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References

1. Kourosh A. S., Harrington C. R., Adinoff B. Tanning as a behavioral addiction. *Am J Drug Alcohol Abuse* 2010; **36**: 284–90.
2. Shulman T. D. *Something for Nothing: Shoplifting Addiction and Recovery.* Haverford, PA: Infinity Publishing; 2003.
3. Sussman S. Love addiction: definition, etiology, treatment. *Sex Addict Compuls* 2010; **17**: 31–45.
4. Mihordin R. Behavioral addiction—quo vadis? *J Nerv Ment Dis* 2012; **200**: 489–91.
5. Lee S., Mysyk A. The medicalization of compulsive buying. *Soc Sci Med* 2004; **58**: 1709–18.
6. Kardefelt-Winther D., Heeren A., Schimmenti A., van Rooij A., Maurage P., Carras M. How can we conceptualize behavioral addiction without pathologizing common behaviors? *Addiction* 2017; **112**: 1709–15.
7. Wright N. P., Turkington D., Kelly O. P., Davies D., Jacobs A. M., Hopton J. *Treating Psychosis: A Clinician's Guide to Integrating Acceptance and Commitment Therapy, Compassion-Focused Therapy, and Mindfulness Approaches Within the Cognitive Behavioral Therapy Tradition*. Oakland: New Harbinger Publications; 2014.
8. Open Science Framework. Behavioral addiction: open definition development. Available at: https://osf.io/q2vva/ (accessed 2 March 2017) (Archived at http://www.webcitation.org/6pCeAMqOS on 24 March 2017).

SUBSTANCE AND BEHAVIORAL ADDICTIONS MAY SHARE A SIMILAR UNDERLYING PROCESS OF DYSREGULATION

Using inclusion–exclusion criteria to define 'addiction' may not be that helpful. A truly theoretical perspective of addiction can help us understand what we are really grappling with. Addiction is probably a process of dysregulation of an appetitive motivation system. Such dysregulation can occur regarding several behaviors, and vary in severity.

In an attempt to clarify what should be considered a behavioral addiction, and to prevent overpathologizing common behaviors, Kardefelt-Winter *et al.* [1] proposed to define it as 'repeated behavior leading to significant harm or distress of a functional impairing nature, which is not reduced by the person and persists over a significant period of time'. The authors neglect to mention that the debate on the definition of behavioral addictions is not new, and holds for substance addictions as well. For example, a harm–dysfunction model has been proposed to distinguish 'real' alcoholism from a more transient, excessive drinking pattern [2]. Also, identifying exactly when substance misuse is eliciting 'significant' impairment, unfortunately tends to be a function of subjective self-judgements, may be context-driven and involves making qualitative decisions regarding quantitative phenomena [1,3]. Kardefelt-Winter *et al.* also propose to exclude harmful behaviors that result from a willful choice as a behavioral addiction. Choice, or lack of choice, however, is also an ongoing issue in the substance addictions debate that may or may not distinguish 'real' alcoholism, for example, from excessive drinking [4]. In the midst of an addiction, it may certainly be a willful choice to drink excessively, based on a steep delayed discounting curve, or moment-by-moment thinking, or due to a lack of immediate negative consequences (yet) [3–5]. That, however, does not mean it is not an addiction. Also, Kardefelt-Winter and colleagues propose to exclude impairment-related behaviors that result from a coping strategy. If this exclusion criterion would be used for diagnosing alcohol dependence, its prevalence rates would drop enormously. In fact, a coping strategy model of substance and behavioral addiction exists, which would argue for coping serving as an inclusion criterion [3].

These things considered, the proposed definition of behavioral addiction and suggested exclusion criteria are harsh, and many substance addiction diagnoses would not survive this definition. Later in the paper, the authors seem to conclude that mobile phone addiction and social media addiction do not exist because there would be no indications of significant functional impairments. The literature on these topics, however, is very young due to relatively recent emergence of these technologies in mainstream use. The evidence concerning functional impairments of these behaviors is building [6,7], and much work still has to be done.

Discussion about the nature of behavioral addictions such as in Kardefelt-Winter *et al.* is very welcome. However, we view it as most probable that addiction is a problem of life-style and associational memory, which interface with neurobiological processes associated with obtaining appetitive effects. That is, addiction probably reflects an appetitive motivation neurobiological system gone awry; may be recurrent or periodic; may be severe or not; may appear normative or deviant; and is likely to be very distressful only at some point [3].

Declaration of interests

None.

Keywords Behavioral addiction, coping, definitions, inclusion and exclusion criteria, social media, substance addiction, theory.

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References

1. Kardefelt-Winther D., Heeren A., Schimmenti A., van Rooij A., Maurage P., Carras M. *et al.* How can we conceptualize behavioural addiction without pathologizing common behaviors? *Addiction* 2017; **112**: 1709–15.
2. Wakefield J. C., Schmitz M. F. How many people have alcohol use disorders? Using the harmful dysfunction analysis to reconcile prevalence estimates in two community surveys. *Front Psychol* 2014; **5**: 22. pp. [Corrigendum: 2014; 5, Article 144, 3 pp.] Article 10.
3. Sussman S. *Substance and Behavioral Addictions: Concepts, Causes, and Cures*. Cambridge, UK: Cambridge University Press; 2017.
4. Yaffe G. Lowering the bar for addicts. In: Poland J., Graham G., editors. *Addiction and Responsibility*. Cambridge, MA: MIT Press; 2011, pp. 113–39.
5. Bickel W. K., Mueller E. T., Jarmolowicz D. P. What is addiction? In: McCrady B. S., Epstein E. E., editors. *Addictions: A Comprehensive Guidebook*, 2nd edn. Oxford, UK: Oxford University Press; 2013, pp. 3–16.
6. Lin Y. H., Chiang C. L., Lin P. H., Chang L. R., Ko C. H., Lee Y. H. *et al.* Proposed diagnostic criteria for smartphone addiction. *PLOS ONE* 2016; **11**: e0163010.
7. van den Eijnden R. J., Lemmens J. S., Valkenburg P. M. The social media disorder scale. *Comput Hum Behav* 2016; **61**: 478–87.

BEHAVIOURAL ADDICTION AND SUBSTANCE ADDICTION SHOULD BE DEFINED BY THEIR SIMILARITIES NOT THEIR DISSIMILARITIES

The components model of addiction uses the symptoms of substance addiction because common components across different behaviours are key to delineating addictions in the first place. If the exclusion criteria proposed by Kardefelt–Winther et al. for non-substance-use behaviours were applied to substance users, few individuals would be diagnosed as addicts.

In their critique of pathologizing everyday behaviours as addictions, Kardefelt-Winther *et al.* [1] note correctly that the components model of addiction [2] uses the symptoms of substance addiction. This is because common components are key to delineating addictions in the first place. All addictions have idiosyncrasies (such as chasing losses in gambling), but it is the similarities (i.e. the core components) that are key to the behaviour being labelled an addiction. If behavioural addictions do not share these core components, they should not be labelled as addictions and should be called something else. Kardefelt-Winther *et al.* [1] also argue that tolerance and withdrawal components are difficult to apply convincingly. Tolerance and withdrawal have been demonstrated empirically and clinically in pathological gambling [3,4] and (to various degrees) video gaming [5,6]. Ironically, removing these from core addiction criteria may actually increase the prevalence of everyday leisure activities being labelled as an addiction. It is also worth noting that the components model of addiction specifies that all six core components need to be endorsed to be defined operationally as an addiction, but in actuality very few individuals are. The real issue is that all the many instruments based on the components model have lower cut-off scores that do not endorse all six items, so the true prevalence rates of behavioural addiction are arguably inflated in most published studies.

Kardefelt-Winther *et al.* provide four exclusion criteria and argue that behaviours should not be classed as a behavioural addiction if:

1. The behaviour is better explained by an underlying disorder (e.g. a depressive disorder or impulse-control disorder).
2. The functional impairment results from an activity that, although potentially harmful, is the consequence of a willful choice (e.g. high-level sports).
3. The behaviour can be characterized as a period of prolonged intensive involvement that detracts time and focus from other aspects of life, but does not lead to significant functional impairment or distress for the individual.
4. The behaviour is the result of a coping strategy (p. 2).

However, if these criteria were applied to substance abuse, very few substance users would be classed as addicted. For instance, it is proposed that any behaviour in which functional impairment results from an activity that is a consequence of wilful choice should not be considered an addiction. I cannot think of a single addictive behaviour that when the person first started engaging in the behaviour (e.g. drinking alcohol, illicit drug-taking, gambling) was not engaged in wilfully. The key issue (as highlighted by Kardefelt-Winther *et al.* in their operational definition of behavioural addiction) is sustained harm, distress and functional impairment in the behaviour (not excluding some behaviours a priori).