



King's Research Portal

DOI: 10.1016/j.jad.2015.10.061

Document Version Peer reviewed version

Link to publication record in King's Research Portal

Citation for published version (APA):

Stein, D. J., Kogan, C. S., Atmaca, M., Fineberg, N. A., Fontenelle, L. F., Grant, J. E., Matsunaga, H., Reddy, Y. C. J., Simpson, H. B., Thomsen, P. H., Van Den Heuvel, O. A., Veale, D., Woods, D. W., & Reed, G. M. (2016). The classification of Obsessive-Compulsive and Related Disorders in the ICD-11. Journal of Affective Disorders, 190, 663-674. https://doi.org/10.1016/j.jad.2015.10.061

Please note that where the full-text provided on King's Research Portal is the Author Accepted Manuscript or Post-Print version this may differ from the final Published version. If citing, it is advised that you check and use the publisher's definitive version for pagination, volume/issue, and date of publication details. And where the final published version is provided on the Research Portal, if citing you are again advised to check the publisher's website for any subsequent corrections.

General rights

Copyright and moral rights for the publications made accessible in the Research Portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognize and abide by the legal requirements associated with these rights.

- •Users may download and print one copy of any publication from the Research Portal for the purpose of private study or research.
- •You may not further distribute the material or use it for any profit-making activity or commercial gain •You may freely distribute the URL identifying the publication in the Research Portal

If you believe that this document breaches copyright please contact librarypure@kcl.ac.uk providing details, and we will remove access to the work immediately and investigate your claim.

Download date: 13. Jan. 2025

The classification of Obsessive-Compulsive and Related Disorders in the ICD-11

Stein D.J.¹, Kogan C.S.², Atmaca M.³, Fineberg N.A.^{4,5,6}, Fontenelle L.F.^{7,8,9}, Grant J.E.¹⁰, Matsunaga H.¹¹, Reddy Y.C.J.¹², Simpson H.B.^{13,14}, Thomsen P.H.¹⁵, van den Heuvel O.A.^{16,17}, Veale D. 18,19, Woods D.W. 20, Reed G.M. 21,22,23

² School of Psychology, University of Ottawa, Ottawa, Canada

⁵ Postgraduate Medical School, University of Hertfordshire, Hatfield, UK

⁶ University of Cambridge School of Clinical Medicine, Cambridge, UK

⁸ "D'Or' Institute for Research and Education, Rio de Janeiro, RJ, Brazil

¹² National Institute of Mental Health and Neurosciences (NIMHANS), Bangalore, India

¹⁷ Department of Anatomy & Neurosciences, VUmc, Amsterdam, The Netherlands

²⁰ Psychology Department, Texas A&M University, College Station, TX, USA

Corresponding author: Prof. Dan J. Stein, Department of Psychiatry, University of Cape Town and Groote Schuur Hospital, J-Block, Anzio Road, Observatory 7925, South Africa. Email: dan.stein@uct.ac.za; Telephone: +27 21 406 6566

¹Department of Psychiatry and MRC Unit on Anxiety and Stress Disorders, University of Cape Town, Groote Schuur Hospital, Cape Town, South Africa

³ Department of Psychiatry, School of Medicine, Firat (Euphrates) University, Elazig, Turkey

⁴ Highly Specialized Obsessive Compulsive and Related Disorders Service, Hertfordshire Partnership University NHS Foundation Trust, Rosanne House, Welwyn Garden City, UK

⁷ Institute of Psychiatry, Federal University of Rio de Janeiro (UFRJ), Rio de Janeiro, Brazil

⁹ School of Psychological Sciences, Monash University, Melbourne, Australia

¹⁰ Department of Psychiatry and Behavioral Neuroscience, University of Chicago, Chicago, IL. USA

¹¹ Department of Neuropsychiatry, Hyogo College of Medicine, 1-1 Mukogawa-cho, Nishinomiya Hyogo, Japan

¹³ College of Physicians and Surgeons, Columbia University Medical College, New York, NY, USA

¹⁴ Anxiety Disorders Clinic and the Center for OCD and Related Disorders, New York State Psychiatric Institute, New York, NY, USA

¹⁵ Centre for Child and Adolescent Psychiatry, Aarhus University Hospital, Risskov, Aarhus, Denmark

¹⁶ Department of Psychiatry, VU University Medical Center (VUmc), Amsterdam, The

¹⁸ Institute of Psychiatry, Psychology and Neuroscience, King's College London, London, UK

¹⁹ Center for Anxiety Disorders and Trauma, South London and Maudsley NHS Foundation Trust, London, UK

²¹ Department of Psychology, National Autonomous University of Mexico (UNAM), Mexico, DF, Mexico

²² National Institute of Psychiatry "Ramón de la Fuente Muñiz", Mexico, DF, Mexico

²³ Department of Mental Health and Substance Abuse, World Health Organization, Geneva. Switzerland

Highlights

- The revision of the Mental and Behavioural Disorders chapter of the Eleventh Revision of the World Health Organization's International Classification of Diseases and Related Health Problems (ICD-11) is guided by principles of clinical utility and global applicability, with the goal of creating a more effective tool to identify individuals in need of mental health services, to diagnose their conditions, and to select treatment strategies.
- These overarching principles were applied to the proposed obsessive-compulsive and related disorders (OCRD) grouping, and consideration was also given to validators including comorbidity patterns, neurocircuitry, neurochemistry, familiality, genetic risk factors, and similarities in responses to specific treatments.
- The proposed OCRD disorders include OCD, body dysmorphic disorder, hypochondriasis, olfactory reference disorder, and hoarding disorder, which all share core features of unwanted thoughts and related repetitive behaviours. The body-focused repetitive behaviour disorders, namely trichotillomania (hair-pulling disorder) and excoriation (skin-picking) disorder, are primarily characterized by recurrent and habitual maladaptive behaviors and lack a prominent cognitive aspect.
- The ICD-11 is scheduled for approval by the World Health Assembly in 2018. Final diagnostic guidelines will be modified based on the results of field studies conducted between now and then. Mental health professionals interested in participating in field studies can enroll at www.globalclinicalpractice.net.

