our perspective, these debates and controversial discussions with the goal to find the most appropriate solution are important to continue as research on the topic is ongoing and future studies will provide new knowledge. These debates will hopefully contribute to testing diverse and competitive hypotheses on the multiple areas of interest in the context of behavioral addictions. We anticipate more knowledge in the years to come regarding diagnostic validity and accuracy of measurements, definition of core symptoms and additional clinical features, and causal mechanisms underlying behavioral addictions. Scientific studies are usually inspired most appropriately by intensive communication among scientists (to which this debate has contributed significantly), clinical practitioners, and those who are affected and their relatives.

Beyond the importance of scientific debates to inspire future research, they are also relevant for clinical practice, decisions regarding inclusion of new conditions in diagnostic manuals, regulatory oversight, policymaking, and public health considerations. We have the impression that the three debate papers and the eleven commentaries are inspiring for all these domains as they demonstrate the general relevance of the topic, the challenges that lie ahead, and insight into frameworks for the future.

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Authors' contributions: MB and MNP wrote the manuscript.

Conflict of interests: MB receives funding from the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation), the EU, and the German Federal Ministry of Education and Research; has performed grant reviews for research-funding agencies; has edited journals and journal sections; has given academic lectures in clinical or scientific venues; and has generated book chapters for publishers of mental health texts. MNP has consulted for Opiant Therapeutics, Game Day Data, Baria-Tek, the Addiction Policy Forum, AXA and Idorsia Pharmaceuticals; has been involved in a patent application with Yale University and Novartis; has received research support from Mohegan Sun Casino, Children and Screens and the Connecticut Council on Problem Gambling; has



participated in surveys, mailings or telephone consultations related to drug addiction, impulse-control disorders or other health topics; has consulted for and/or advised gambling and legal entities on issues related to impulse-control, internet use and/or addictive disorders; has performed grant reviews for research-funding agencies; has edited journals and journal sections; has given academic lectures in grand rounds, CME events and other clinical or scientific venues; and has generated books or book chapters for publishers of mental health texts. Both authors do not see a conflict of interest in the context of the work on this article. MB and MNP are associate editors of the Journal of Behavioral Addictions.

