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## Issues for DSM-5: Video-gaming disorder?

Daniel L King and Paul H Delfabbro

Internet addiction is a contentious disorder (Pies, 2009). To date, addiction researchers have questioned its construct validity (Shaffer et al., 2000); the precision of definitional criteria (Blaszczynski, 2008; Czincz and Hechanova, 2009); clinical formulation and overlap with other addictive disorders (Sim et al., 2012); aetiology and risk factors (Kuss and Griffiths, 2012); and, the quality of intervention studies (King et al., 2011, 2012). Vladan Starcevic's insightful commentary (Starcevic, 2012) continues this line of critical analysis. Starcevic highlights in particular that there is no clear consensus as to whether internet addiction 'exists', given the variability in terminology, methodology and psychometric measurement used across studies.

Recent developments in regard to the DSM-5 have significant bearing on this debate. On 1 May 2012, the DSM-5 Task Force and Work Groups proposed that internet use disorder, which refers primarily to maladaptive video-gaming (or 'internet gaming') behaviour, should be included in Section III of the DSM-5 as the subject of further empirical inquiry. The proposed DSM-5 category of internet use disorder was intended to provide greater clarity to the clinical formulation of internet-related disorders. However, we argue that, in practice, this diagnostic category may promote further confusion with its conflation of video-gaming and internet use for other purposes.

The lack of a standard definition for internet-related disorders has led to conflicting accounts of the underlying pathology and its symptoms, and

how it should be diagnosed or measured (Griffiths, 2008; Weinstein and Lejoyeux, 2010; Wood, 2008). Thus, while many researchers in the field have called for consensus on the criteria for internet-related disorders, they have meanwhile created their own distinct model of the disorder, often with an accompanying assessment tool. By our count, over a dozen assessment tools for problematic video-gaming have been used in research studies since the year 2000. Starcevic provides an example of this divergence in assessment in citing research by his colleagues on 'problem video game use' (PVGU) (Porter et al., 2010). He notes that PVGU criteria differ from prevailing models of 'excessive' and 'pathological' video-gaming. Specifically, the PVGU concept does not refer to tolerance (i.e., the process whereby increasing amounts of video-game play are required to achieve the former mood-modifying effects). Starcevic argues that it is not clear whether tolerance is associated with video-gaming behaviour, and states that the research evidence is 'equivocal'.

To our knowledge, at least three widely used instruments of pathological video-gaming assess tolerance (i.e., *Problem Videogame Playing Scale* (Salguero and Moran, 2002), *Game Addiction Scale* (Lemmens et al., 2009), *Online Game Addiction Scale for Adolescents* (Wan and Chiou, 2006)). Therefore, divergent evidence on tolerance in video-gaming may be a reflection of the fact that differing assessment tools have been used across studies, some of which measure tolerance and some of which

do not, rather than representing a true division in empirical findings. This again highlights the difficulty in comparing research findings when different definitions are employed, and thus the need for a standardised approach to classification of internet-related disorders.

Another important theoretical issue raised by Starcevic is that internet addiction is a misnomer because it refers to an addiction to a 'delivery mechanism'. In particular, he states:

*'Being addicted to the Internet implies addiction to a "delivery mechanism" or more precisely, addiction to a medium, a means to an end or a vehicle for achieving something. Therefore, Internet addiction is as meaningful a term as "casino addiction", which would denote addictive gambling in casinos.'*

On one level, the notion of addiction to a delivery mechanism is not entirely problematic or unique to internet-based behaviour. Most clinical formulations of addiction usually consider a range of structural and situational characteristics as determinants of the addictive behaviour (Griffiths, 2005). On this view, it could be argued that most, if not all, addictive activities involve addiction to a delivery mechanism of some kind. For example, tobacco addiction involves addiction

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to cigarettes, a delivery mechanism for nicotine, whereas gambling addiction may involve addiction to blackjack or a slot machine, which are delivery mechanisms for wins and other rewards. Video-games, too, are fundamentally delivery mechanisms. Video-gamers are motivated by the rewards offered within the medium of the game (i.e., virtual goods, social feedback, or an escape from reality). Research suggests that certain video-game 'mediums', such as MMORPGS (e.g., *World of Warcraft*), are more addictive than others because they deliver rewards with greater intensity or on partial reinforcement schedules that motivate sustained play (Ng and Wiemer-Hastings, 2005).

However, the uses and structure of the internet are so broad that it is unlikely to be conceptually or clinically meaningful to consider addiction to the internet per se. Accordingly, it has often become necessary to distinguish between addictions on the internet, and addictions to the internet (Widyanto and Griffiths, 2006). In other words, some 'internet addicts' are not addicted to the internet itself, but use it as a medium to fuel other addictions. A gambling addict who uses the internet to gamble is a gambling addict not an internet addict. The internet is just the place where they conduct their chosen (addictive) behaviour. However, some behaviours engaged on the internet (e.g., cybersex, online social networking, etc.) may be behaviours that an individual would only carry out on the internet because the medium is anonymous, non face-to-face, and disinhibiting (Suler, 2001). These online-only behaviours should be the focus of internet use disorder.

The main limitation of the DSM-5 internet use disorder is that it is an overinclusive concept that does not actually refer to any specific addictions to the internet. However, the proposed disorder does refer to 'internet video-gaming'. This is a major problem because it confuses two different delivery mechanisms

(i.e., the internet and a video-game) within a single classification. There is a need to consider which aspects of online use should (and should not) be incorporated into internet use disorder. Inclusion may depend on whether the behaviour occurs exclusively online. Block (2008), for example, provides two types of 'pure' online addiction: online sexual preoccupations (e.g., cybersex) and email/social networking. Browsing websites may also be considered a distinctively online activity given its lack of a real world equivalent.

Starcevic provides some thoughtful recommendations for further study, particularly in regard to better defining video-gaming as a pathological behaviour. However, it was not clear to us whether he was suggesting that internet use disorder should be replaced with 'video game disorders' (presumably, incorporating both online and offline video-gaming), or whether the two problematic criteria of DSM-5 internet use disorder that refer to general internet use should be revised to refer specifically to internet gaming (i.e., to enable consistency with the other seven criteria). Our position is that it is not necessary to categorise video-gaming within internet use disorder, nor to divide video-gaming into multiple subtypes (e.g., online and offline gaming). Similarly, there would be no need to make 'online gambling' a subtype of internet use disorder or gambling disorder.

Unquestionably, the topic of internet-related addictions remains a fertile one for further conceptual development and empirical investigation. In support of this, the proposed DSM-5 internet use disorder suggests that pathologies related to online technology are beginning to be taken more seriously in psychiatry and clinical psychology. An unexpected benefit of the proposed DSM-5 internet use disorder is that it has stimulated a great deal of academic debate on the nature of behavioural addiction itself. Overall, we agree with Starcevic's conclusion that the term internet

addiction can be misleading, and that the proposed DSM-5 internet use disorder would benefit from sub-types referring to specific online activities. We suggest that, because video-gaming is not an exclusively online activity, it should be removed from its current positioning within DSM-5 internet use disorder. The specific context in which video-gaming takes place is relatively unimportant in conceptualising addiction to video-game play. Like pathological gambling, video-gaming may be more appropriately placed in its own diagnostic category, which may be termed 'video-gaming disorder'. This category would refer to an individual's addictive use of video-games, irrespective of whether the video-game is played online or otherwise.

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