COMMENTARY

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From *Pong* to *Pokemon Go*, catching the essence of the Internet Gaming Disorder diagnosis

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.)

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Taking as a starting point, this commentary proposes some issues regarding the diagnosis of Internet Gaming Disorder discussed in Kuss et al. (2016). In our opinion, the confusion in DSM-5 diagnosis could be due to the weak starting point in building the criteria. The criteria such as functional impairment and stability of the dysfunctional behavior are considered. It is suggested that avatar identification, playing motivations, and types of video games should be considered for diagnosis. The diagnostic process is highly influenced by social context and the rapid development of video game industry. The commentary ends by considering the distinction between online and offline video gaming and the critical consideration of everyday behaviors as being addictive.

Keywords: Internet Gaming Disorder, video game addiction, DSM-5 diagnosis

The paper by Kuss, Griffiths, and Pontes (2016) titled "Chaos and confusion in DSM-5 diagnosis of Internet Gaming Disorder: Issues, concerns, and recommendations for clarity in the field" provides a critical account on a subject that the authors have discussed previously (Griffiths et al., 2016) and on which reflection is needed: to what extent is the fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5) an improvement, or does its contradictions create a setback in the diagnosis and conceptualization of Internet Gaming Disorder (IGD)? How can scholars reach a consensus? Kuss et al. (2016) highlighted that the strength of the DSM-5 is that, for the first time, Gambling Disorder has been categorized as a behavioral addiction instead of an impulse control disorder, as in the previous editions. Among the inconsistencies of the DSM-5, the authors highlighted that the American Psychiatric Association (APA) states that IGD could involve non-Internet-computerized games as well. The rest of the paper is devoted to present a consensus on the criteria proposed in the DSM-5 for IGD.

First, let us comment on how the DSM-5 criteria were built. The DSM-5 (APA, 2013, p. 797) explains that "The description of criteria related to this condition is adapted from a study in China," and Petry and O'Brien (2013) specify that "To facilitate this research, the description of internet gaming disorder in Section 3 of DSM-5 includes nine potential criteria, derived from other reports (Tao et al., 2010)." We stop at this point to address the difficulty of reaching a consensus on addiction criteria with such a weak foundation. The clinical participants as well as those in the validation group in the Tao et al.'s study were minors (mean age: 17.6 years; range: 12–27), making the diagnoses more appropriate for a developmental disorder than a diagnosis for adults. Second, presumably, as many of the participants were admitted to the clinic against their will, social desirability could have played an important role in their participation in the study.

The contributions of Kuss et al. (2016) are necessary and appropriate, but the task of reaching a consensus on diagnostic criteria for IGD faces the enormous challenges that video games are a relatively new and rapidly changing behavior, which does not lend itself to rigid diagnosis criteria. To this difficult nature of video games, we must also add that the criteria for behavioral addictions are ambiguous in general. Therefore, we propose some relevant issues in video game behavior that must be addressed to develop accurate and comprehensive diagnosis of IGD as follows.

If we try to take a global look at the criteria, two central issues arise. As pointed by Billieux, Schimmenti, Khazaal, Maurage, and Heeren (2015), most studies on behavioral addictions do not adequately address two mandatory factors: functional impairment and stability of the dysfunctional behavior. In essence, when we compare the functional impairment due to addictions to substances, such as alcohol, cocaine, or heroin, with the impairment due to playing video games, an important difference emerges: the consequences of playing video games are lesser in severity than those of abusing substances. It could be argued that the functional impairment of other drugs, such as nicotine, is also low, allowing nicotine addicts to carry on with their academic, professional, and family life without apparent harm, but the

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harm of nicotine is physiological, with tobacco consumption being one of the first causes of morbidity and mortality in Western countries. This, however, is not the case for video gaming.

The stability of the disorder is the second point. While the DSM-5 requires a 12-month duration of symptoms for diagnosis, the questionnaires used to evaluate the IGD frequently ignore this time specification that may be especially relevant to adolescents. We must consider that 12 months is a long time in the developmental stage of adolescence, and we could, therefore, consider the shorter periods of symptoms. At the same time, one of the characteristics of adolescence is immersion in some behaviors and in some attitudes for shorter periods of time. Adolescence is a tumultuous period when teens often prioritize social capital maintenance over other roles such as those of an academic nature (Carbonell & Panova, 2016). This is one of the defining features of adolescence and has existed long before video gaming. We should keep in mind that IGD diagnosis is for adults and not for teenagers, which some researchers seem to forget. In the dynamic developmental state of adolescence, video game "disorders" may show to be unstable in the long term (Thege, Woodin, Hodgins, & Williams, 2015). This lack of stability has also been described by online chat activity that is phasic with obsessive levels (enchantment) followed by a sharp decline (disillusionment) and then by a more normal level (homeostasis) (Walther, 1999).

We must also not forget that there are still issues with the diagnosis of substance abuse. For example, in DSM-5, caffeine is a substance that produces intoxication and withdrawal, but excess caffeine consumption is not considered a substance use disorder such as alcohol, nicotine, or cannabis (APA, 2013), generating an interesting discussion (Addicott, 2014). Curiously, caffeine use disorder also appears in Section 3 ("Conditions for further study"), just preceding IGD (APA, 2013, p. 792).