Abstract

Background: To present the rationale for the new Obsessive-Compulsive and Related Disorders (OCRD) grouping in the Mental and Behavioural Disorders chapter of the Eleventh Revision of the World Health Organization's International Classification of Diseases and Related Health Problems (ICD-11), including the conceptualization and essential features of disorders in this grouping.

Methods: Review of the recommendations of the ICD-11 Working Group on the Classification for OCRD. These sought to maximize scientific validity, clinical utility, and global applicability.

Results: The rationale for the grouping is based on common clinical features of included disorders including repetitive unwanted thoughts and associated behaviours, and is supported by emerging evidence from imaging, neurochemical, and genetic studies. The proposed grouping includes obsessive-compulsive disorder, body dysmorphic disorder, hypochondriasis, olfactory reference disorder, and hoarding disorder. Body-focused repetitive behaviour disorders, including trichotillomania and excoriation disorder are also included. Tourette disorder, a neurological disorder in ICD-11, and personality disorder with anankastic features, a personality disorder in ICD-11, are recommended for cross-referencing.

Limitations: Alternative nosological conceptualizations have been described in the literature and have some merit and empirical basis. However, the proposed ICD-11 OCRD grouping is most likely to achieve the goals of maximizing clinical utility and global applicability.

Conclusion: It is anticipated that creation of an OCRD grouping will contribute to accurate identification and appropriate treatment of affected patients as well as research efforts aimed at improving our understanding of the prevalence, assessment, and management of its constituent disorders.

Key words: ICD-10; ICD-11; Obsessive-Compulsive Disorder; classification; global public health

Introduction

The constitution of the World Health Organization (WHO) assigns to WHO responsibility for establishing and revising "international nomenclatures of diseases" and for standardizing "diagnostic procedures" (WHO, 2014). One of the ways this mandate is achieved is through the publication of the International Classification of Diseases and Related Health Problems (WHO, 1992). The eleventh revision (ICD-11) is being prepared for presentation to the World Health Assembly in 2018. The WHO Department of Mental Health and Substance Abuse, which is responsible for coordinating the Chapter on Mental and Behavioural Disorders in ICD-11, appointed Working Groups to develop recommendations and draft diagnostic guidelines. These proposals will be used as a basis for field testing (Evans, 2015; Keeley, in press), results of which will inform the finalization of the ICD-11.

This article provides an overview of the proposals of the ICD-11 Working Group on Obsessive-Compulsive and Related Disorders. Proposals were guided by WHO's mandate that ICD-11 must reflect current scientific evidence and seek to maximize clinical utility and global applicability. A more clinically useful ICD-11 would provide a more effective tool to clinicians in varied settings with different levels of resources for identifying individuals in need of mental health services, diagnosing their conditions, and selecting treatment strategies (International Advisory Group for the Revision of ICD-10 Mental and Behavioural Disorders, 2011; Reed et al., 2013). This would most effectively support WHO's goal of reducing the global disease burden of mental disorders (WHO, 2013). The Clinical Descriptions and Diagnostic Guidelines for ICD-11 Mental and Behavioural Disorders are being developed in line with these priorities (First et al., 2015) and these considerations guided the Working Group in developing its recommendations.

The Working Group proposed the introduction of a new grouping of Obsessive-Compulsive and Related Disorders (OCRD), including the existing categories of obsessivecompulsive disorder (OCD) and hypochondriasis. Body dysmorphic disorder is proposed for inclusion as a separate diagnostic entity, as well as a new, related category of olfactory

reference disorder. The new category of hoarding disorder is also proposed for inclusion. In addition, a subgrouping of Body-Focused Repetitive Behaviour Disorders is proposed, including the existing category of trichotillomania (hair-pulling disorder) and the new category of excoriation (skin-picking) disorder. Tourette disorder will be included with other Primary Tic Disorders in the ICD-11 chapter on Diseases of the Nervous System, but will be crossreferenced to the OCRD grouping.

This is a clear change from the ICD-10, which does not include a separate OCRD grouping. In the ICD-10, OCD is classified under the broad grouping of Neurotic, Stress-related, and Somatoform disorders, which also includes hypochondriacal disorder as part of a subgrouping of Somatoform Disorders. The ICD-10 does not include a separate category for body dysmorphic disorder, but rather includes it under hypochondrical disorder. Trichotillomania appears in the ICD-10 in a different broad grouping of Disorders of Adult Personality and Behaviour, as a part of subgrouping of Habit and Impulse Disorders. Tourette syndrome appears in the ICD-10 as a part of the grouping of Behavioural and Emotional Disorders with Onset Usually Occurring in Childhood and Adolescence, as part of a subgrouping of Tic Disorders.

