## Commentary on: Are we overpathologizing everyday life? A tenable blueprint for behavioral addiction research

## Defining and classifying non-substance or behavioral addictions

MARC N. POTENZA\*

Departments of Psychiatry, Neurobiology, and Child Study Center and CASAColumbia, Yale University School of Medicine, New Haven, CT, USA

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Multiple controversies exist currently in the field of behavioral addictions. The opinion article by Billieux, Schimmenti, Khazaal, Maurage and Heeren (2015) proposes an approach to considering which behaviors might be considered as foci for addictions. The article raises multiple important points that foster further dialog and highlight the need for additional research. Given that how specific behaviors are considered from diagnostic and classification perspectives holds significant public health implications, targeting and eliminating current knowledge gaps relating to behavioral addictions is an important undertaking.

Keywords: Internet use, gaming, gambling, food, addictions, classification

The article by Billieux, Schimmenty, Khazaal, Maurage and Heeren (2015) raises questions about how best to approach non-substance or behavioral addictions. In the article, the authors propose that recent articles have used atheoretical and confirmatory research approaches to identify a nearly limitless number of new behavioral addictions. The authors raise multiple important points including the potential negative impact of being too inclusive with respect to considering an overly wide range of behaviors as foci for addictions.

An area of current debate exists regarding how best to consider excessive and interfering levels of engagement in non-substance behaviors including gambling, gaming, Internet use, sex, shopping and eating [although this last domain may be considered substance-related with the substance being "food" or specific components thereof; e.g., individual sugars, fats, other entities or combinations of these, with an understanding of the precise impact of specific foods and their constitutive elements having possibly wide-reaching public health implications (Gearhardt, Grilo, DiLeone, Brownell & Potenza, 2011)]. Furthermore, debate exists regarding how best to demarcate normal and abnormal levels of involvement in behaviors (Cloud, 2012; Potenza, 2015).

In the article (Billieux et al., 2015), Billieux and colleagues use several presumably fictitious examples regarding proposed behavioral addictions including "research addiction." While the authors contend that scholars or practitioners "should easily laugh in reaction" to the described case and corresponding diagnostic definition, the example may be more controversial than initially intended, particularly when considered in light of some recent events. For example, in Palo Alto, California, USA, there have been multiple teen suicides that by accounts appear to be linked to intense academic pressure and related distress (NPR Staff, 2015). While the individuals who suicided may or may not have been addicted to work, one should not prematurely dismiss potential psychiatric considerations linked to excessive

patterns of academic pursuits. In the example given by the authors, if distress related to doing well academically led to:
1) compulsive engagement (and "lost time") in academic activities (e.g., "overchecking" one's CV) that were enacted to reduce distress, and 2) neglect of important relations (losing friends) and potentially other opportunities, then the behavior warrants attention. In the case of the teen suicides, it would be important to consider whether academic distress may have led individuals to take their own lives, which conceivably may have been a potential concern in the case example provided by the authors. Given these considerations, there may be dangers in the premature dismissal of certain behaviors or activities as not being addictive or in other ways harmful, just as there may be potential downsides of being overly inclusive in broadening the scope of addictions.

With this in mind, it appears important to consider the core elements of addictions. Proposed core features (Potenza, 2006; Shaffer, 1999) include: 1) continued engagement in a behavior despite adverse consequences; 2) an appetitive urge or craving state that often immediately precedes behavioral engagement; 3) poor self-control over behavioral engagement; and 4) compulsive behavioral engagement. Of these, the first feature may be particularly relevant when considering the potential impact on affected individuals and those around them. Of note, perceptions of behaviors as addictive may change over time as awareness of negative consequences increases (e.g., consider the changes in perceptions of tobacco use over the past fifty years in the setting of increased knowledge of harms associated with smoking).

<sup>\*</sup> Corresponding address: Marc N. Potenza, MD, PhD; CMHC, 34 Park Street, SAC Room S-104, New Haven, CT 06519 USA; Phone: +1-203-974-7356; Fax: +1-203-974-7366; E-mail: marc.potenza@yale.edu

In agreement with the theme of the authors' article, this author believes that a systematic approach should be undertaken when considering whether a behavior may constitute the focus of an addiction. Such an approach was taken in the re-classification of pathological gambling (now gambling disorder) from a category of "Impulse-control Disorders (ICDs) Not Elsewhere Classified" in DSM-IV-TR (APA, 2000) to one of "Substance-related and Addictive Disorders" in DSM-5 (APA, 2013; Petry, 2006; Potenza, 2006; Potenza, Koran & Pallanti, 2009). In this case, several research workgroups considered pathological gambling and other disorders characterized by impaired impulse control. Similarities with and differences from substance-use disorders (conditions well established as addictions) were reviewed, systematically considering data from epidemiological, clinical, phenomenological, psychological, genetic, neurobiological, cultural and other domains (Petry, 2006; Potenza, 2006; Potenza et al., 2009). Such an approach, one that focuses on incorporating findings from a broad range of domains, will be important to pursue with a range of potentially addictive behaviors (e.g., gaming, forms of Internet use, sex, shopping and eating) to consider the extent to which each one may have addictive potential.

The authors also note the importance of considering differences across addictions. Such differences are important to consider from a treatment perspective. For example, medications that have indications for the treatment of one addiction (e.g., disulfiram for alcohol dependence) may not have efficacy in the treatment of other addictions, particularly given different mechanisms of action of specific medications and specific aspects of the addiction (e.g., alcohol metabolism in alcohol dependence). While the authors mention that subgroups of individuals warrant consideration (e.g., those with different forms of problematic Internet use), enthusiasm for the impact on treatment development might be tempered given challenges in using subtyping measures to match individuals to specific behavioral therapies (e.g., see project MATCH, in which subgroups of individuals with alcohol dependence did not differ in hypothesized responses to behavioral therapies (Project MATCH Research Group, 1997)). On the other hand, there appear to be important differences in the sociodemographic features as they relate to patterns of Internet use; for example, males appear to have more problems with Internet-related gaming and pornography viewing and females more problems with social networking (Rehbein & Mößle, 2013). As such, considering multiple forms of Internet use may have important public health implications, and systematic study of these behaviors across multiple domains may provide insight into the extent to which excessive and problematic engagement may be best classified as addictions. Appropriate classification holds multiple implications. From a scientific perspective, related disorders may provide a framework for testing hypotheses regarding the pathophysiologies of individual behavioral addictions and thus promote more rapid understandings of disease processes. Similarly, interventions with demonstrated efficacy for substance addictions may hold promise for behavioral addictions, and this may guide prevention, treatment and policy efforts. Classification of disorders as addictions may help promote educational and clinical efforts if, for example, teaching about and treating behavioral addictions become incorporated into existing venues for teaching about and treating substance addictions. As such, the appropriate definition and classification of conditions as behavioral addictions holds significant public health implications (Potenza, 2015).

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