Avatar identification and preferring the video game world over the real world are other explanations that have been proposed for the development of negative consequences due to video gaming (Carbonell et al., 2012; Smahel, Blinka, & Ledabyl, 2008). Fuster et al. (2012) suggested that the addictive potential of massively multiplayer online role-playing game (MMORPG) is greater than that of other video games because in MMORPGs, the players may create a new identity with particular desirable attributes, with the dual aim of satisfying their desires and fantasies while at the same time forgetting their frustrations (i.e., escape from negative feelings). Therefore, this psychological operation involves a certain degree of dissociation from reality, and this disassociation, together with a high level of absorption/immersion in the game, may have an important contributory role in the development of maladaptive behaviors in a gaming context. Another point of issue also addressed by Griffiths et al. (2016) is that there are many types of online video games. The complexity of video games implies that other variables could also be relevant to understand problematic use. Much of the literature on video game addiction is based on MMOPRGs; however, in the last few years, other video games have taken the center stage. It is difficult to put the negative consequences of playing MMORPG like World of Warcraft, on the one hand, and Pokemon Go, on the other hand, in the same bag. They have very different features and rules of play; therefore, the consequences of their excessive use may be different. A person playing a game on a smartphone in the street may have different symptoms than those of someone playing alone on the computer or than those of a team sports game. The negative consequences may be different and make it difficult to identify across video gamers. The scene is complicated even further if we consider the Multiplayer Online Battle Arena (MOBA), such as League of Legends, first-person shooter games, sports games, etc.

It is important to understand the reasons and motivations for playing to make an accurate diagnosis (Fuster et al., 2012; Kahn et al., 2015). Some video gamers are professional players who spend many hours training in teams, going to competitions, and earning money. In this case, the high level of engagement in the activity is more similar to competitive athletics than to addictive behaviors. As Kuss et al. (2016) reminded us, Charlton and Danforth (2007) proposed the term "high engagement" for this kind of video gaming. Obviously, a League of Legends video game beginner needs a period of training and exercise to become professional. How should we refer to this period of time? High engagement? Problematic use? Pre-professional? Amateur? And will this professional player be more like a football player or like a poker player? What would his family think and what effect will their thoughts have on the player's emotional and social status? I remember when Weizembaum (1976, p. 111) coined the term "compulsive programmers" and asked himself "How may the compulsive programmer be distinguished from a merely dedicated, hard-working programmer?" when he was observing the coetaneous of Bill Gates and Steve Jobs at his MIT laboratory.

This cultural consideration leads us to bear in mind another point: the social contexts in which video gaming takes place. Asian countries, such as Taiwan, South Korea, and China, are more prone to classifying it as a disorder when a young person is immersed in playing video games because society, and indeed psychologists and psychiatrists, have a stricter consideration of time-wasting and academic performance than in Western countries. Only with these social contexts in mind is it possible to understand why high engagement in video gaming is a mild concern in Western countries and a clinical reason for admission to a military clinic against people's will in China [see the documentary Web junkies (Shlam & Medalia, 2014)], and that the genre of video game which causes addiction in China is World of Warcraft (a MMORPG video game), whereas League of Legends (a MOBA video game) is the favorite video game in South Korea. Some of the Chinese approaches to the treatment of video gaming are also surprising and culturally specific. Compulsory-type treatment used in China is accepted in a culture where the collective prevails over the individual; this type of approach is confronting the sophisticated neurofeedback technique used in some hospitals of South Korea [see the documentary Inside Korea's Gaming Rehab Clinic (James, Armour, & Shea, 2015)]. Therefore, it becomes challenging to identify a single set of adequate diagnostic criteria that span genres from Pokemon Go to League of Legends and cultures from Japan and China to USA and Spain, etc.

As Kuss et al. (2016) also commented, there is a controversial issue about "videogaming disorder (or simply 'gaming disorder') suggesting that excessive videogaming does not necessarily have to occur online." This argument leads me to another point. "Gaming disorder" or "playing disorder"? If the video games that qualify for diagnosis do not have to be played online, could playing board games such as chess be considered a kind of addiction as well? If the differential point is not "being online," then perhaps any kind of play could be considered addictive (i.e., chess, tennis, etc.) and training could be confused with addiction. Therefore, it is important to clarify, where is the key differentiating point? What is the "addictive factor"? It is well established that only alcoholic beverages could lead to addiction (but not other beverages, such as fruit juice or milk) and that "risking something of value" could lead to gambling addiction. In the same vein, are only online games the ones that can lead to addiction, or not? The new releases of offline video games are always online (but not necessarily massive), which will probably make the distinction between online and offline video games superfluous in the future. However, this is still an important question to consider. For example, we can wonder if we need to consider the addictive potential of Pokemon Go simply because it is online, or are there substantial differences between video gaming and other forms of online entertainment? Is being online the key to qualifying as addictive? Or are other elements of gaming, such as repetitive actions and immersive graphics (which also exists offline) what make video games potentially addictive? It is important to have a clear definition of the criteria for addiction, or we might begin pathologizing everyday behaviors and calling them addictive, as happened with dancing tango or reading Harry Potter (Billieux et al., 2015; Carbonell & Panova, 2016).

In summary, we are still a long way from reaching a consensus in the diagnosis of IGD, but as research continues, we are opening new questions which, in the end, will help us make more accurate diagnoses. And the video game world is evolving faster than our research. The release of new types and genres of video games, virtual reality, online video gaming, different video game mechanics and social structures, and the emergence of smartphones as the main platform are some of the new challenges for scholars. Therefore, the paper of Kuss et al. (2016) is a substantial step that helps us to make the development toward this study.

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