The rationale for bringing these disparate entities in ICD-10 together in an OCRD grouping is based on evidence that existing as well as newly described disorders share core features of unwanted thoughts and related repetitive behaviours (Phillips et al., 2010; Stein, 2000). In addition, the proposal reflects evidence that OCD and related disorders share higher than expected familiality (Bienvenu et al., 2012), genetic risk factors (Monzani et al., 2014), underlying neurocircuitry anomalies (Milad and Rauch, 2012), and neurochemical (Nikolaus et al., 2010) abnormalities. In addition, they frequently co-occur (Lochner et al., 2005) and some share similar responses to specific psychopharmacological and psychological treatments (Fineberg et al., 2014).

The Working Group made recommendations with awareness of a range of perspectives on classification of OCRD. For example, some researchers have argued that because anxiety is observed in OCD and hypochondriasis, an OCRD grouping should not be separate from a grouping of Anxiety Disorders (Storch et al., 2008). Others have argued for a broader construct of the OCRD category, with the most inclusive proposals suggesting an impulsive-compulsive continuum that would encompass OCRD as well as obsessive-compulsive personality disorder (Fineberg et al., 2007), impulsive control disorders, attention deficit hyperactivity disorder (Abramovitch et al., 2012; Hollander and Wong, 1995), and even substance abuse disorders and feeding and eating disorders (Robbins et al., 2012). The Working Group determined that an OCRD grouping with the diagnostic entities in Table 1 optimally balances clinical utility with current evidence. The proposed OCRD grouping will be located in the ICD-11 immediately following the grouping of Anxiety and Fear-Related Disorders given their phenomenological and psychobiological similarities. It is hoped that an OCRD grouping will prompt clinicians to better recognize, assess, and treat these conditions and will stimulate research based on a more accurate conceptualization of these serious disorders, ultimately supporting WHO's objective of improving global mental health and reducing the associated disease burden.

The sections that follow describe the diagnostic entities proposed for inclusion in the OCRD grouping, including the rationale for the delineation of the essential features of each disorder (see Table 1) and the evidence supporting its inclusion.

Obsessive-Compulsive Disorder

The proposed ICD-11 diagnostic guidelines for obsessive-compulsive disorder (OCD) retain the core features of the disorder as conceptualized in ICD-10: the presence of obsessions and/or compulsions (Stein et al., 2014). However, subsequent research has provided additional evidence regarding the clinical heterogeneity of the disorder, its underlying neurobiological mechanisms, and it differentiation from normality and from other mental health and medical

conditions. Such evidence has been incorporated into the ICD-11 diagnostic guidelines for OCD. (See Table 1 for core diagnostic features).

The Working Group recommended that the definition of obsessions in OCD be broadened to capture the range of experiences described in the literature. The proposed diagnostic guidelines define obsessions as including repetitive and persistent thoughts (e.g., of contamination), images (e.g., of violent scenes), or impulses/urges (e.g., to stab someone) that are experienced as intrusive, unwanted, and are commonly associated with anxiety. This definition acknowledges that sensory as well as cognitive phenomena can precede compulsive behavior (Ferrao et al., 2012; Shavitt et al., 2014). Although obsessions in ICD-11 are described as commonly associated with anxiety, the proposed diagnostic guidelines also acknowledge the broad range of affective experiences that may be associated with obsessions, including strong feelings of disgust (Husted et al., 2006; Olatunji et al., 2011) or a distressing sense of "incompleteness" or uneasiness until things look, feel, or sound, "just right" (Ferrao et al., 2012). The heterogeneity of affective experiences related to obsessions is one factor that distinguishes OCD from Anxiety and Fear-Related Disorders and contributes to the rationale for a separate OCRD grouping.

Another reason for recommending relatively inclusive terminology is that the ICD-11 will be translated into many languages in which it may not be possible to distinguish between terms that are related but distinct in English (e.g., "impulse" as opposed to "urge"). The Working Group considered whether this definition of obsessions could unintentionally reduce clinicians' ability to differentiate OCD symptomatology from "impulses" in Impulse Control Disorders and "urges" in Disorders Due to Substance Use. This was addressed by specifying that the mental phenomena in OCD are experienced as intrusive, unwanted, and commonly associated with anxiety or distress, and that behaviours undertaken in response to obsessions (i.e., compulsions) are not experienced as pleasurable, although they may result in temporary relief from anxiety or distress. This distinguishes impulses or urges in OCD from appetitive experiences in Disorders

Due to Substance Use and from short-term rewarding behaviours in Impulse Control Disorders, despite partially overlapping terminology.

The proposed ICD-11 diagnostic guidelines also better represent the phenomenology of compulsions in OCD and differentiate them from repetitive behaviours in other disorders. Compulsions are defined as repetitive behaviours (e.g., washing, checking) or mental acts (e.g., repeating words silently) that the individual feels driven to perform in response to an obsession. according to rigid rules, or to achieve a sense of "completeness." In ICD-10, compulsions are described as repetitive stereotyped behaviours, but this confuses compulsions in OCD with stereotypies in other disorders such as autism spectrum disorder and stereotyped movement disorder. Consistent with the literature, the proposed ICD-11 definition of compulsions also includes covert repetitive behaviours (i.e., mental rituals) rather than being restricted to repetitive behavioral acts (Foa et al., 1995).

The ICD-11 proposal does not specify a duration requirement for a positive diagnosis of OCD because there is no empirical support for a particular threshold. Rather, clinicians are prompted to exercise caution in assigning a diagnosis of OCD to patients who present with a very short duration of illness (e.g., less than 1 month) and in excluding other etiologies in cases of acute or fulminant onset of OCD symptoms, particularly in children (Singer, 2011; Swedo et al., 1998).

