THE RATES OF CO-OCCURING BEHAVIOURAL ADDICTIONS IN TREATMENT-SEEKING INDIVIDUALS WITH OBSESSIVE-COMPULSIVE DISORDER: A PRELIMINARY REPORT

ABSTRACT:

Objectives: To assess the rates of co-occurring putative 'behavioural addictions' in patients with obsessive-compulsive disorder (OCD).

Methods: Twenty-three international centres specialising in the treatment of OCD were invited to participate in a survey of the rates of behavioural addictions and other relevant comorbidity within their samples.

Results: Sixteen of 23 (69.6%) invited centres from 13 countries had sufficient data to participate in the survey. The use of validated diagnostic tools was discrepant, with most centres relying on a 'clinical diagnosis' to diagnose behavioural addictions. The final sample comprised of 6916 patients with a primary diagnosis of obsessive-compulsive disorder (OCD). The reported rates of behavioural addictions were as follows: 8.7% for problematic Internet use, 6.8% for compulsive sexual behaviour disorder, 6.4% for compulsive buying, 4.1% for gambling disorder and 3.4% for Internet gaming disorder.

Conclusions: Behavioural addictions should be better assessed for in patients with OCD. The absence of diagnostic scales developed specifically for behavioural addictions and overlapping obsessive-compulsive phenomena such as compulsive checking of information on the Internet may explain the relatively high rate of problematic Internet use in this sample. The study encourages better efforts to assess and to conceptualise the relatedness of behavioural addictions to obsessive-compulsive "spectrum" disorders.

Keywords: diagnosis, behavioural addictions, obsessive-compulsive disorder.

Introduction

A "behavioural addiction" refers to a persistent repetitive behaviour that is difficult to cease and that may escalate despite the negative consequences (e.g. distress, impact on functioning, time lost) of engaging in the behaviour (Kardefelt‐Winther et al., 2017). The list of disorders believed to constitute putative behavioural addictions is currently being debated, but it usually includes gambling disorder, Internet gaming disorder (problematic online gaming, gaming disorder), problematic Internet use ("Internet addiction"), compulsive buying (buying disorder) and compulsive sexual behaviour disorder ("sex addiction") (Starcevic and Khazaal, 2017).

This study builds on previous studies (Brakoulias et al., 2017, Lochner et al., 2014, Lochner et al., 2005) that have attempted to assess rates of co-occurring disorders in patients with OCD. The study aimed to explore how specialist OCD centres are assessing for co-occurring behavioural addictions with specific enquiry regarding the rates of all commonly recognised behavioural addictions in patients with a primary diagnosis of OCD based on a large international multisite collaboration. Considering a previous study by Lochner et al, (2014) had found elevated rates of compulsive buying in patients with OCD, it was hypothesised that rates of other behavioural addictions that were not assessed in that study, but that were phenomenologically

similar to the compulsions of OCD, e.g. problematic Internet use, would also be elevated.

Materials and methods

A questionnaire was constructed and emailed to a large group of international OCD research centres based on a previous study by the same authors (Brakoulias et al., 2017). Each centre was surveyed on the rates of a defined list of behavioural addictions (gambling disorder, Internet gaming disorder, problematic Internet use, compulsive buying and compulsive sexual behaviour disorder) within their existing data sets of participants with a primary diagnosis of OCD and how these were assessed. Each research centre had obtained their own ethics approval for the collection and publication of their data. Data were also collated on the rates of the disorders that are considered to be related to OCD such as hoarding disorder, body dysmorphic disorder, trichotillomania and skin-picking disorder, as well as other disorders that may have an important relationship with OCD such as tic disorder, attention deficit/hyperactivity disorder (ADHD) and autism spectrum disorder (ASD). Where data were incomplete for a particular behavioural addiction, the site with the missing data was omitted from the specific analysis. The data was statistically evaluated using descriptive statistics.

Results

The survey response rate was 69.6% with 16 of 23 centres participating in the survey, providing a total sample of 6916 patients. The centres were in: Buenos Aires (Argentina), Sydney (Australia), Brazil (a consortium of sites), Hamburg (Germany), Bengaluru (India), Pisa (Italy), Rome (Italy), Turin (Italy), Hyogo (Japan), Mexico

City (Mexico), Braga (Portugal), Cape Town (South Africa), Valencia (Spain), London (UK), Boston (USA) and Oconomowoc (Wisconsin, USA). The mean age of the sample was 34.5 years (SD=12.1), 51.7% (n=3577) were male and the mean Y-BOCS total score was 24.8 (SD=6.8). The centres involved in the study used either the MINI International Neuropsychiatric Interview or the Structured Interview for DSM-IV TR (SCID) between the years 2000 to 2018. These validated assessment tools were used to diagnose OCD and common comorbid disorders, but these tools do not assess behavioural addictions. The survey also revealed that behavioural addictions were not assessed in all centres and that the method of diagnosis was discrepant with most centres using a "clinical diagnosis", whereas others used specific validated diagnostic assessment tools such as: the SCID-ORCD (du Toit et al., 2001) for the assessment of obsessive-compulsive and related disorders (this scale assesses some, but not all putative behavioural addictions) used by the Cape Town site; the South Oaks Gambling Screen (Lesieur and Blume, 1987) for assessment of gambling disorder (used by the Valencia site); and the Autism Quotient (Woodbury-Smith et al., 2005) for assessment for ASD (used by the London site). The rates of behavioural addictions and other disorders are reported in Table 1. The rates of these disorders ranged from 8.7% (problematic internet use) to 3.4% (internet gaming disorder).

