

UPDATE ARTICLE

Hoarding disorder: a new diagnostic category in ICD-11?

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Despite the long-held view that hoarding is a symptom of both obsessive-compulsive disorder and obsessive-compulsive personality disorder, increased evidence has emerged during the last 20 years suggesting that hoarding represents a distinct form of psychopathology. This study reflects the discussions on the nosological status of hoarding carried out by the WHO ICD-11 Working Group on the Classification of Obsessive-Compulsive and Related Disorders. The distinctiveness of hoarding is based on its having core symptoms that differ from those of other disorders, as well as distinctive neurobiological correlates and treatment responses. Furthermore, data showing the clinical utility, global applicability, and appropriateness of the concept of hoarding disorder outside specialty mental health settings suggest that this condition should be included in ICD-11. Finally, given the focus of ICD-11 on primary care and public health, the Working Group suggests that poor insight and severe domestic squalor may be considered as specifiers for hoarding disorder in ICD-11.

Keywords: Hoarding; obsessive-compulsive disorder; obsessive-compulsive personality disorder; anankastic personality disorder; DSM-5; ICD-11; classification; nosology

Introduction

Despite the long-held view that hoarding is a symptom of both obsessive-compulsive disorder (OCD) and obsessive-compulsive personality disorder (OCPD), increased evidence has emerged during the last 20 years suggesting that hoarding represents a distinct form of psychopathology. However, the arguments supporting key differences between hoarding and other OCD symptoms are not immune to criticism. For instance, some authors have expressed the fear that the separation of hoarding from OCD might be the first step toward the dismantling of what has been considered a valid and useful diagnosis so far (i.e., OCD). They are concerned that following this logic will lead to the creation of entities such as washing disorder, checking disorder, or ordering disorder. The fact that each OCD symptom dimension has some particularity does not indicate that it should comprise an independent disorder.

It is important to address whether splitting of diagnoses is indeed valuable in primary care and in a global context where the vast majority of the world has too few, rather than too many, possessions. Such a significant shift in the conceptualization of hoarding may be justifiable, however, if data shows it to be clinically useful and to translate into specific treatments and better outcomes. The present study reflects the discussion on the nosological status of

hoarding carried out by the WHO ICD-11 Working Group on the Classification of Obsessive-Compulsive and Related Disorders, appointed by the WHO Department of Mental Health and Substance Abuse and reporting to the International Advisory Group for the Revision of ICD-10 Mental and Behavioural Disorders.

Historical background

Interest in the phenomenon of hoarding emerged in the early 20th century alongside the expansion of the psychoanalytical movement. It was particularly prompted by Freud's 1908 essay,¹ where he detailed the so-called "anal character," i.e., "a regular combination of three peculiarities," namely orderliness (i.e., "body cleanliness, reliability, and conscientiousness in the performance of petty duties"), obstinacy (i.e., "defiance, with which irascibility and vindictiveness may easily be associated"), and parsimony (which could "be exaggerated to the point of avarice"). More specifically, Freud's description of parsimony was perhaps one of the earliest sketches of what would later be called hoarding.

The concept of anal character markedly influenced the subsequent approach to hoarding.² For instance, a few years later, in 1912, Jones identified two key aspects related to Freud's anal trait of parsimony, namely, "the refusal to give" and "the desire to gather, collect, and hoard." Jones further suggested that money, books, time, food, and other objects were "copro-symbols," i.e., fecal equivalents of the anal-erotic character. Hoarding possessions were also later conceptualized as phallic symbols (to represent their subjective value),³ transitional objects (to account for the close attachment children

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have to them),⁴ a pathological way of relating (i.e., a hoarding orientation),⁵ and as last vestiges of the patients' object relations (aimed at maintaining ties with the external world),⁶ among others.

Initially, the term hoarding was introduced into the scientific terminology mainly to describe food-collecting behavior in animals, especially in rodents.⁷ In the 1960s, Bolman & Katz were the first to use the term to describe a human psychopathological phenomenon.⁸ Later on, hoarding was progressively reported in a range of unrelated psychiatric disorders, from OCD to schizophrenia, thus raising questions about how best to classify such behaviors.⁷ In 1987, Greenberg⁹ provided, in a description of four cases, several psychopathological features seen in primary hoarding, namely: onset in the third decade of life, preoccupation with hoarding to the exclusion of work and family, diminished insight, little interest in receiving treatment, and no attempt to curb the compulsion.

As theoretical approaches moved away from the classic emphasis on psychoanalytical factors toward a focus on functional relationships between cognitions and behaviors, alternate etiopathogenetic models were proposed.² For instance, Furby¹⁰ described two types of behaviors on the basis of their underlying motivations: instrumental saving, where the possession fulfills some desire or purpose; and sentimental saving, where the possession serves as an extension of the self. More recently, Frost & Hartl¹¹ have put forward a widely employed cognitive-behavioral model of hoarding, which conceptualizes hoarding as a consequence of: 1) information-processing deficits; 2) problems in forming emotional attachments; 3) behavioral avoidance; and 4) erroneous beliefs about the nature of possessions.

Is hoarding different from OCD and OCPD?

To early psychoanalysts, "anal traits" (the forerunner of today's OCPD) and OCD laid on the same spectrum and were both ascribed to common etiopathogenetic factors, and thus, understandably, shared several symptoms. Since parsimony (or, to use more recent terms, hoarding) was no exception, it was argued that hoarding could also be a symptom of OCD. Early theorists felt that hoarding could take on the characteristics of a compulsion,² currently defined as behavior that is: i) recognized by the individual as its own; ii) resisted unsuccessfully; iii) not pleasurable in itself; and iv) unpleasantly repetitive.¹² Abraham,¹³ for instance, described one of the first clear-cut hoarding-related cases of OCD in a woman with hoarding who, in order to discard personal belongings, had to emulate their unintentional loss by means of a complex and rigid ritual.