The proposed ICD-11 diagnostic guidelines describe a functional relationship between obsessions and compulsions (Foa et al., 1995), specifying that individuals with OCD typically feel driven to perform compulsions in response to obsessions, often to reduce affective reactions. This is based on contemporary cognitive-behavioural models of OCD (McKay et al., 2015) and is intended to improve clinical utility by assisting assessment of OCD and planning treatments such as exposure and response prevention. Furthermore, specifying this functional relationship differentiates OCD from disorders that may involve repetitive, intrusive thoughts without concomitant compulsions (e.g., rumination in depressive disorders, re-experiencing of

traumatic events in PTSD, worries in generalized anxiety disorder) as well as from disorders involving repetitive behaviors that are not performed in response to obsessions (e.g., trichotillomania, stereotyped movement disorder, autism spectrum disorder). However, inclusion of this functional linkage between obsessions and compulsions is intended to enhance clinical utility because it reflects patients' reports of their experience but does not imply that a causal relationship has been demonstrated beyond the phenomenological level. In fact, recent functional imaging studies suggest that obsessions may be a consequence rather than a cause of excessive habit formation (i.e., compulsive behaviours) (Gillan and Robbins, 2014).

Several elements of the ICD-10 classification of OCD are recommended for elimination either because they do not reflect current research or are not clinically useful for treatment recommendations or outcomes. Thus, the OCD subtypes in ICD-10—predominantly obsessional thoughts or ruminations, predominantly compulsive acts [obsessional rituals], mixed obsessional thoughts and acts—are recommended for deletion in ICD-11 because they have no predictive validity with respect to response to treatment (Foa et al., 1995) and the majority of patients have both obsessions and compulsions (Shavitt et al., 2014). The ICD-10 diagnostic guidelines for OCD also contain somewhat confusing instructions that a depressive disorder diagnosis should be given primacy over OCD; diagnostic co-occurrence of OCD and depressive disorder is permitted under the proposed ICD-11 diagnostic guidelines. This change is based on evidence that OCD often precedes depressive disorders (Ruscio et al., 2010), outlasts typical depressive episodes and is more likely to be chronic rather than episodic (Ravizza et al., 1997; Skoog and Skoog, 1999), and can be distinguished from depressive disorders in community samples (Weissman et al., 1994). Giving primacy to depressive disorders may have led to underreporting of OCD when using ICD-10. Finally, in recognition of the high degree of cooccurrence of OCD and Tic Disorders (Cohen et al., 2013) as well as a putative genetic association (Mathews and Grados, 2011), the ICD-11 proposal specifies that assigning both OCD and a Tic Disorder is permitted.

Body dysmorphic disorder

In ICD-10, body dysmorphic disorder is not a separate category, but appears as an inclusion term under hypochondriacal disorder. This suggests that body dysmorphic disorder should be diagnosed in ICD-10 as hypochondrical disorder, although the ICD-10 provides at least three additional possible diagnostic options for this phenomenon, depending largely on the extent to which beliefs associated with body dysmorphic disorder are interpreted as delusional (Veale and Matsunaga, 2014). In recognition of its distinct symptomatology (Phillips, 1991; Phillips et al., 2005; Veale, 2004; Veale et al., 1996) and prevalence in the general population (Koran et al., 2008; Rief et al., 2006), the Working Group has recommended that body dysmorphic disorder be included as a separate disorder category.

Individuals with body dysmorphic disorder are persistently preoccupied with one or more defects or flaws in their bodily appearance (Veale, 2004) that are either unnoticeable or only slightly noticeable to others. Any part of the body may be the focus of the perceived defects but most commonly these involve the face, especially the facial skin, nose, hair, eyes, teeth, lips, chin or face in general. Frequently, there are multiple perceived defects (Phillips and Diaz, 1997; Veale et al., 1996). Individuals with body dysmorphic disorder are excessively selfconscious about the perceived defects or flaws, often to the point of manifesting ideas of selfreference (see Table 1). They may fear rejection, humiliation or, in some cultures, causing offence to others.

The ICD-11 proposal also emphasizes that the persistent preoccupation must be accompanied by repetitive behaviors (e.g., mirror checking), camouflaging (surgically or otherwise), or avoidance of anxiety-provoking situations (Phillips, 1991; Phillips et al., 2005; Veale, 2004; Veale et al., 1996). The inclusion of alteration of the perceived defect is important in alerting health care workers to assess for body dysmorphic disorder in individuals presenting to cosmetic surgeons or dermatologists (Mufaddel et al., 2013). The vast majority of individuals with body dysmorphic disorder engage in some form of camouflaging of their perceived defects (Phillips et al., 1995), which can make it difficult to assess for the degree to which the defect is unnoticeable or slightly noticeable to others. Awareness of this fact guides the clinician to take steps to obtain objective information about the body part or region from collateral sources. Similar to anxiety and fear-related disorders and other OCRD, avoidance behaviors are commonly seen in body dysmorphic disorder and are included as a possible variant of repetitive behaviours partly because of their association with significant impairments in social and occupational functioning.

Several lines of evidence support the inclusion of body dysmorphic disorder among the OCRD (Veale and Matsunaga, 2014). First, at a phenomenological level, body dysmorphic disorder and OCD share features of intrusive thoughts or images and repetitive behaviours. Specifically, individuals affected by body dysmorphic disorder experience persistent, unwanted thoughts about their perceived defects or flaws in appearance (Osman et al., 2004) and perform a variety of repetitive behaviours associated with these preoccupations. Second, there are high rates of co-occurrence of body dysmorphic disorder and OCD (Bienvenu et al., 2012). Furthermore, like OCD, body dysmorphic disorder symptoms, including presentations where insight is absent, respond to serotonin reuptake inhibitors (Phillips et al., 2002) and cognitivebehavioural therapy (Veale et al., 2014) rather than to treatments that target psychotic symptoms. Finally, including a separate diagnostic option of body dysmorphic disorder is intended to address underdiagnosis and undertreatment of the disorder (Zimmerman and Mattia, 1998) by prompting health care workers to assess for its presence, thus improving the clinical utility of the classification.