Discussion

This is the first study to specifically report the rates of a comprehensive list of co-occurring behavioural addictions in patients with OCD. Moreover, the study is based on the largest international survey of OCD centres around the world. Its findings have to be regarded as preliminary because of the lack of uniform diagnostic criteria, the absence of diagnostic assessment instruments across the centres, and the fact that only

some of the centres assessed all the disorders of interest. It is important to note that the SCID-ORCD (used only by the Cape Town site) does not assess for problematic internet use or internet gaming disorder (du Toit et al., 2001). Recognition of behavioural addictions has also increased over time and there is a strong possibility that co-occurrence rates have been underestimated.

Nevertheless, the results suggest that some behavioural addictions may be more closely related to OCD than others, at least as far as their rates of co-occurrence are concerned. Thus, the rates of compulsive buying and compulsive sexual behaviour disorder in patients with OCD were higher than in the general population and similar to those of OCD-related disorders such as trichotillomania and skin-picking disorder. Both compulsive buying and compulsive sexual behaviour disorder are thought by some researchers to mediated by dorsal striatal (compulsive) neural circuits (Mueller et al., 2010), and compulsive buying shares some symptom overlap with hoarding behaviour (Mueller et al., 2010). It should be acknowledged that these disorders may be difficult to differentiate.

Although the rate of co-occurring problematic Internet use (often referred to as "Internet addiction") was the highest of all behavioural addictions in this study, the concepts of problematic Internet use and Internet addiction are increasingly regarded as inadequate because they refer to a medium (i.e., the Internet) and a wide variety of activities that are performed online, such as gaming, gambling, social networking, shopping, sexual activities and the checking of health-related or other information (i.e. "googling") (Starcevic and Aboujaoude, 2017). The checking of information on the Internet may be compulsive in nature and a symptom of OCD and this may lead to

some diagnostic overlap and confusion. It may also be the case that some clinicians subsumed Internet gaming under problematic Internet use, thus inflating co-occurrence rates. New diagnostic tools need to be able to differentiate symptoms as either an expression of OCD or behavioural addictions.

The interpretation of lower rates of gambling disorder and Internet gaming disorder in OCD patients should also be made with caution due to the absence of a formal assessment tool. It is also difficult to speculate on the relationship between types of behavioural addictions and OCD based on prevalence rates. It should be noted that the neurobiology underpinning all these disorders remains speculative and that the concept of "behavioural addictions" is still evolving with compulsive sexual behavior disorder for instance, being conceptualized as an impulse control disorder in ICD-11. It should also be noted that criteria for behavioral addictions are changing and, as a consequence, the current rates may not be consistent with current or future prevalence estimates.

Conclusions

In conclusion, some putative behavioural addictions (compulsive buying and compulsive sexual behaviour disorder) seem to occur in patients with OCD with frequencies that are comparable to those of disorders considered to be related to OCD, but much more study is needed to understand how best to conceptualise these disorders. The study highlights the need to develop more widely used and specific diagnostic instruments that can differentiate behavioural addictions from compulsive behaviours.

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Table 1: The rates of co-occurring behavioural addictions, hoarding disorder, body dysmorphic disorder, trichotillomania, skin picking disorder, tic disorder, attention deficit/hyperactivity disorder and autism spectrum disorder in individuals with a primary diagnosis of obsessive-compulsive disorder.

Diagnosis	Number with diagnosis	Total samples in which the diagnoses were reported	Rates
Problematic Internet use	210	2405	8.7%
Compulsive sexual behaviour disorder	218	3200	6.8%
Compulsive buying	241	3750	6.4%
Gambling disorder	165	4059	4.1%
Internet gaming disorder	82	2405	3.4%
Hoarding disorder	268	2724	9.8%
Body dysmorphic disorder	477	5584	8.5%
Trichotillomania	312	4198	7.4%
Skin picking disorder	359	4298	8.4%
Tic disorder	796	5564	14.3%
Attention deficit/ hyperactivity disorder	572	4645	12.3%
Autism spectrum disorder	191	1651	11.6%

Please note: Only the Cape Town site used the SCID-ORCD. Only the Valencia site used the South Oaks Gambling Screen. Only the London site used the Autism Quotient.