REFERENCES

- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington DC: APA.
- American Psychiatric Association. (2022). *Diagnostic and statistical manual of mental disorders* (5th ed.). Text Revision: American Psychiatric Association Publishing.
- Borgogna, N. C., & Aita, S. L. (2022). Another failure of the latent disease model? The case of compulsive sexual behavior disorder: Commentary to the debate: “Behavioral addictions in the ICD-11”. *Journal of Behavioral Addictions*, 11(3), 615–619. <https://doi.org/10.1556/2006.2022.00069>.
- Bóthe, B., Koós, M., & Demetrovics, Z. (2022). Contradicting classification, nomenclature, and diagnostic criteria of compulsive sexual behavior disorder (CSBD) and future directions: Commentary to the debate: “Behavioral addictions in the ICD-11”. *Journal of Behavioral Addictions*, 11(2), 204–209. <https://doi.org/10.1556/2006.2022.00030>.
- Brand, M. (2022). Can internet use become addictive? *Science*, 376(6595), 798–799. <https://doi.org/10.1126/science.abn4189>.
- Brand, M., Müller, A., Stark, R., Steins-Loeber, S., Klucken, T., Montag, C., ... Wegmann, E. (2021). Addiction research unit: Affective and cognitive mechanisms of specific internet-use disorders. *Addiction Biology*, e13087. <https://doi.org/10.1111/adb.13087>.
- Brand, M., Rumpf, H.-J., Demetrovics, Z., Müller, A., Stark, R., King, D. L., ... Potenza, M. N. (2022). Which conditions should be considered as disorders in the International Classification of Diseases (ICD-11) designation of “other specified disorders due to addictive behaviors”? *Journal of Behavioral Addictions*, 11(2), 150–159. <https://doi.org/10.1556/2006.2020.00035>.
- Briken, P., & Turner, D. (2022). What does “sexual” mean in compulsive sexual behavior disorder?: Commentary to the debate: “Behavioral addictions in the ICD-11”. *Journal of Behavioral Addictions*, 11(2), 222–225. <https://doi.org/10.1556/2006.2022.00026>.
- Castro-Calvo, J., Flayelle, M., Perales, J. C., Brand, M., Potenza, M. N., & Billieux, J. (2022). Compulsive sexual behavior disorder should not be classified by solely relying on component/symptomatic features: Commentary to the debate: “Behavioral addictions in the ICD-11”. *Journal of Behavioral Addictions*, 11(2), 210–215. <https://doi.org/10.1556/2006.2022.00029>.
- Fineberg, N. A., Menchón, J. M., Hall, N., Dell’Osso, B., Brand, M., Potenza, M. N., ... Zohar, J. (2022). Advances in problematic usage of the internet research – a narrative review by experts from the European network for problematic usage of the internet. *Comprehensive Psychiatry*, 118, 152346. <https://doi.org/10.1016/j.comppsy.2022.152346>.
- Gola, M., Lewczuk, K., Potenza, M. N., Kingston, D. A., Grubbs, J. B., Stark, R., & Reid, R. C. (2022). What should be included in the criteria for compulsive sexual behavior disorder? *Journal of Behavioral Addictions*, 11(2), 160–165. <https://doi.org/10.1556/2006.2020.00090>.
- Griffiths, M. D. (2022). Disorders due to addictive behaviors: Further issues, debates, and controversies: Commentary to the debate: “Behavioral addictions in the ICD-11”. *Journal of Behavioral Addictions*, 11(2), 180–185. <https://doi.org/10.1556/2006.2022.00025>.
- Gullo, M. J., Wood, A. P., & Saunders, J. B. (2022). Criteria for the establishment of a new behavioural addiction: Commentary to the debate: “Behavioral addictions in the ICD-11”. *Journal of Behavioral Addictions*, 11(2), 191–198. <https://doi.org/10.1556/2006.2022.00031>.
- Jennings, T. L., Gleason, N., & Kraus, S. W. (2022). Assessment of compulsive sexual behavior disorder among lesbian, gay, bisexual, transgender, and queer clients: Commentary to the debate: “Behavioral addictions in the ICD-11”. *Journal of Behavioral Addictions*, 11(2), 216–221. <https://doi.org/10.1556/2006.2022.00028>.
- Kuss, D. J., & Lopez-Fernandez, O. (2022). What the grey literature can contribute to addictive behaviour disorder classification: Commentary to the debate: “Behavioral addictions in the ICD-11”. *Journal of Behavioral Addictions*, 11(2), 199–203. <https://doi.org/10.1556/2006.2022.00027>.
- Leeman, R. F., & Potenza, M. N. (2012). Similarities and differences between pathological gambling and substance use disorders: A focus on impulsivity and compulsivity. *Psychopharmacology*, 219, 469–490. <https://doi.org/10.1007/s00213-011-2550-7>.
- Lew-Starowicz, M., & Coleman, E. (2022). Mental and sexual health perspectives of the international classification of diseases (ICD-11) compulsive sexual behavior disorder: Commentary to the debate: “Behavioral addictions in the ICD-11”. *Journal of Behavioral Addictions*, 11(2), 226–229. <https://doi.org/10.1556/2006.2022.00032>.
- Potenza, M. N. (2006). Should addictive disorders include non-substance-related conditions? *Addiction*, 101, 142–151. <https://doi.org/10.1111/j.1360-0443.2006.01591.x>.
- Potenza, M. N., Koran, L. M., & Pallanti, S. (2009). The relationship between impulse-control disorders and obsessive-compulsive disorder: A current understanding and future research directions. *Psychiatry Research*, 170(1), 22–31. <https://doi.org/10.1016/j.psychres.2008.06.036>.
- Rumpf, H.-J., & Montag, C. (2022). Where to put compulsive sexual behavior disorder (CSBD)? Phenomenology matters: Commentary to the debate: “Behavioral addictions in the ICD-11”. *Journal of Behavioral Addictions*, 11(2), 230–233. <https://doi.org/10.1556/2006.2022.00039>.



- Sassover, E., & Weinstein, A. (2022). Should compulsive sexual behavior (CSB) be considered as a behavioral addiction? A debate paper presenting the opposing view. *Journal of Behavioral Addictions*, 11(2), 166–179. <https://doi.org/10.1556/2006.2020.00055>.
- Stein, D. J., & Lochner, C. (2022). Nosology of behavioral addictions: Intersections with philosophy of psychiatry: Commentary to the debate: “Behavioral addictions in the ICD-11”. *Journal of Behavioral Addictions*, 11(2), 186–190. <https://doi.org/10.1556/2006.2022.00033>.
- Volkow, N. D., Koob, G. F., Croyle, R. T., Bianchi, D. W., Gordon, J. A., Koroshetz, W. J., ... Weiss, S. R. B. (2018). The conception of the ABCD study: From substance use to a broad NIH collaboration. *Developmental Cognitive Neuroscience*, 32, 4–7. <https://doi.org/10.1016/j.dcn.2017.10.002>.
- World Health Organization. (2019). ICD-11 for mortality and morbidity statistics. 2019(06/17). Retrieved from <https://icd.who.int/en/>.

