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Non-substance addictive behaviors in the context of DSM-5

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The term addiction holds significance for patients, clinicians, researchers, policy makers and many other groups of people. Thus, how the term addiction is used (and to whom it may apply) has been debated. The term “addiction” originated in Roman times and initially was not linked to substance use (Maddux & Desmond, 2000). However, over time, the term addiction became increasingly linked to substance use such that around the time of DSM-III-R (American Psychiatric Association, 1987), the committee working on substance-related disorders believed that addiction was defined by compulsive drug use (O’Brien, Volkow, & Li, 2006). Nonetheless, the term was largely omitted from the DSM-III-R (American Psychiatric Association, 1994), in part given the charged nature of the term (perceived as pejorative or stigmatizing) and associated complexities (O’Brien et al., 2006). However, in DSM-5 (American Psychiatric Association, 2013), the category of “Substance-related and Addictive Disorders” replaces the “Substance-related Disorders” category found in DSM-IV-TR (American Psychiatric Association, 2000). This difference represents an important change in multiple ways, as described below.

The DSM-5 process involved multiple research workgroups that convened prior to the operation of the committees. Two research workgroups, one focusing on substance-related/addictive disorders and the other on obsessive-compulsive-spectrum disorders, considered how pathological gambling might be considered from a classification perspective, with manuscripts emanating from each workgroup (Petry, 2006; Potenza, Koran, & Pallanti, 2009; Potenza, 2006). An important aspect of the DSM process involved using extant data to direct decisions on how best to define and classify conditions. Since the publication of DSM-IV (American Psychiatric Association, 1994), a considerable amount of research had been conducted into pathological gambling, substance-use disorders, and other potentially or theoretically related conditions. On the basis of research demonstrating clinical, phenomenological, genetic, neurobiological and other similarities between gambling and substance-use disorders, a decision was made to group pathological gambling (now gambling disorder) with substance-related disorders in DSM-5.

Although gambling disorder is presently the only condition in the subsection of “Non-substance-related disorders” in the category of “Substance-related and Addictive Disorders”, other conditions were considered. Notably, Internet gaming disorder has been included in the DSM-5 as a condition requiring further study (Petry & O’Brien, 2013). The inclusion of specific diagnostic criteria for this disorder should help advance clinical and research efforts into its prevalence and impact, and thus its inclusion in DSM-5 represents a significant advance. However, Internet gaming may represent just one facet of problematic use of the Internet and the potential impact of other Internet-related behaviors (e.g., social networking, shopping, pornography viewing, gambling) warrants consideration (Yau, Crowley, Mayes, & Potenza, 2012). Additionally, problematic use of non-Internet-based forms of technology

(e.g., non-Internet video-gaming, television viewing) warrant consideration as being potentially addictive (Sussman & Moran, 2013; Yau et al., 2012). Consistent with the idea that problems with video-gaming might not exist solely within problems with Internet use, studies have found differences relating to risky/problematic Internet use versus risky/problematic video-gaming in samples of adolescents (Desai, Krishnan-Sarin, Cavallo, & Potenza, 2010; Liu, Desai, Krishnan-Sarin, Cavallo, & Potenza, 2011) and adults (Yau, Potenza, & White, 2013). However, the associations between negative measures of health and functioning and these problematic uses of technology in these studies, as well as the proportions of individuals acknowledging risky or problematic levels of these behaviors, highlight the importance of additional research of these behaviors and the need for increased awareness, treatments and prevention strategies for these behaviors.

Although not included in the DSM-5, several other non-substance or behavioral addictions were considered. Specifically, the topics of addictions relating to sex, exercise and shopping were discussed but not included as it was concluded that (p. 481 (American Psychiatric Association, 2013)), “at this time there is insufficient peer-reviewed evidence to establish the diagnostic criteria and course descriptions needed to identify these behaviors as mental health disorders.” Nonetheless, as many individuals seek help for these conditions, it is important to gather information on these behaviors and their clinical correlates in order to continue to improve public health initiatives.

During this millennium, significant advances have already been made in the area of non-substance addictions, although much more progress is needed. At the millennial onset, Constance Holden questioned whether behavioral addictions existed, and at the close of its first decade, she communicated on the proposal to group gambling with substance-use disorders in DSM-5 (Holden, 2001, 2010). Debate on how best to define which disorders constitute addictions remains. For example, considerable debate exists regarding the extent to which food may be addictive and whether food addiction might be an important entity (Avena, Gearhardt, Gold, Wang, & Potenza, 2012; Ziauddeen, Farooqi, & Fletcher, 2012a, 2012b). Regardless of the outcome of the debate, it seems premature to dismiss a food-addiction entity, particularly given potential implications for prevention, treatment and policy (Gearhardt, Grilo, DiLeone, Brownell, & Potenza, 2011). Given the current obesity epidemic, an improved understanding of how a food-addiction model might relate to obesity or other eating-related conditions may help lead to improved prevention, treatment and policy initiatives (Potenza, in press). As neurobiological similarities represented one important consideration in the decision to classify together gambling and substance-use disorders in DSM-5, it is important to note that similar neurobiological features have been reported between gambling, substance-use and eating disorders. For example, relatively diminished ventral striatal activation during the anticipatory phase of reward processing has been observed in pathological gambling, alcohol dependence, tobacco smoking and binge-eating disorder (Balodis et al., 2012; Balodis et al., 2013; Beck et al., 2009; Choi et al., 2012; Peters et al., 2011; Wrase et al., 2007), the last of which shows particularly strong similarities with and high rates of food addiction (Gearhardt, White, & Potenza, 2011). The possibility that diminished ventral striatal activity during anticipatory phases of reward processing might represent an important biomarker for addictive processes warrants further examination.

As with the concept of food addiction, considerable debate exists regarding whether other behaviors (e.g., excessive/compulsive sex (Kor, Fogel, Reid, & Potenza, 2013); see also <http://healthland.time.com/2013/07/23/my-name-is-john-and-i-am-a-sex-addict-or-maybe-not/?iid=hl-main-lead>) might represent addictions. Interestingly, many of these behaviors (excessive/compulsive gambling, sex, eating, and shopping) have been associated with Parkinson’s disease and its treatment (Weintraub et al., 2010), further suggesting a common

biological pathway across these conditions. Thus, while the reclassification of gambling disorder in DSM-5 represents an important development, it is anticipated that additional changes may occur in the future as more knowledge is attained. Gathering information to provide empirical support for such changes is critical in this process, and the resulting understanding should provide a foundation for generating an improved public health through better policy, prevention and treatment approaches.

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