The proposed ICD-11 diagnostic guidelines for body dysmorphic disorder differentiate it from both normal preoccupations with appearance and from other disorders that share similar features. The description of the perceived defects or flaws in body dysmorphic disorder as being either unnoticeable or only slightly noticeable to others is intended to differentiate it from selfconsciousness about actual physical problems. Self-consciousness in social anxiety disorder is

differentiated from a similar phenomenon in body dysmorphic disorder because it takes the form of fear of negative evaluation about the individual's behaviour or physiological manifestations of anxiety (e.g., sweating, flushing, and tremor) rather than a perceived bodily deformity.

A major source of confusion in the appropriate diagnosis of body dysmorphic disorder has been the extent to which manifestly untrue beliefs about one's appearance and the reaction of others to it should be regarded as psychotic symptoms. Reflecting this confusion, the ICD-10 diagnostic guidelines for delusional disorder specifically mention "a conviction that the individual's body is misshapen" as an example of a delusion that may characterize the disorder. The proposed ICD-11 diagnostic guidelines indicate that some individuals with body dysmorphic disorder can acknowledge that their thoughts or behaviours are untrue or excessive, but others cannot, and the beliefs of some individuals with body dysmorphic disorder may at times appear delusional in intensity or fixity (e.g., an individual is convinced that he is hideously ugly). Moreover, beliefs related to the reactions of others to their flaws or defects may resemble ideas or delusions of self-reference (e.g., the conviction that people are taking notice, judging, or talking about the perceived defects or flaws) (Hrabosky et al., 2009; Mancuso et al., 2010). According to the proposed ICD-11 diagnostic guidelines, if such beliefs are restricted to the fear or conviction of having a flawed appearance or bodily defect in an individual without a history of other delusions and in the absence of other features of psychosis (e.g., hallucinations or formal thought disorder), and are fully consistent with the other clinical features of the disorder, then body dysmorphic disorder and not delusional disorder is the appropriate diagnosis. This change in conceptualization from ICD-10 is consistent with the way that distorted beliefs about body shape or weight have been conceptualized in the diagnosis of anorexia nervosa and the way in which strongly held beliefs about the nature of obsessions and compulsions are viewed in the context of OCD.

Olfactory reference disorder

The Working Group has recommended the addition of olfactory reference disorder to ICD-11, the essential features of which include persistent preoccupation with a perceived foul or offensive body odor or breath (Pryse-Phillips, 1971) that is either unnoticeable or slightly noticeable to others such that the individual's concerns are markedly disproportionate to the smell (see Table 1). Perceived odors reported in the literature include those originating from the mouth, genitals, anus, feet, underarms, urine, sweat, and occasionally non-bodily odors. Affected individuals fear or are convinced that others noticing the smell will reject or humiliate them, and this is associated with various affective responses including anxiety, shame, and depressed mood (Veale and Matsunaga, 2014). In Japan, olfactory reference disorder symptoms are considered a form of taijin kyofoshu referred to as jiko-shu-kyofu (Suzuki et al., 2004).

Similar to body dysmorphic disorder, for a diagnosis of olfactory reference disorder, intrusive preoccupations must be accompanied by associated repetitive behaviours intended to eradicate the perceived odor or ensure that others do not smell it (Phillips and Menard, 2011) or by avoidance behaviours. Common behaviours include checking for body odor, checking the perceived source of the smell, camouflaging the perceived odor, and seeking reassurance (Malasi et al., 1990; Pryse-Phillips, 1971). Furthermore, avoidance of social situations, present in up to 75% of individuals with olfactory reference disorder (Phillips and Menard, 2011), or avoidance of triggers that increase distress about the perceived odor is common. In a clinical sample, olfactory reference disorder symptoms resulted in about half of participants avoiding occupational, academic, or other important role activities, or being completely housebound for at least a week (Phillips and Menard, 2011).

There are several reasons for including olfactory reference disorder among the OCRD. The disorder shares phenomenological similarity with other OCRD with respect to the presence of persistent intrusive preoccupations and associated repetitive behaviours. Furthermore, OCD is commonly comorbid with olfactory reference disorder (Prazeres et al., 2010) and its inclusion

among OCRD highlights the importance of considering the disorder during the differential diagnostic process. Although olfactory reference disorder appears to have low prevalence, patients may be ashamed of their symptoms and instead report more acceptable symptoms such as those associated with a depressive disorder, OCD, or social anxiety disorder (Phillips et al., 2005), which are, in fact, often co-occurring with or consequences of olfactory reference disorder (Malasi et al., 1990). Furthermore, because the concerns are related to body functioning, many affected individuals present to primary care or to medical specialties other than psychiatry and the separate diagnostic label is expected to raise awareness of the condition. Although olfactory reference disorder is an under-researched phenomenon, case reports in the literature suggest, that similar to other OCRD, there may be a preferential response to serotonin reuptake inhibitors (Begum and McKenna, 2011; Prazeres et al., 2010; Teraishi et al., 2012).