Perhaps as a consequence, hoarding obsessions and compulsions were included in several different obsessive-compulsive symptom checklists, such as the Yale-Brown Obsessive-Compulsive Symptom Checklist (Y-BOCS),^{14,15} its dimensional version (the D-YBOCS),¹⁶ and the Obsessive-Compulsive Inventory,¹⁷ and are reported in most (up to 52.7%) patients with OCD.¹⁸ Hoarding was

also described among patients with other obsessive-compulsive and related disorders (OCD).¹⁹ Indeed, in several nonclinical samples, significant correlations between the severity of hoarding and OCD symptoms were described using different self-report scales.²⁰⁻²⁴ Similarly, self-identified hoarders also described more OCD symptoms than nonclinical controls, thus suggesting an overlap between hoarding and OCD.²⁵

However, a number of observations have emerged suggesting that hoarding and other OCD symptoms are distinct conditions. For instance, thoughts related to hoarding were said to differ from OCD-related thoughts insofar as they were less intrusive,²⁶ characterized by less insight,²⁷ and more frequently associated with grief and/or anger.²⁶ Conversely, in contrast to OCD compulsions, hoarding-related compulsions were frequently said to lead to pleasure and reward²⁸ and to worsen over each decade of life.^{29,30} Furthermore, hoarding was reported to be a major problem in only a minority of patients with OCD,³¹ to result infrequently from prototypical OCD obsessions (i.e. aggressive, sexual, religious, contamination, or symmetry),^{32,33} and to be poorly correlated with other non-hoarding OCD symptoms.³⁴ Hoarding has also been associated with a pattern of neurobiological correlates that seem to differ from those observed in OCD, including genetic, cognitive, and neuroimaging findings (Table 1).²⁶ Finally, some, but not all,⁵³ studies suggest that hoarding patients exhibit poor adherence^{49,50} and poor response to conventional anti-OCD treatment that is not mediated by adherence.⁵⁰

The WHO ICD-11 Working Group on the Classification of Obsessive-Compulsive and Related Disorders has attempted to list some counterarguments questioning the validity of these data, ranging from clinical to therapeutic and biological ones, in Table 1. However, close scrutiny of each argument and corresponding counterarguments tends to support the view that OCD and hoarding are, essentially, different phenomena. Hoarding also seems to be unrelated to OCPD phenomena. For instance, hoarding has been associated with a number of personality disorders other than OCPD, including the paranoid, schizotypal, and avoidant personality disorders.⁵⁴⁻⁵⁶ Also, it has been suggested that deleting hoarding and miserliness items from the set of OCPD criteria may improve the validity of the OCPD diagnosis.^{57,58} Similarly, in longitudinal studies, only non-hoarding OCPD criteria, such as preoccupation with details, rigidity and stubbornness, and reluctance to delegate, were predictive of the diagnosis of OCPD two years later.⁵⁹ Therefore, most studies suggest that the association between hoarding and OCPD is due to overlapping item content, i.e., because hoarding was assumed to be one of the eight criteria of OCPD.

Summary of the ICD-10 approach to hoarding

The ICD-10 approach might be considered neglectful for not even mentioning hoarding as a symptom or syndrome, dependent or independent of some other diagnosis. On the other hand, the DSM-IV-TR approach could

Table 1 Arguments, counterarguments, and some comments supporting the differences between hoarding and obsessive-compulsive disorder

