

## Chapter 2

# New Concepts, Old Known Issues: The DSM–5 and Internet Gaming Disorder and its Assessment

**Halley M Pontes**

*Nottingham Trent University, UK*

**Mark D Griffiths**

*Nottingham Trent University, UK*

### ABSTRACT

*Background: Following the growing concern about ‘gaming addiction’, the American Psychiatric Association (APA) and numerous scholars have suggested the need for unification and consensus for the assessment of gaming addiction, which is now possible given the recent formal recognition of ‘Internet Gaming Disorder’ (IGD) by the APA since its inclusion in the DSM-5. Aims: In light of this, the aim of this chapter is to present the main findings concerning the development of the Internet Gaming Disorder Test (IGD-20 Test) and the Internet Gaming Disorder Scale – Short-Form (IGDS9-SF), two newly developed psychometric tools aimed to measure the extent of gaming disorder in online and/or offline players. Conclusions: The present findings support the viability of the two newly developed measures as adequate standardized psychometrically robust tools for assessing internet gaming disorder. Consequently, the new instruments represent the first step towards unification and consensus in the field of gaming studies.*

### INTRODUCTION

According to the Entertainment Software Association (2014) [ESA], 59% of the entire American population plays video games, with an average of two gamers in each game-playing household. Additionally, among US households 68% play video games on consoles, 53% play on smartphones, and 41% play on wireless devices (ESA, 2014). During 2012, playing video games via smartphones and wireless devices increased by 22% and 37%, respectively while the average video game player is 31 years old, with 52% being male and 48% female (ESA, 2014).

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Given the pervasiveness of gaming across several countries and different segments of the population, the study of its associated effects on general human behavior, physical and mental health has become an important topic for dedicated research agendas from various scientific domains in addition to psychology and psychiatry (e.g., Blocher, 2015; Dreier, Wölfling, & Müller, 2013; Johnston, Boyle, MacArthur, & Manion, 2013). Taken together, findings in this developing field suggest both favorable and unfavorable effects of gaming, outcomes that could inform decisions made by health care professionals, parents, policymakers (Przybylski, 2014), and other stakeholders such as researchers and the video game industry (Yousafzai, Hussain, & Griffiths, 2013).

## **BACKGROUND**

A relatively large body of research suggests that playing video games has been associated with several positive outcomes when performed in a healthy and balanced way. In a recent study using a nationally representative sample of 4,899 British children and young adolescents gamers and non-gamers (Przybylski, 2014), it was found that low levels of gaming (i.e., < 1 hour of gameplay/day) was associated with higher levels of prosocial behaviors, augmented life satisfaction, and lower levels of internalizing and externalizing problems in comparison to non-gamers. Furthermore, low levels of game engagement accounted for between .5% and .9% of variability in positive psychosocial indicators and between .5% and 1.3% of variability in negative indicators of adjustment. In another recent study (Jackson et al., 2012), using a small-sized sample (N = 491) of children with mean age of 12 years from the US, it was found that irrespective of the type of videogame played, videogame playing was able to predict creativity. Furthermore, Jackson et al. (2012) concluded that regardless of gender or race, greater videogame playing was linked to greater levels of creativity on different levels.

A study conducted by Ewoldsen et al. (2012) aimed to explore the effects of violent gameplay when played cooperatively and competitively in eliciting subsequent cooperative behaviors in a sample of 119 undergraduate students. In this study, four between-subject conditions were used: (i) direct competition, (ii) indirect competition, (iii) cooperation, and the (iv) control to assess subsequent levels of a behavioral measure of cooperation between participants. Based on the study's results, it was demonstrated that participants in the cooperation condition showed significantly more use of tit-for-tat strategies than participants pertaining to the other two competition conditions, which led the researchers to conclude that playing violent games cooperatively increased the use of tit-for-tat strategies, therefore leading to a possible increase in the likelihood of subsequent cooperative behaviors.

In addition to the aforementioned potential positive outcomes, videogame playing has also been linked with increased selective attention in action video game players (Bavelier, Achtman, Mani, & Föcker, 2012), attenuation of cognitive decline in older adults (Basak, Boot, Voss, & Kramer, 2008), enhancement of mental rotation skills in children (De Lisi & Wolford, 2002) and adolescents (Okagaki & Frensch, 1994), alongside general overall improvement of spatial cognition in adolescents and adults (Feng, Spence, & Pratt, 2007). There is also a large literature on the use of video games for educational, medical, and therapeutic purposes (Griffiths, 2010; Griffiths, Kuss, & Ortiz de Gortari, 2013).

Despite the extant reports of positive outcomes associated with gaming, most of these studies present with a different set of limitations that undermine their potential to be generalized to the broader population of gamers and other cultural contexts since most of these studies (i) used cross-sectional research designs, (ii) recruited self-selected samples of university students and therefore, (iii) lacked representative

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