The proposed ICD-11 diagnostic guidelines help to distinguish olfactory reference disorder from other disorders that share similar features. In particular, self-consciousness in social anxiety disorder is distinguished from that observed in olfactory reference disorder in the same way as for body dysmorphic disorder. As in body dysmorphic disorder, patients presenting with olfactory reference disorder in the absence of an appropriate diagnostic category may be unhelpfully diagnosed as having a delusional disorder or other psychotic disorder. In one clinical sample, 85% of patients with olfactory reference disorder were characterized as delusional about their conviction that they emit a foul or offensive odor (Prazeres et al., 2010), although much lower prevalence has been reported for another sample (Phillips and Menard, 2011). The proposed diagnostic guidelines reminds clinicians that preoccupations in olfactory reference disorder can appear similar to ideas or delusions of self-reference, but should be considered to be wholly consistent with the condition.

Hypochondriasis

The Working Group has recommended retaining the core diagnostic features of hypochondriasis, called hypochondriacal disorder in ICD-10, but moving it from the grouping of Somatoform Disorders In ICD-10 to the new proposed OCRD grouping in ICD-11. Hypochondriasis is a well-characterized disorder in which affected individuals have persistent preoccupations with the possibility of having one or more serious diseases (see Table 1) (Stein, 2012). These concerns may involve life-threatening diseases (e.g. cancer, AIDS), severe progressive diseases (e.g. multiple sclerosis), or in rare cases even severe mental disorders (e.g., schizophrenia). Preoccupations are associated with catastrophic misinterpretation of one or more bodily signs or symptoms, including normal or commonplace sensations. The person attributes these bodily signs or symptoms to the suspected disease and engages in a variety of behaviours intended to establish diagnosis or prognosis. In some cases, this may be manifested in avoidance of health care rather than seeking of medical information or attention.

The proposed ICD-11 diagnostic guidelines specify that in addition to preoccupations about having a serious illness, a positive diagnosis must include repetitive and excessive behaviours or maladaptive avoidance related to health, though the nature and extent of these behaviours may change over the course of the disorder. Repetitive and avoidance behaviours are important targets of treatment (Warwick, 2001). Among repetitive behaviours commonly observed in affected individuals are checking their bodies and bodily functions for signs of illness, spending excessive amounts of time searching for information about a presumed illness, and repeatedly seeking reassurance from health professionals about their health status (Rachman, 2012; Warwick and Salkovskis, 1990). Common avoidance behaviours include attempts at suppressing disease-related cognitions, not scheduling medical appointments, and evasion of triggering situations or objects.

The Working Group considered a range of evidence related to the potential placement of hypochondriasis in the OCRD grouping, in a grouping with other disorders that were included in the ICD-10 grouping of Somatoform Disorders, or in the Anxiety and Fear-Related Disorder

grouping. The recommendation not to include hypochondriasis in a grouping of Somatoform Disorder is based on the fact that the presence of somatic symptoms is not an essential feature of hypochondriasis (van den Heuvel et al., 2014), although they may occur transiently and be a focus of considerable preoccupation when they do. Moreover, unlike in individuals with Somatoform Disorder, reassurance and appropriate medical examination is typically reassuring to patients with hypochondriasis, at least in the short term (Creed and Gureje, 2012). Hypochondriasis has been found to have high rates of co-occurrence and familiality with other OCRD (Bienvenu et al., 2012). Somatoform Disorders, notably somatization disorder, also frequently co-occurs with hypochondriasis (Barsky et al., 1992; Noyes et al., 1994; Rief et al., 1998), however, this may reflect overreliance in earlier classifications on shared rather than distinct features to define these disorders. Finally, hypochondriasis unlike Somatoform Disorders, demonstrates similar response to treatments used for OCRD including serotonin reuptake inhibitors and cognitive-behavioural treatments including adapted exposure and response prevention (Greeven et al., 2009; Greeven et al., 2007).

The weight of the evidence supporting the placement of hypochondriasis in the OCRD grouping as opposed to the Anxiety and Fear-Related Disorders grouping is less clear. Hypochondriasis shares important clinical features with both OCD and with Anxiety and Fear-Related Disorders, in particular panic disorder (Neziroglu et al., 2000). Individuals with OCD often report illness related concerns, such as fears of contamination, as do those with panic disorder in their catastrophic misinterpretation of bodily sensations as evidence of illness (Clark, 1986). Unlike hypochondriasis, illness concerns in panic disorder are typically only present during panic attacks with inter-episode preoccupations focused primarily on the reoccurrence of panic. Furthermore, panic attacks can occur in the context of many forms of psychopathology including the OCRD and Anxiety and Fear-Related Disorders. Nevertheless, anxiety remains the most common affective response to hypochondriacal preoccupations. Neurobiological studies of hypochondriasis, OCD, and panic disorder provide evidence of overlapping

neuropsychological and neurocircuitry features among these disorders (Creed and Gureje, 2012; van den Heuvel et al., 2011; van den Heuvel et al., 2005). The Working Group's recommendation to include hypochondriasis among the OCRD was ultimately based on the phenomenological similarities in terms of the presence of intrusive preoccupations and repetitive behaviours such as repeated checking of the body for signs of illness, searching for information about a perceived illness, and seeking reassurance from health professionals (Rachman, 2012). However, in recognition of the overlap with anxiety and fear-related disorders, the Working Group has also recommended that hypochondriasis be cross-referenced in the ICD-11 grouping of Anxiety and Fear-Related Disorders (van den Heuvel et al., 2014). The Working Group has also recommended that the alternate title of health anxiety disorder be included for hypochondriasis (see Table 1) because of its prevalent use in the clinical literature (Tyrer and Tyrer, 2014).