Domain	Arguments supporting hoarding as a distinct phenomenon from OCD	Counterarguments and/or arguments supporting hoarding as a subtype of OCD	Some comments after weighing the evidence for and against hoarding as a phenomenon independent from OCD
Cognition	Thoughts related to hoarding are not archetypal obsessions as those typically found in OCD patients. (For a review, see Mataix-Cols et al. ²⁶)	Thoughts related to symmetry and ordering are not typical obsessions either, ³⁵ thus suggesting that this is actually a weak argument.	Thoughts related to hoarding are different from other obsessive-compulsive thoughts, as the former involve the emotional significance, instrumental characteristics, or intrinsic values of hoarded items. ^{28,36}
Insight	Thoughts related to hoarding typically lack insight, while most OCD patients have insight toward their symptoms. ²⁷	Thoughts related to other OC dimensions may also lack insight, ³⁷⁻³⁹ which seems to depend on the severity of OC symptoms. ⁴⁰ In a field trial, most individuals who hoarded (> 85%) were rated as having good or fair insight. ⁴¹	Hoarding patients may be particularly prone to lack of insight into the consequences of hoarding behaviors, ^{41,42} rather than just into their hoarding-related thoughts, as reported in other OC dimensions. Furthermore, in the study reporting a high rate of good or fair insight in hoarding, most subjects were self-identified individuals attending a local support group. ⁴¹
Affective states	Thoughts related to hoarding may result in feelings of grief and anger, whereas OCD-related thoughts result in anxiety. ²⁶	Thoughts related to symmetry and contamination may also result in anger or other non-anxiety emotions (e.g., disgust). ⁴³⁻⁴⁶	Thoughts related to hoarding are distinct from those related to other OC dimensions insofar as they are associated with grief and with the experience of other pro-social emotions, such as pity and regret.
Reward	Hoarding behaviors are associated with pleasure and reward, whereas in OCD, they lead to anxiety relief. ²⁸	Symmetry and ordering behaviors may also be associated with pleasure and reward (e.g., in so-called "house-proud homemakers"). ⁴⁷	While the experience of reward in hoarding is frequently associated with shame, reward-related symmetry is probably ascribed more to social reinforcement and pride.
Course	Hoarding behaviors worsen over each decade of life, ^{29,30} while OCD tends to wax and wane over time.	One could argue that it is actually clutter, a mere byproduct of hoarding, that worsens over each decade of life.	Clutter is a key and intrinsic feature of clinically significant hoarding behaviors ²² and, therefore, cannot be considered a simple byproduct of the condition.
Co-occurrence with OCD	Hoarding is a significant problem in only a minority of patients with OCD. ³¹	Hoarding is present in the majority of patients with OCD. ¹⁸	Hoarding is a common phenomenon in other anxiety disorders ⁴⁸ ; therefore, it is not surprising that it is also frequently reported in OCD.
Functional relationships	Hoarding is not frequently related to other non-hoarding OCD dimensions. ³²	Other OC symptoms (e.g., washing) are also infrequently related to other OC symptom dimensions (e.g., sexual/religious). ¹⁶	It is presently unclear whether hoarding unrelated to OCD is more or less frequent than other "hybrid symptoms" in OCD because there is an absence of studies reporting this "crossover" between different OC dimensions.
Correlations	Hoarding is infrequently associated with other OCD symptoms; correlations between hoarding and other OCD symptoms are moderate. ³⁴	Correlations between hoarding and other OCD symptoms were sometimes reported to be high in clinical samples of patients with OCD. ²⁴	OCD patients may display hoarding secondary to OCD, thus artificially increasing correlations between both conditions. However, hoarding and OCD symptoms are much less correlated in non-OCD (e.g., epidemiological) samples.
Treatment response	Patients with hoarding symptoms show poor adherence ⁴⁹ and poor response to treatment. ⁵⁰	Studies suggest that patients with sexual/religious symptoms may also show a poor therapeutic outcome. ⁵¹	Although non-hoarding OCD symptoms were found to predict poor response to OCD treatment, studies reporting these findings failed to characterize hoarding unrelated to OCD in their samples.
Biological correlates	Individuals with hoarding show a certain pattern of genetic, cognitive, and neuroimaging findings, thus suggesting that they have a <i>putatively different disorder</i> . ²⁶	However, it is also possible to interpret these specificities as indicating a <i>different and more clear-cut type of OCD dimension</i> . ^{26,52}	Since no study has ever compared the neurobiology of individuals with hoarding to that of individuals with OCD, it is still unknown whether these conditions share most or just a few neurobiological features, findings that would support hoarding as an OCD subtype or as an OCD-related disorder, respectively.

OC = obsessive-compulsive; OCD = obsessive-compulsive disorder.

be characterized as misleading by including it as a mere manifestation of OCD or OCPD. However, if faced with the need to code patients with prominent hoarding behaviors in the absence of OCD or OCPD, clinicians using the ICD-10 could still resort to the residual category F42.8, which denoted other OCD.

Comparing ICD vs. DSM approaches to hoarding

In contrast to the ICD-10 approach to hoarding described above, hoarding is implicitly mentioned in DSM-IV-TR as a symptom of OCD, when hoarding is severe, or of OCPD, when hoarding is milder. This may have been based on the idea that OCPD and OCD were due to common etiopathogenetic factors, resided on the same spectrum, and represented different severities of the same condition. In other words, if OCPD is milder OCD, and hoarding is OCPD, then severe hoarding is OCD. Nevertheless, as reported above, there is now evidence that the relationship between OCD and OCPD is probably due to symptom overlap.⁶⁰ Of note, clinicians were left with a problem if their patients had hoarding symptoms considered to be moderate in severity: no diagnosis was left for them in the DSM-IV-TR.

The approach to hoarding was modified in DSM-5.^{61,62} Based on the differences between hoarding and OCD/OCPD, the DSM-5 classified hoarding disorder as a discrete condition. However, hoarding disorder was kept in the chapter on OCD for historical reasons (i.e., the traditional link between hoarding and OCD/OCPD), because hoarders are usually seen in OCD clinics, and in line with the conservative approach adopted by DSM-5.²⁶ The alternative option, i.e., including hoarding in an Appendix of Criteria Sets Provided for Further Study, was not adopted. Nevertheless, proponents of DSM-5 recognized that hoarding could be ascribed to different conditions, including major depressive disorder, schizophrenia or another psychotic disorder, dementia, autism spectrum disorders, and Prader-Willi syndrome, as well as OCD.⁵² A summary of the different approaches to hoarding adopted by ICD-10, DSM-IV-TR, and DSM-5 is provided in Table 2.

Issues to be considered for ICD-11 related to clinical utility, global applicability, and applicability outside specialty mental health settings

There is good evidence supporting the inclusion of a specific hoarding disorder in the ICD-11.²⁶ First, hoarding is not even mentioned as a problem in ICD-10. Second,

as already acknowledged by DSM-5, the construct of hoarding is not subsumed by current conceptualizations of OCD or OCPD. If hoarding is left synonymous with OCD, ineffective anti-OCD treatments will be employed and patients will not be treated properly. Third, hoarding is a prevalent, yet neglected, condition. For example, recent epidemiological studies found current population estimates of hoarding of 5.8%, figures that are even higher than those reported for OCD.⁶³ Finally, hoarding fits modern definitions of mental disorder according to different diagnostic manuals, which will be detailed below.^{64,65}

For instance, hoarding fulfills the ICD-11 criteria for mental disorders⁶⁵ as “a clinically recognizable set of symptoms or behaviors associated in most cases with distress and with interference with personal functions.” Hoarding also fits the more elaborate DSM-5 criteria for a mental disorder⁶⁴ as “a behavioral or psychological syndrome or pattern that occurs in an individual,” that “leads to clinically significant distress or disability” (although hoarding symptoms are not distressful per se, the consequences of hoarding behaviors lead to distress and disability), that “is not merely an expectable response to common stressors and losses (e.g., the loss of a loved one) or a culturally sanctioned response to a particular event,” that “reflects an underlying psychobiological dysfunction,” and that “is not primarily a result of social deviance or conflicts with society.”

The concept of hoarding disorder is clinically useful.²⁶ Hoarding is under-recognized and undertreated, may respond poorly to anti-OCD treatment, and often requires specific therapeutic approaches. The characterization of hoarding as a standalone disorder will potentially promote public awareness, decrease diagnostic ambiguities, facilitate professional communication, and stimulate research. Patients with hoarding disorder would be pleased to have their condition identified, as they frequently do not seem to perceive themselves as individuals suffering from typical OCD symptoms.⁶⁶ Finally, adding hoarding specifiers (e.g., with and without squalor) to existing criteria would further enhance the clinical utility associated with the public health consequences of the disorder (see below).

Hoarding disorder diagnostic guidelines are likely to be globally applicable. For instance, in one study, about 90% of international psychiatrists thought hoarding disorder criteria would be very/somewhat acceptable for professionals and sufferers.⁶⁶ Most experts (70%) supported the inclusion of hoarding disorder in the main DSM manual, whereas up to 50% of American Psychiatric Association members did.⁶⁶ In another study, most

Table 2 Key differences between the ICD-10, DSM-IV-TR, and DSM-5 approaches to hoarding

	ICD-10	DSM-IV-TR	DSM-IV-TR	DSM-5
Parent category	OCD	Anxiety disorders	Personality disorders	Obsessive-compulsive and related disorders
Category name	Other obsessive-compulsive disorders	OCD	OCPD	Hoarding disorder
Children or constituent categories	Hoarding symptoms	Severe hoarding symptoms	Mild hoarding symptoms	Excessive acquisition or based on insight

OCD = obsessive-compulsive disorder; OCPD = obsessive-compulsive personality disorder.

participants with hoarding disorder (96%) felt that creating a new disorder would be very or somewhat acceptable, useful (96%), and not too stigmatizing (59%).⁵²

Although most of the work on hoarding disorder has been done in English-speaking countries and in predominantly Caucasian samples, hoarding has been assessed in OCD studies from Japan,³³ India,⁶⁷ South Africa,¹⁹ and Brazil.⁶⁸ In these studies, OCD plus hoarding has been associated with a distinctive phenotype. Nevertheless, hoarding has not been examined in these and in other low- and middle-income countries outside of OCD patients. There is a pressing need to assess hoarding in developing contexts, collectivistic cultures, rural communities, and non-Caucasian individuals. For instance, in a recent Indian study, compared with OCD non-hoarders, OCD hoarders hailed exclusively from an urban background.⁶⁷

Finally, the concept of hoarding also seems to be applicable outside specialty mental health settings. Because of the complex, multifaceted nature of hoarding, some authors have called for and view “a multidisciplinary approach involving a variety of community organizations (e.g., social services, area agencies on aging, mental health agencies, code enforcement, public housing, law enforcement, fire, public health, home health agencies, and animal control agencies) as imperative and potentially the only successful response to hoarding.”⁶⁹ The extent to which the concept of hoarding disorder will be applicable outside specialty mental health settings in low- and middle-income countries is not completely clear. However, identifying hoarding disorder as a public health problem in these countries may stimulate local health organizations to develop tools and guidelines to intervene in most severe cases.

Alternatives for ICD-11 and rationale

The evidence reviewed above suggests that hoarding should be included in the ICD-11, as in DSM-5.²⁶ Although, as specified above, hoarding disorder has ties with many different conditions, its historical link with OCD and OCPD and the fact that most treatment-seeking hoarders are seen in OCD clinics suggest that, until more is known about its etiology, it would be reasonable to acknowledge hoarding disorder as an OCD.²⁶

A subsequent issue is the development of an optimal description of hoarding disorder for ICD-11. Current approaches to hoarding suggest that, besides clutter, there are two additional important behavioral elements for its characterization: difficult discarding and excessive acquisition. In addition, some evidence has arisen that cognitive features related to hoarding may also constitute one of its important dimensions. Diagnostic options for the cognitive, behavioral, and functional domains of hoarding disorder are described below.

Cognitive components of hoarding disorder

Although a significant component of hoarding is the presence of particular behaviors, a number of studies

have described cognitive characteristics associated with problematic hoarding. The cognitive features of hoarding disorder can be conceptualized in terms of preoccupations, obsessions, overvalued ideas, cognitive deficits, or excessive attachments.

Preoccupation with the importance of possessions

While excessive preoccupations (or worries) have been classically reported to be a central feature of generalized anxiety disorder,⁷⁰ this term has also been employed in relation to the ICD-11 diagnostic guidelines for other OCD (see other articles in this issue). Preoccupations are characterized by pervasiveness and excessive time occupied with specific obsessive concerns. A focus on preoccupations also provides clinicians a means of categorizing patients regarding the levels of insight in relation to hoarding-related thoughts. Nevertheless, some patients with hoarding do not seem to spend much time thinking about their possessions, unless they face the prospect of losing them.¹¹

Obsessions (i.e., thoughts, images, or urges/impulses) related to the importance of possessions

In an attempt to avoid unwanted confusion with generalized anxiety disorder-related preoccupations and to underline the relationship between hoarding disorder and other OCD, one might argue that the cognitive component of hoarding disorder is best characterized as an obsession. DSM-5 has alluded to the obsessional quality of hoarding disorder when it describes a perceived need to save items and/or distress associated with discarding.⁵² However, some authors have called attention to several differences between hoarding-related thoughts and prototypical obsessions, including the non-intrusive character of the former and the frequency with which they lead to other non-anxiety related emotions.²⁶

Overvalued ideas regarding the possible importance of possessions

Hoarding is frequently described as a condition associated with poor insight. Since some have characterized poor-insight obsessions as overvalued ideas,⁷¹ one might argue that hoarding-related thoughts could be better described in these terms. The fact that the concept of overvalued ideation also refers to how the self or identity of the individual is defined⁷¹ (and that hoarders frequently see their possessions as extensions of themselves) also supports the latter view. However, by using this label, one may miss the fact that hoarding-related symptoms may also be associated with good insight. For instance, in the London field trial, more than half of individuals with self-identified hoarding disorder were described as having good insight.⁵²

Inattention and other information-processing deficits

A number of recent studies suggest that hoarding disorder patients exhibit a range of cognitive deficits, including inattention,⁷²⁻⁷⁵ executive dysfunction,^{76,77} and

memory problems.^{73,78,79} Some models have posited that information-processing deficits play a significant role in the development of hoarding behaviors.^{11,80} According to these models, problems with attention may contribute to difficulty making decisions and lead to the accumulation of clutter.⁸⁰ However, there are also studies suggesting that attentional problems may be seen in only a small subset of patients with hoarding disorder.⁸¹ Although psychostimulants have been employed in the treatment of patients with hoarding disorder, they did not lead to any benefit for hoarding symptoms.⁸²

Excessive attachments to possessions

One additional option is to characterize the cognitive component of hoarding as an excessive or pathological attachment to possessions. Although some might criticize the use of constructs with a psychodynamic flavor, it has been demonstrated that patients with hoarding disorder are excessively attached to their possessions, which they tend to hoard because of emotional significance (e.g., association with a significant event, person, place, or time), instrumental characteristics (e.g., usefulness), or intrinsic value (e.g., aesthetic qualities).⁸³ Critically, hoarding behaviors per se (but not their consequences) are non-distressing and/or are associated with pleasure or enjoyment.

Behavioral components of hoarding disorder

While hoarding must be associated with some degree of clutter to be clinically significant, the extent to which hoarding-related behaviors must be present is not so straightforward. At least theoretically, clutter may be the ultimate result of a positive balance between acquired and discarded possessions. For instance, an individual can develop hoarding/clutter: because (i) he/she acquires too many items despite not having problems discarding them; because (ii) he/she discards too few items (if any), despite not having excessive acquisition behaviors; or (iii) because he/she acquires too many items and discards too few at the same time. To help clarify this issue, some options for what can be considered key behavioral elements of hoarding disorder have been outlined below.

Difficult discarding as a core symptom

This alternative was adopted by the DSM-5, which requires the presence of persistent difficulty discarding or parting with possessions, regardless of their actual value, for a diagnosis of hoarding disorder. The problem with this diagnostic requirement is that it would eliminate the possibility of diagnosing hoarding disorder in individuals who exhibit clutter as a result of excessive acquisition in the absence of difficult discarding. For example, in a German population-based sample, the correlations between the clutter subscale of the German Compulsive Hoarding Inventory and the Compulsive Buying Scale scores were even higher ($r = 0.547$) than those found between the difficulty discarding subscale of the German Compulsive Hoarding Inventory and the

same buying scale ($r = 0.330$).⁸⁴ Nevertheless, despite the theoretical plausibility of this clinical picture, patients with excessive acquisition and clutter in the absence of inability to discard are probably not often seen by clinicians.

Excessive acquisition as a core symptom

It has been suggested that not all subjects with hoarding disorder exhibit excessive acquisition. Accordingly, DSM-5 included excessive acquisition as a specifier. For instance, in a study with self-identified hoarders, one-third of patients with hoarding disorder did not endorse excessive acquisition behaviors, including compulsive shopping, excessive acquisition of free items, and kleptomania.⁶³ Nevertheless, it has also been suggested that patients who deny current acquisition problems often report a history of acquisition problems in the past and active avoidance of acquisition cues.⁸⁵ In some cases, acquisition may only surface when cues that trigger urges to acquire are no longer avoided.⁸⁵ In addition, there has also been some dispute on whether lack of excessive acquisition could reflect poor insight and individuals' inability to appraise their acquisition behaviors.⁸⁶

Both difficult discarding and excessive acquisition as core symptoms

This alternative would require the presence of the two classical hoarding-related behavioral elements, as in early studies on hoarding behavior.²⁰ Although they would raise the diagnostic threshold for hoarding disorder, these diagnostic guidelines would also prompt greater search for excessive acquisition symptoms by clinicians (including urges, behaviors, and related avoidance) and better differentiation from other forms of pathological accumulation. It would also be in accordance with recent studies suggesting that excessive acquisition and difficult discarding belong to a unidimensional hoarding phenotype.⁸⁷ As reported above, this alternative would reinforce the need to involve family members, friends, or other related individuals in the diagnostic assessment, given that patients with hoarding may have poor insight into their acquisition behaviors.^{52,63,86}

Functional impairment component of hoarding disorder (clutter)

The presence of an accumulation of possessions that congest and clutter active living areas is a useful criterion to differentiate clinical from normal hoarding. One assumption that is made in this definition is that clinically significant hoarding cannot occur in the absence of clutter. Although it is possible to imagine that someone could spend so much time acquiring, organizing, and protecting their possessions (and not cluttering their home) that they neglect other aspects of their lives, these cases are probably rare.¹¹ However, the extent to which clutter may be present and/or interfere with usual activities may vary, and it is important to consider the

different possibilities available in order to set the ideal threshold for a diagnosis of hoarding disorder.

Impossible use of living areas

The original definition of hoarding put forward by Frost & Hartl¹¹ included the fact that living spaces had to be sufficiently cluttered so as to preclude activities for which those spaces were designed. Similarly, in a DSM-5 field trial, a particular criterion, requiring the clutter of hoarding disorder to result in an impossible use of living areas, was tested.⁵² However, this alternative was considered too strict, as several individuals were significantly distressed and impaired and met all other diagnostic criteria for hoarding disorder, yet still managed to somehow use some of their “key” living spaces.

Difficult, but not impossible, use of living areas

A second option would require clutter to result in a substantially compromised use of active living areas. Arguably, this would achieve the right balance between false-positive and false-negative hoarding disorder cases. Although none of the non-pathological or benign “collectors” assessed in the DSM-5 hoarding disorder field trial (n=20) fulfilled the criterion before these proposed adjustments, lowering the diagnostic threshold did not lead to any additional diagnosis of hoarding disorder in this studied sample, thus suggesting that this alternative cannot be misused to pathologize normative human activity.⁵²

One needs also to consider, however, that clutter may be absent among some patients with hoarding disorder if there is a history of recent decluttering by family members, cleaners, or authorities. In these cases, the diagnosis of hoarding disorder would be performed exclusively on the basis of cognitive and behavioral features leading to distress or impairment.⁵² This alternative, which was also tested and adopted in DSM-5, would not exclude the possibility of adopting any of the diagnostic options for clutter described above.

Additional diagnostic features

In DSM-5, symptoms must result in clinically significant distress or impairment in different areas of functioning (including maintaining a safe environment). In ICD-11, functional impairment will not be strictly required for a diagnosis of a mental disorder (including hoarding disorder), although clinicians may use it as additional information to rate severity of symptoms.⁶⁵ In the opinion of the Working Group, the ICD-11 should also recognize that hoarding symptoms might be seen in a range of medical conditions (e.g., brain injury) and mental disorders (e.g., OCD). It also needs to state explicitly that, for a diagnosis of hoarding disorder, hoarding symptoms must not be better understood as a symptom of these conditions. It can sometimes be difficult to differentiate hoarding disorder in association (comorbidity) with a specific disorder (e.g., OCD) from hoarding as a symptom of the same disorder. Theoretically, it is also

possible that both situations could coexist in the same patient, thus adding further complexity to the diagnostic process.

Potential specifiers

Excessive acquisition

As described above, traditional conceptualizations of hoarding have listed excessive acquisition, inability to discard, and clutter as its key symptoms. In DSM-5, however, difficult discarding and clutter are the core features of hoarding. In that manual, excessive acquisition was included as a specifier that is not present in all patients with hoarding, but that is important to consider from a therapeutic point of view. It has been suggested that some patients with hoarding disorder who deny excessive acquisition may “acquire” possessions passively, simply allowing their homes to fill up naturally, with the habitual flow of mail, newspapers, and packaging from purchased products.

It may be difficult to differentiate the behavior exhibited by a subject who actively acquires possessions from that of an individual who passively lets objects accumulate day after day. Both behaviors may be intentional and serve the same purpose. For instance, consider the case of a hoarding disorder patient who, in response to sales calls, signs up for several different year-long newspaper subscriptions and thereafter starts receiving them daily at his door. Although no one will argue with a diagnosis of hoarding for this patient, it might be difficult to determine whether his hoarding disorder is associated with active or passive excessive acquisition.

As reported above, there is increasing recognition that almost all patients with hoarding have current or lifetime histories of excessive acquisition urges and/or behaviors, and that those who report otherwise may be avoiding buying- or other excessive acquisition-related cues or have low levels of insight into their behaviors.⁸⁶ In addition, all studies describing a subset of patients without excessive acquisition relied on self-report assessments and did not include face-to-face interviews with clinicians focusing on excessive acquisition behaviors.^{63,85,86} In the DSM-5 hoarding disorder field trial, up to 100% of subjects with hoarding disorder assessed by a trained interviewer exhibited excessive acquisition.⁵²

Taken together, these findings suggest that excessive acquisition is likely to be an integral part of hoarding disorder. Statistical analysis using a composite of interviews and self-report instruments has shown that the active acquisition of items, buildup of clutter, and difficulty discarding accumulated possessions co-occur strongly enough to be considered a unidimensional construct and are better conceived as part of a “cohesive hoarding phenotype.”⁸⁷ In this scenario, considering excessive acquisition as a mere specifier may overshadow its prevalence and therapeutic relevance among individuals with hoarding. A critical analysis of the available evidence suggests that excessive acquisition should be considered a core symptom of hoarding disorder.

Insight

In DSM-5, all OCD with a cognitive component – OCD, hoarding disorder, and body dysmorphic disorder (BDD) – have an “insight” specifier for rating patients’ insight into their disorder-related beliefs. For example, while some patients with OCD acknowledge that they will not be contaminated by HIV if touching doorknobs (good or fair insight), others may believe that they probably will get contaminated (poor insight), and others still may be absolutely convinced that they will get contaminated (absent insight). By adding a specifier to these conditions, the DSM-5 called attention to clinicians that patients with absent insight in the context of OCD or BDD do not need to receive an additional diagnosis of delusional disorder not otherwise specified.

Nevertheless, research has demonstrated that there are more similarities than differences between good- and poor-insight OCD⁸⁸ and BDD.⁸⁹ Although adding motivational techniques may help ambivalent patients with both conditions, this categorization does not seem to impact, for instance, biological treatment, as all patients with OCD or BDD, regardless of insight level, should be treated with serotonin reuptake inhibitors rather than antipsychotic monotherapy. Furthermore, motivational therapy may be important in the treatment of severe OCD in general, regardless of whether it is associated with poor insight.^{90,91}

Although there is no study comparing poor- and good-insight hoarding disorder in terms of sociodemographic, clinical, or treatment outcomes, the same rationale regarding OCD and BDD is potentially applicable to it. However, an additional problem might exist. While poor insight is a frequent phenomenon among patients with hoarding disorder,⁹² the concept of poor insight into hoarding may be quite heterogeneous and potentially difficult for a general practice clinician to understand.⁵³ It can include, for instance, anosognosia (denial of illness), indifference to the consequences of hoarding behaviors, inflexible beliefs in relation to possessions, or even defensive reactions against change.

Despite these problematic conceptual issues, specifying the degree of insight into hoarding may have clinical utility. As suggested above, adopting this poor insight specifier would strengthen the ties between OCD associated with a cognitive component (OCD, BDD, and hoarding disorder). Furthermore, if criteria are clearly operationalized, even the non-specialist can refer to poor insight in relation to at least two key hoarding elements, i.e., hoarding-related cognitions and/or behaviors, with a reasonable degree of confidence. By reminding clinicians that it is possible to diagnose hoarding disorder with poor insight in the absence of delusional disorder, clinicians may spare patients with hoarding disorder from being treated with antipsychotic monotherapy.

Severe domestic squalor

Hoarding and squalor have some significant areas of overlap, but the accumulation of objects does not necessarily lead to surroundings becoming unclean, and squalor can be observed in the absence of an accumulation

of apparently worthless items and materials.⁹³ So-called severe domestic squalor has been defined as “(A person’s home) so unclean, messy, and unhygienic that people of similar culture and background would consider extensive clearing and cleaning to be essential. Accumulated dirt, grime, and waste material extend throughout living areas of the dwelling, along with possible evidence of insects and other vermin. Rotting food, excrement, and certain odors may cause feelings of revulsions among visitors. As well as accumulation of waste, there may have been purposeful collection and/or retention of items to such a degree that it interferes with occupant’s ability to adequately clean up the dwelling.”⁹⁴

While approximately 10 to 20% of patients who participate in hoarding research studies may live in varying degrees of domestic squalor, the preponderance of such cases among individuals who require social services may be much higher.⁹⁵ However, it has been suggested that, currently, “there is no definite evidence that those with hoarding disorder who live in squalor have a condition that differs from hoarding disorder without squalor.”⁹³ This observation was based on the fact that, at present, it is not possible to ascertain whether squalor is a mere consequence of severe hoarding or a marker of a specific subgroup of patients with marked neuropsychological dysfunction which may require different diagnostic procedures (e.g., neuropsychological assessment) and perhaps even different approaches (e.g., cognitive rehabilitation).^{93,95}

However, the ICD-11 Working Group believes that there are also some reasons to consider including squalor as a subtype of hoarding disorder in ICD-11. Firstly, hoarding with squalor may be associated with greater public health implications (including the presence of mosquitoes, rodents, vermin, infestations, excreta, pathogens, fire hazards, and sewerage problems) and justify early intervention from third parties, thus requiring prompt identification.⁹⁶ Considering that ICD-11 focuses on public health issues, it might be worthwhile to include squalor as a hoarding disorder specifier.

Secondly, squalor in cases of hoarding may be indicative of executive impairment and greater frontal lobe pathology than in hoarding without squalor, which would make it a marker of different pathophysiological events. Although there is no data to confirm this hypothesis, it has been demonstrated that patients with hoarding and squalor exhibit a wide range of comorbid psychiatric disorders that have been associated with executive dysfunction.⁹⁷ In light of this, squalor should prompt clinicians to search for comorbid conditions and make sure that dementia, alcohol-related, and psychotic disorders do not explain hoarding and squalor before a diagnosis of hoarding disorder is made.⁹⁷ Finally, in the absence of these severe neuropsychiatric disorders, hoarding disorder with squalor may be a potential prodrome, heralding the appearance of one of these severe neuropsychiatric disorders, and thus demand close follow-up.⁹⁵

Animal hoarding

A phenomenon that has an intricate relationship with severe domestic squalor is the pathological accumulation

of animals. Animal hoarding was first described more than 30 years ago,⁹⁸ but was only recently defined in the public health literature⁹⁹ as (i) having more than the typical number of companion animals, (ii) failing to provide even minimal standards of nutrition, sanitation, shelter, and veterinary care, with this neglect often resulting in illness and death from starvation, spread of infectious disease, and untreated injury or medical condition, (iii) denying the inability to provide this minimum care and the impact of that failure on the animals, the household, and human occupants of the dwelling, and (iv) persisting, despite this failure, in accumulating and controlling animals.

Some have argued that the profound attachment to hoarded animals, "which is often intertwined with a sense of mission to rescue animals," has qualitative differences from the attachment patients with object hoarding have toward "their most dearly held inanimate possessions."¹⁰⁰ Furthermore, it has been suggested that patients with animal hoarding may exhibit particularly high rates of dysfunctional personality traits and dissociative symptoms, which could, at least theoretically, explain their puzzling indifference to severe domestic squalor.¹⁰⁰ Animal hoarding seems to be more prevalent in women and to appear later than object hoarding, whereas object hoarding is probably more prevalent in men (reviewed by Frost et al.¹⁰¹). Finally, animal hoarding may lead to criminal prosecution, as most patients with animal hoarding have made a series of deliberate choices and acts, placing their interests above the interests of animals, and leading to foreseeable suffering and neglect.⁹⁹

In spite of its peculiarities, animal hoarding also overlaps extensively with object hoarding disorder. For instance, patients with animal hoarding also display difficulty discarding possessions, frequently refusing to give up sick, unnourished, or dying animals or even their carcasses.¹⁰² Like object hoarders, animal hoarders may acquire animals through a variety of active and passive means.¹⁰³ As it is possible to note from the above-mentioned definition, the concept of animal hoarding has some overlap with severe domestic squalor, insofar as animal hoarding cannot be present without some degree of squalor, although domestic filthiness does not necessarily include animal hoarding. For instance, virtually all homes in which animals are hoarded have their living areas contaminated with animal feces and urine.^{100,102} Therefore, animal hoarding could be addressed within severe domestic squalor. Although there seem to be some particularities related to animal hoarding as compared with the traditional concept of object hoarding,¹⁰¹ the evidence base is still too scarce to provide a definitive answer with regard to the status of this phenomenon.

Differential diagnosis of hoarding disorder in the ICD-11

As exemplified above, differential diagnosis of hoarding disorder with OCD can be difficult. In contrast to hoarding

disorder, object accumulation in OCD (in this case, so-called compulsive hoarding) results from prototypical obsessions with aggressive (e.g., fear of harming others), sexual/religious (e.g., fear of committing blasphemous or disrespectful acts), contamination (e.g., fear of spreading infectious diseases), or symmetry/ordering themes (e.g., a feeling of incompleteness). In addition, even in poor-insight OCD, behaviors are generally unwanted and distressing, and are thus not associated with pleasure or enjoyment.

In major depressive disorder, decreased energy, lack of initiative, or apathy may lead to object accumulation. However, in contrast to major depressive disorder, saving of possessions in hoarding disorder is a purposeful and intentional behavior. Patients with major depressive disorder may also be indifferent to hoarding objects and display no distress associated with discarding them.

In bipolar disorder, object accumulation may be secondary to excessive buying, and thus restricted to manic episodes. However, difficulty discarding or parting with possessions is not part of the core symptoms of bipolar disorder. Furthermore, only very rarely is mania chronic enough to allow for a substantial amount of clutter to develop.

In schizophrenia and other primary psychotic disorders, object accumulation is driven by delusions, which are typically not accompanied by pleasure or enjoyment. In ambiguous cases, the presence of first-rank or/and negative symptoms may help establish a diagnosis of schizophrenia or schizophrenia-related condition. In addition, the content of a symptom in delusional disorders is generally restricted to a small number of themes, which are typically different from those reported in hoarding disorder.

In dementia, object accumulation may result from cognitive deficits, but there is typically no interest in accumulating objects or distress associated with discarding items. Furthermore, collecting behavior in dementia may be accompanied by severe personality and behavioral changes, such as apathy, excessive gambling, sexual indiscretions, and motor stereotypies.

In paraphilias, sexual fantasies, urges, or behaviors may result in object accumulation that are associated with pleasure or enjoyment and increased emotional attachment to the hoarded items. However, in contrast to hoarding disorder, object accumulation in paraphilia-related disorders is strictly related to sexual gratification.

In eating disorders (including the bingeing and/purging subtypes of anorexia nervosa, bulimia nervosa, and binge eating disorder), individuals may accumulate food to allow binge eating in specific situations (e.g., while at home alone). However, in contrast to hoarding disorder, the ultimate aim of object accumulation in eating disorders is the consumption of food.

In autism spectrum disorders, restricted interests may result in object accumulation, which may resemble that of hoarding disorder. However, patients with autism spectrum disorders display a number of additional features that are typically lacking among patients with hoarding disorder, including persistent deficits in social communication and social interaction.

In substance use disorders, individuals may be too impaired to declutter, and often live in squalor with accumulation of trash. In these cases, however, accumulation is secondary to the substance use disorder.

Prader-Willi syndrome is a genetic disorder that has been associated with increased drive to eat and a range of compulsive and ritualistic symptoms, including food storing. The presence of short stature, hypogonadism, failure to thrive, hypotonia, and a history of feeding difficulty in the neonatal period are helpful to distinguish Prader-Willi syndrome from hoarding disorder.

Individuals with hoarding disorder and animal hoarding need to be differentiated from “animal exploiters,” who breed and/or actively acquire animals for their own financial gratification. Animal exploiters usually display concomitant antisocial or borderline personality disorders or traits. They keep animals in poor conditions because they have no empathy regarding their suffering and do not care about them. It has been suggested that, when offered enough incentive, such individuals would dispose of their animals.⁹⁹

Conclusions

Despite the long-held view that hoarding was almost synonymous with OCD and/or OCPD, evidence has emerged during the last 20 years suggesting that hoarding disorder represents a distinct condition. While ICD-10 did not mention hoarding, DSM-IV-TR implicitly described it as a symptom of OCD, when severe, or of OCPD, when milder. Recently, DSM-5 recognized the distinctiveness of hoarding disorder as a discrete diagnostic entity within the chapter of OCD. Considering the evidence supporting the clinical utility, global applicability, and appropriateness outside specialty mental health settings of hoarding disorder as an entity and the desirable harmonization of ICD-11 and DSM-5, it is the Working Group's opinion that hoarding disorder should also be included in ICD-11, specifically in the chapter on OCD.

The Working Group tentatively defines hoarding disorder as an excessive attachment to a large number of possessions, regardless of their actual value, resulting in excessive acquisition of and failure to discard them, such that living spaces become cluttered and the use of active living areas compromised. Regarding specifiers, a number of issues should be taken into consideration. Excessive acquisition is probably too common among individuals with hoarding disorder to be considered a specifier. In fact, current evidence suggests it is an intrinsic part of the hoarding disorder phenotype.

The Working Group recommends the adoption of a poor-insight specifier in ICD-11 hoarding disorder diagnostic guidelines. It also suggests that severe domestic squalor should be considered as a specifier, especially in light of its ease of detection and its potential threat to community health as a whole. This latter suggestion is particularly relevant if one considers that the foundation of ICD-11 should be pertinence to primary care and public health, and not only to mortality/morbidity, clinical care,

and research. Following the same line of reasoning, with a consideration of public health issues, one may consider animal hoarding within domestic squalor.

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