

## Not good enough? Further comments to the wording, meaning, and the conceptualization of Internet Gaming Disorder

*Commentary on: Chaos and confusion in DSM-5 diagnosis of Internet Gaming Disorder: Issues, concerns, and recommendations for clarity in the field (Kuss et al.)*

ELFRID KROSSBAKKEN<sup>1\*</sup>, STÅLE PALLESEN<sup>1,2</sup>, HELGE MOLDE<sup>3</sup>, RUNE AUNE MENTZONI<sup>1</sup> and TURI REITEN FINSERÅS<sup>3</sup>

<sup>1</sup>Department of Psychosocial Science, University of Bergen, Bergen, Norway

<sup>2</sup>Norwegian Competence Center for Sleep Disorders, Haukeland University Hospital, Bergen, Norway

<sup>3</sup>Department of Clinical Psychology, University of Bergen, Bergen, Norway

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In their commentary, Kuss, Griffiths, and Pontes (2016) criticize the use of the term “Internet” in the recently proposed diagnosis for Internet Gaming Disorder (IGD) and its use as one of the included diagnostic criteria. We agree with the exclusion of the term “Internet” in the diagnosis, but have some considerations to the comments regarding the nine criteria for IGD. Specifically, we discuss the meaning, the wording, and the importance of the criteria, as well as the importance of distress or functional impairment in the proposed diagnosis. We also address the possibility of categorizing IGD as a subtype of a general behavioral addiction diagnosis.

**Keywords:** Internet Gaming Disorder, behavioral addiction, DSM-5

In their commentary entitled “Chaos and confusion in DSM-5 diagnosis of Internet Gaming Disorder: Issues, concerns, and recommendations for clarity in the field,” Kuss, Griffiths, and Pontes (2016) criticize the use of the term “Internet” in the recently proposed diagnosis for Internet Gaming Disorder (IGD) in the fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5; American Psychiatric Association, 2013) and its use as one of the included diagnostic criteria. We wholeheartedly agree with the exclusion of the term “Internet” in the diagnosis, but have some considerations to the comments regarding the nine criteria for IGD. We also want to address the possibility of categorizing this disorder under a general behavioral addiction diagnosis.

The concept of “Internet addiction” has been debated; several arguments oppose this disorder mainly because of the lack of specification regarding the Internet content that the addictive behavior entails (Musetti et al., 2016). This is in line with the concept that people are not addicted to the Internet *per se*, but to the specific content or activity provided by the Internet (Young, 2009). This specification debate is also prominent in the discussion of IGD (Király, Griffiths, & Demetrovics, 2015), where the inclusion of the term “Internet” indicates that there is something essential to the online component of the disorder. In our view, the online component might be regarded as a characteristic of the game, which provides features that make the game more or less addictive, but that is not to say that a gamer cannot be addicted to offline games. Wenzel, Bakken, Johansson, Götestam, and Øren (2009) found, for example, that although problems related to gaming were more prevalent

among online gamers, they were also present among offline gamers. Thus, regarding the inclusion of the term “Internet” in the IGD diagnosis, it is easy to agree with Kuss et al. (2016). However, there is nothing new about this specific argument as the original developers of the nine IGD criteria have clarified that the term seems to create further misunderstandings, as noted by Petry et al. (2014). As such, Petry et al. (2014, 2016) are explicit in stating that the medium used in gaming is of no importance for assessing IGD. Hence, with the next revision of the DSM-5, the term “Internet” in “Internet Gaming Disorder” should be abandoned. We think there is a little disagreement about this in the research community.

While gaming online may be a risk factor for developing a “Gaming Disorder” (Kuss, van Rooij, Shorter, Griffiths, & van de Mheen, 2013), research should also try to elucidate how different risk factors are likely to interact with other risk factors or individual vulnerabilities. Kuss et al. (2016) refer to specific factors that are predictive of addictive gaming among Massively Multiplayer Online Role-Playing Game players. However, these risk factors have been identified in cross-sectional studies (Dauriat et al., 2011; Kuss, Louws, & Wiers, 2012). In our opinion, such studies do not possess the necessary methodological rigor for drawing conclusions about risk factors, although they of course can provide hypotheses that can be investigated using more suitable designs. A few longitudinal studies that point to possible

\* Corresponding author: Elfrid Krossbakken; Department of Psychosocial Science, University of Bergen, 5020 Bergen, Norway; Phone: +47 55588648; E-mail: [elfrid.krossbakken@uib.no](mailto:elfrid.krossbakken@uib.no)

risk factors have been conducted (Gentile, Lynch, Linder, & Walsh, 2004; Lemmens, Valkenburg, & Peter, 2011) and have identified risk factors, such as low social competence, impulsivity, loneliness, and low self-esteem (Gentile et al., 2011; Lemmens, Valkenburg, & Peter, 2009).

However, if conclusions are to be drawn about risk factors and causality, the field needs more longitudinal investigations and experimental studies. Furthermore, a developmental psychopathological research frame seems warranted. This is necessary to link gaming to normal and abnormal developmental processes and trajectories over time. This is in concordance with Kuss et al. (2016) who state that the various criteria can be more, or less, relevant depending on the stage of the disorder (Király et al., 2017). Thus, there is a need to consider both the time frame and context when evaluating short- and long-term consequences of a gaming disorder. In addition, the increasing convergence of gaming and gambling deserves further attention. The fact that people are now offered the opportunity to stake money on the winner of video games, and that in-game purchases of resources to make progress in a computer game are readily available, underlines this argument. How many people gamble on the outcomes of video games, and how many impulsively spend increasing amounts of money on upgrades and resources for video games is currently unknown. Hence, far more research is needed to answer these questions.

There is also a lack of consensus regarding the meaning, the wording, and the importance of criteria to be included in a gaming disorder diagnosis. It has been argued that some of the severe criteria should be regarded as peripheral to video game addiction (i.e., salience, tolerance, and mood modification), whereas others more specifically relate to core criteria for addiction (i.e., withdrawal, relapse, conflict, and problems) (Brunborg et al., 2013; Charlton & Danforth, 2007; Ferguson, Coulson, & Barnett, 2011). Rehbein, Kliem, Baier, Mößle, and Petry (2015) state that there is a need for studies to evaluate the validity and the reliability of the nine IGD criteria, and that the nine criteria are the first step in developing a standardized assessment. Notably, the authors identify tolerance, withdrawal, and behavioral salience as key criteria for differentiating between diagnostic entities (addicted and non-addicted). That is, these three criteria predicted a high percentage of adolescents, endorsing five or more of the IGD criteria in a recent study. The authors also note that such endorsements are associated with clinical impairment. The latter is perhaps the most important factor, as several authors state that distinguishing “passionate,” “engaged,” or “enthusiastic” gaming from “problematic,” “pathological,” or “addicted” is critical (Brunborg, Hanss, Mentzoni, & Pallesen, 2015; Charlton & Danforth, 2007; Rehbein et al., 2015). Thus, excessive gaming without adverse consequences should not be classified as a mental disorder (Demetrovics & Király, 2016), and consequently should not be included in the DSM diagnostic system. In regard to this latter point, we agree. However, tolerance, withdrawal, and behavioral salience as criteria are critically discussed by several authors (Griffiths et al., 2016; Kardefelt-Winther, 2014; van Rooij & Prause, 2014) as they are adapted from the substance and gambling diagnostic criteria found in the DSM. Moreover, as stated by

Kuss et al. (2016), both the withdrawal criterion and the tolerance criterion need to be further evaluated, as their specific meaning as related to problem gaming is unclear, reflecting the fact that gaming-related problems may arise without associated withdrawal symptoms (Kaptis, King, Delfabbro, & Gradisar, 2016).

With respect to the withdrawal criterion, the use of experimental studies might add to the clarification of the importance and role of this criterion, similarly to that which has been done in regards to other substances (Juliano & Griffiths, 2004). The tolerance criterion is in our view somewhat imprecisely cited by Kuss et al. (2016): “Do you feel that you should play less, but are unable to cut back on the amount of time you spend playing games?” (p. 3), as the correct wording from Petry et al. (2014) is “Do you feel the need to play for increasing amounts of time, play more exciting games, or use more powerful equipment to get the same amount of excitement you used to get?” (p. 1401). In DSM-5, the wording is “the need to spend increasing amounts of time engaged in Internet games” (American Psychiatric Association, 2013, p. 7). Our opinion is that the section concerning “playing for increasing amounts of time” is problematic, because it leaves out gamers that perhaps have played a considerable amount of time every day for a year, but have not increased their playing time during that period.

Kardefelt-Winther (2015) is especially critical to the criteria regarding withdrawal, tolerance, and preoccupation (salience), and states that these criteria have legitimate explanations due to the widespread (normal) popularity of gaming. He suggests that motivations for playing should be the starting point while assessing excessive gaming. Kuss et al. (2016) refer to King and Delfabbro (2014) who suggest that to differentiate between gaming engagement and addiction one should consider including cognitive content (e.g., the salience) as a criterion. As cognitive content related to self-esteem and identity, for example, is linked to motivation for gaming, this would concur with the ideas of Kardefelt-Winther (2015). Furthermore, as stated by Kuss et al. (2016), gaming disorder may be considered a maladaptive coping strategy, thus maintaining excessive playing, and in accordance with such a view, it may be that tolerance and withdrawal are secondary criteria, and that fulfilling self-esteem and social bonding needs, for example, are primary functions of some forms of online excessive gaming. A factor analysis found that preoccupation, withdrawal, and mood modification should be considered as peripheral criteria of gaming addiction, and thereby supports the notion that these are secondary regarding video game addiction (Brunborg et al., 2015). Thus, the wording of these criteria, if included, should in our opinion clearly reflect some sort of distress or functional impairment.

A consistent theme in Kuss et al.’s (2016) criticism of the criteria for IGD concerns the wording, where the current wording seems to elevate the risk for overpathologizing normal gaming. Studies conducted to identify new behavioral addictions have similarly been criticized for failing to consider functional impairment and stability of the dysfunctional behavior (Billieux, Schimmenti, Khazaal, Maurage, & Heeren, 2015). The DSM-5 (American Psychiatric Association, 2013) highlights the need for clinical

assessment when determining a diagnosis. The American Psychiatric Association (2013) further presents a generic diagnostic criterion to establish disorder thresholds; “the disturbance causes clinically significant distress or impairment in social, occupational, or other areas of functioning” (American Psychiatric Association, 2013, pp. 21). Some of this wording is included in the IGD criteria in DSM-5, but is seldom taken into consideration when assessing IGD using different scales (Petry et al., 2014). Of the nine criteria proposed by Petry et al. (2014), only a few seem to include functional impairment or distress in their wording. If the wording was changed and functional impairment and distress were included in all the criteria, one could separate engaged and addictive gamers within the same scale.

When it comes to further development and evaluation of the IGD criteria, we believe that one should also use proper psychometric approaches to evaluate (e.g., the dimensionality) the IGD construct. This issue was recently raised by van Rooij, Van Looy, and Billieux (2016), arguing that one should see IGD as a formative construct, rather than a reflective construct. When considering IGD as a reflective construct, the IGD diagnosis is assumed to cause the criteria, and the criteria are expected to covary and to be mutually interchangeable. Accordingly, when the construct changes, this change will also be detected in the indicators. van Rooij et al. (2016) argue, however, that such a relationship between the construct and indicators do not hold true for IGD. Instead, they argue that the criteria constitute formative subconstructs, and that the items thus cause/form the construct of IGD. Hence, in a formative construct, the causality flows in the opposite direction from the indicators to the construct, and no correlation or relationship between the indicators is required.

In line with this, van Rooij et al. (2016) argue that models based on formative models should be applied and tested. We think this offers an opportunity to develop the research on the topic of IGD, similar to that which has been done when evaluating the DSM-IV gambling criteria (e.g., Molde, Hystad, Pallesen, Myrseth, & Lund, 2010; Molde, Pallesen, Bartone, Hystad, & Johnsen, 2009).

Kuss et al. (2016) conclude with emphasizing the importance of an established diagnosis and a network providing further research to benefit the patients affected. This is something we also agree with, and future studies should concentrate on prospective studies and treatment studies aimed at providing treatment to those affected. However, we would like to argue that the American Psychiatric Association (2013) should consider the benefits of establishing a general “behavioral addiction” disorder, with gaming disorder as a subtype/diagnosis. This is in line with previous studies indicating a similar etiology between different types of addictions, indicating that it is not the specific object that is the essential feature of the disorders, but rather an underlying condition with shared neurobiological and psychosocial antecedents and shared experiences (Shaffer et al., 2004). A transdiagnostic model such as this would also be beneficial to the development and evaluation of the treatment of behavioral addictions in general, in such a way that treatment training and research could be more effective (Nolen-Hoeksema & Watkins, 2011).

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