Hoarding disorder

The Working Group has recommended that hoarding disorder be added to the OCRD grouping. Hoarding disorder is characterized by an excessive attachment to a large number of possessions, regardless of their actual value, resulting in excessive acquisition and failure to discard items, such that living spaces become cluttered and their use compromised (see Table 1 for core diagnostic features). Hoarding behaviours may be exhibited as a part of a broad range of Mental and Behavioural Disorders and other conditions (Mataix-Cols et al., 2013), including OCD, Depressive Disorders, Schizophrenia, Dementia, Autism Spectrum Disorder, and Prader-Willi Syndrome (Fontenelle and Grant, 2014). However, the Working Group determined that there is now sufficient evidence that hoarding behaviour accompanied by other essential features should be regarded as a separate and unique mental disorder. For example, a large epidemiological study concluded that the disorder is distinct from OCD and other disorders and that the disorder has a population estimate of 5.8% (Timpano et al., 2011).

Individuals affected by hoarding disorder are under-recognized and undertreated, which argues from a public health perspective for its inclusion in the classification (Mataix-Cols et al., 2010).

According to the proposed ICD-11 diagnostic guidelines, the essential features of hoarding disorder include: 1) excessive accumulation of and attachment to possessions, regardless of their actual value; 2) repetitive urges or behaviours related to buying, stealing or amassing items; and 3) difficulty discarding items due to a perceived need to save items and distress associated with discarding them (see Table 1). Although the existence of a variant of the disorder that does not involve excessive acquisition has also been suggested (Timpano et al., 2011), the evidence suggests that those who deny current acquisition problems often report active avoidance of cues that might trigger a desire to acquire items and that they tend to exhibit excessive acquisition when such cues are no longer avoided (Frost et al., 2013). The proposed ICD-11 diagnostic guidelines also indicate that significant distress or functional impairment is also a required feature of the disorder, to distinguish hoarding from collecting, and it is most commonly the excessive acquisition of items that is associated with distress and impairment and produces threats to health and safety. Excessive attachment to hoarded items, regardless of their actual value, may occur for a variety of reasons (Steketee and Frost, 2003), and is distinct from cognitive phenomena common in other OCRD, such as obsessions in OCD (Mataix-Cols et al., 2013). Inclusion of the requirement for difficulty discarding items, alongside excessive acquisition, is consistent with recent evidence that both belong to a one-dimensional hoarding phenotype (Meyer et al., 2013).

The diagnostic requirement that excessive acquisition and failure to discard items in hoarding disorder result in cluttered living spaces whose use or safety are compromised is intended to differentiate clinically significant hoarding from normal accumulation of items and collecting. One assumption that is made in this definition is that clinically significant hoarding cannot occur in the absence of clutter. However, the extent to which clutter may be present and/or interfere with usual activities may vary (e.g., depending on resources and available

space), and various possibilities were considered for setting a reasonable threshold for the diagnosis. A field trial of the DSM-5 criterion that requires "key" living spaces to be sufficiently cluttered so as to preclude activities for which those spaces were designed (APA, 2013), which is similar to earlier definitions of hoarding (Frost and Hartl, 1996), was considered too strict because it resulted in not assigning the diagnosis to individuals who 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 (Mataix-Cols et al., 2013). The proposed ICD-11 guidelines use a somewhat more flexible threshold of "use or safety being compromised."

The presence of positive affective responses to acquisition behaviors observed in individuals with hoarding disorder raises the question of whether the disorder might be more appropriately considered an impulse control disorder (Steketee and Frost, 2003). The Working Group considered this formulation but opted against it because inability to discard items cannot be considered an impulsive behaviour and also because some compulsions in OCD, such as symmetry-related behaviours, may also be experienced as pleasurable. The strongest support for including hoarding disorder in the OCRD grouping comes from phenomenological similarities with OCD, whereby individuals with hoarding disorder engage in repetitive behaviours in the form of excessive acquisition alongside avoidance of discarding objects in order to diminish or avoid distress (Fontenelle and Grant, 2014; Mataix-Cols et al., 2010). Moreover, there are also important differences in symptomatology, and treatments for OCD such as serotonin reuptake inhibitors and exposure and response prevention appear to be less effective among individuals with hoarding disorder (Mathews, 2014), who tend to require adjunctive strategies such as motivational interviewing and adaptations to CBT protocols (Steketee et al., 2010). Therefore, hoarding disorder may not fit as neatly or unequivocally into the OCRD grouping as the other disorders described above. However, the Working Group considered that, on balance, its

inclusion in this grouping is the most clinically useful placement option given currently available evidence.

Insight Qualifier in OCRD

Varying proportions of individuals with OCD, body dysmorphic disorder, olfactory reference disorder, hypochondriasis, and hoarding disorder at times appear to lack insight about the irrationality of their thoughts and behaviors to such an extent that their convictions of the veracity of associated beliefs (e.g., that failing to enact a ritual will results in catastrophic consequences, that one is hideously deformed, that one has a life-threatening illness, and that possessions cannot be discarded) may at times appear to be delusional in intensity or fixity. In the past, this has caused some presentations of these disorders to be misdiagnosed as delusional or other psychotic disorders, for example as discussed above for body dysmorphic disorder. According to the proposed diagnostic guidelines, if beliefs are restricted to ideation that is specifically related to psychopathology of the OCRD, occur entirely in the context of symptomatic episodes of the disorder, and in the absence of other features of psychosis, they should be regarded as fully consistent with the OCRD diagnosis and the individual should not be diagnosed with delusional disorder. Support for this diagnostic approach is also derived from studies demonstrating that effective treatments for OCRD, irrespective of the level of insight, differ from those for psychotic disorders (O'Dwyer and Marks, 2000; Veale and Matsunaga, 2014; Wilhelm et al., 2014).

At the same time, the intensity or fixity of the individual's beliefs exhibited as part of an OCRD is likely to be relevant for selection of a treatment approach—for example, different cognitive treatments involve different degrees of direct confrontation with the individual's beliefs—and as predictors of treatment adherence and prognosis (Himle et al., 2006; Phillips et al., 2014). The Working Group has therefore recommended the inclusion of a qualifier for level of insight that can be applied across the OCRD categories described above. For the purpose of this qualifier, insight refers to the extent to which a person is convinced that her or his

obsessions, preoccupations, repetitive behaviours, or beliefs about the relationship between these phenomena reflect objective truths, and is meant to include overvalued ideas (Veale, 2002). Level of insight is expected to vary with the evolution of the disorder, the current level of stress and symptoms, and in response to somatic and psychosocial treatments.

The insight qualifier captures the spectrum of conviction with which disorder-specific beliefs are held with what the Working Group considered sufficient granularity to be clinically useful. Each disorder can be assigned one of three distinct levels as follows: (1) with fair to good insight, which characterizes individuals who think that their beliefs are probably untrue or are regularly able to entertain the possibility that their beliefs may not be true; (2) with poor insight, which characterizes individuals who think that their beliefs are probably true; and (3) no insight, which characterizes individuals for who, all or almost all of the time, are completely convinced that the beliefs are true.

Although the insight qualifier is intended to be applicable to OCD, body dysmorphic disorder, olfactory reference disorder, hypochondriasis, and hoarding disorder, the base rates for levels of insight associated with each diagnostic category likely vary. For example, data suggest that lack of insight is relatively uncommon in OCD (Eisen and Rasmussen, 1993), significantly higher in body dysmorphic disorder with approximately half of patients affected (Phillips et al., 1997; Veale et al., 1996), and may range up to 85% in olfactory reference disorder depending on the sample (Phillips and Menard, 2011; Prazeres et al., 2010). Future research using the proposed level of insight qualifier will help to clarify its utility and its association with factors such as prognosis and genetic factors.

Body-focused repetitive behaviour disorders

The Working Group has proposed including a new subgrouping of Body-Focused Repetitive Behaviour Disorders within the OCRD, encompassing trichotillomania (hair-pulling disorder) and excoriation (skin-picking) disorder, which are characterized by recurrent and habitual actions directed at the integument (see Table 1). Inclusion of a subgrouping of Body-

Focused Repetitive Behaviour Disorders grouping reflects evidence that these disorders share more in common with each other than with other OCRD (Lochner et al., 2002). Trichotillomania was previously classified as a "habit and impulse disorder" in ICD-10 whereas excoriation disorder is a new proposed diagnostic entity. Hair-pulling and skin-picking are included as named categories in the subgrouping because they are the most prevalent of these conditions, and the most likely to be accompanied by distress and impairment (Keuthen et al., 2010; Odlaug and Grant, 2008), but other bodily targets of repetitive behaviour such as nail biting and nose picking, can be classified under the residual category of "other body-focused repetitive behaviour disorders" if they meet the other essential diagnostic requirements.

The essential features of trichotillomania and excoriation disorder are repetitive and persistent pulling of hair or picking of skin resulting in hair loss or skin lesions, respectively. In addition, individuals with these disorders must have demonstrated attempts to stop or decrease these compulsive behaviours. There is no requirement that patients experience relief or gratification from hair or skin removal, a feature that was omitted based on findings that there are no important clinical differences in individuals who did and did not report this experience (Lochner et al., 2012a; Lochner et al., 2012b). Instead, the proposed ICD-11 diagnostic guidelines indicate that Body-Focused Repetitive Behaviour Disorders may be associated with a variety of reported effects including regulation of affect and arousal, tension reduction, and pleasure, all of which are presumed to reinforce repetitive behaviours. Patients are also found to have varying degrees of awareness of their hair pulling or skin picking behaviour. Importantly, the guidelines emphasize that in the aftermath of hair pulling or skin picking, many individuals report a variety of negative affects, such as a sense of loss of control or shame. Finally, rather than providing clinicians with arbitrary, non-evidenced based counting rules for elements such as the duration of symptoms and time spent performing behaviours to differentiate normality from pathology, these are referred to more flexibly to allow for appropriate clinical judgment.

Body-Focused Repetitive Behaviour Disorders are distinct from other OCRD in that they are rarely preceded by cognitive phenomena such as intrusive thoughts, obsessions, or preoccupations, but instead may be preceded by sensory experiences (Grant and Stein, 2014). However, their inclusion in the OCRD grouping is based on evidence of their relatedness to OCD in terms of shared phenomenology, patterns of familial aggregation, and etiologic mechanisms (Grant et al., 2012). At the phenomenological level, the behaviours in Body-Focused Repetitive Behaviour Disorders are often accompanied by urges, and once performed relieve anxiety (or hyperarousal). At the neurobiological level there is evidence of fronto-striatal circuitry dysfunction as is observed in OCRD (Chamberlain et al., 2008). Finally, Body-Focused Repetitive Behaviour Disorders frequently co-occur with OCD (Lochner et al., 2005).

In contrast to other OCRD, