COMMENTARY

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).

Also, not being classed as an addiction if the behaviour is secondary to another comorbid behaviour (e.g. a depressive disorder) or is used as a coping strategy again means that some other substance addictions (e.g. alcoholism) would not be classed as genuine addictive behaviours using such exclusion criteria, because many substance-based addictions are used as coping strategies [7] and/or are symptomatic of other underlying pathologies [8]. The pathways model of pathological gambling [8] (co-written by one of the co-authors of the Kardefelt-Winther *et al.* paper) demonstrates explicitly that some types of gambling addiction are as a consequence of other more global comorbidities and that the behaviour is symptomatic of these more primary disorders. Saying that a behaviour cannot be considered a behavioural addiction if it is used for coping or arises as a consequence of other underlying disorders seems unduly stringent if no such exclusion criteria are applied to substance addictions.

Kardefelt-Winther *et al.* call for more person-centred case studies and in-depth qualitative studies to help overcome weaknesses in the field. However, most of the survey research into the behavioural addictions that were cited in fact arose out of published case studies and small-scale qualitative studies including addictions to work [9], video gaming [10,11], internet use [12], social networking [13], exercise [14] and dancing [15]. Pathological gambling (decades before it was classed as a behavioural addiction in the 2013 DSM-5 [16]) opened the theoretical floodgates in the behavioural addiction area. Once one behaviour that does not involve the ingestion of a psychoactive substance is classed formally as an addiction, there is no a priori reason why any other behaviour cannot be classed as such. Kardefelt-Winther *et al.* appear to suggest that leisure activities should not be pathologized yet, apart from work, every single human activity outside

biological necessity (e.g. breathing, urinating, defecating, eating, sleeping) [17] can arguably be defined as a leisure activity. Very few of the thousands of leisure activities in which individuals engage have ever been written about in terms of addiction in peer-reviewed scientific papers. The very few excessive leisure activities that have been investigated from an addiction perspective using survey research were instigated typically following the publication of small-scale qualitative studies.

In summary, similarities in core components are key to defining addictions, and applying three of the exclusion criteria (1, 2 and 4) to non-substance use behaviours make it almost impossible for any behaviour to be classed as an addiction, yet many substance addictions are comorbid with other underlying disorders (e.g. depression), are engaged in wilfully during the initiation of the behaviour and/or are engaged in as a coping response to counteract other problems in the individual's life.

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Keywords Addiction comorbidity, addiction components, addiction components model, behavioural addiction, gambling addiction, gaming addiction, substance addiction.

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