



## Is hoarding a different disorder?



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“...the creation of a new diagnosis in the DSM-5 is desirable not just for hoarding, but also for other OCD dimensions, such as symmetry/ordering, and for other OCD subtypes.”

Obsessive–compulsive disorder (OCD) is a complex and disabling disorder. The core of the complexity is the fact that OCD is a heterogeneous disorder with respect to its clinical presentation (i.e., age at onset, pharmacological response, pattern of comorbidities and symptom dimensions), and its neurobiological and neurocognitive dysfunctions. Among these complex clinical pictures, the manifestation of a condition with prevalent hoarding symptoms has been proposed as a separate disorder and its potential diagnostic criteria are now under revision for the inclusion in the DSM-5 [101].

There are two main issues: is there sufficient evidence to conceptualize hoarding as a separate disorder from OCD? And what would be the utility of separating hoarding disorder from OCD?

The answer to the first question is the most complex. In fact, from a neuroscientific perspective, the categorical dissection of a brain disorder from another

must take into account the systematic evaluation of several dimensions, ranging from genetics to clinical phenomenology.

The epistemological input for an operation of this kind is usually represented by epidemiological studies. In this case, the prevalence of hoarding in OCD samples seems to vary consistently across studies, but the overlap is significant. However, a recent meta-analysis demonstrates that this dimension may be regarded as an independent factor [1], suggesting that the issue needs to be methodically examined and deserves better conceptualization in order to definitely view hoarding as a subtype of OCD or, rather, a discrete and separate disorder. If carefully analyzed, many differences can be found.

First, some discrepancies in the phenomenological gestalt of the two conditions are worth highlighting. Obsessions are typically and tautologically defined as intrusive and egodystonic, whereas, often, thoughts related to hoarding and

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acquisition of items are not. Furthermore, these are often correlated to the experience of pleasure and reward, a feature that is more commonly shared with the cluster of impulse–control disorders rather than with ‘classic’ OCD [2]. Indeed, a recent study proposed that OCD patients with hoarding symptoms may be classified in a putative impulsive/compulsive subtype of OCD, characterized by the presence of poor insight, poor resistance and control over compulsions and poor clinical outcome [3].

Recently, some authors discussed a new conceptualization of OCD as a behavioral addiction, based on new insights on the reward system dysfunction in these patients. In this perspective, hoarding seems to show differences with respect to OCD in presenting a value attribution rather than reward attribution bias.

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Moreover, hoarding has long been associated with higher rates and different types of comorbidities, in particular mood, impulse–control and tic disorders [4]. The presence of hoarding symptoms has indeed become an exclusion criterion in the majority of OCD clinical trials.

Of particular interest is the comorbidity with ADHD. Several studies found high rates of comorbidity between OCD and ADHD, and a recent study demonstrated that the presence of hoarding symptoms is the only clinical variable independently associated with the presence of ADHD in a sample of OCD patients with a childhood onset of the disorder [5]. Moreover, Tolin and Villavicencio analyzed the comprehensive symptomatological patterns of hoarding disorder and nonhoarding OCD patients and found that hoarding and related behaviors are significantly predicted by the inattentive cluster of symptoms of ADHD, but not by obsessive–compulsive symptoms [6], suggesting that, on the one hand, neurocognitive impairment is present in the clinical presentation of the disorder (or may be in some way involved in its pathophysiology) and, on the other hand, that OCD and hoarding could be more distant entities than previously thought. However, more evidence is needed to substantiate this hypothesis.

In addition to this, another study showed that patients with prominent hoarding symptoms showed impaired decision-making on the Iowa Gambling Task, as well as reduced skin conductance responses when compared with patients with dimensionally different forms of OCD [7].

Second, both genetic and imaging research provides interesting data. Neuroimaging studies suggest that different obsessive–compulsive symptom dimensions are mediated by relatively distinct components of fronto-striato-thalamic circuits, and that hoarding is not an exception. Indeed, a study by Mataix-Cols and colleagues showed that during a symptoms provocation task of the left precentral gyrus and right orbitofrontal cortex, OCD patients with prevalent hoarding symptoms had increased neural activation when compared with controls and OCD patients with other symptom dimensions [8].

Finally, a genetic study reports that in a large sample of OCD families, those with a higher rate of hoarding had a significant linkage of OCD to chromosome 14, whereas families with lower rates of hoarding had a linkage to chromosome 3 [9].

All these studies suggest, but do not necessarily demonstrate, that hoarding may be a separate disorder from OCD. But what would be the utility in separating hoarding disorder from OCD?

A more specific and neuroscientific approach to psychiatric treatment implies the treatment of each symptomatic dimension of the disorder, based on their neurobiological underpinnings. Thus, separating hoarding from the other OCD dimensions may become useful in the investigation of its neurobiological underpinnings and in the development of more circuit-based treatments. From this perspective, the creation of a new diagnosis in the DSM-5 is desirable not just for hoarding, but also for other OCD dimensions, such as symmetry/ordering, and for other OCD subtypes.

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#### Financial & competing interests disclosure

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■ **Website**

- 101 DSM-5: The Future of Psychiatric Diagnosis. [www.dsm5.org](http://www.dsm5.org)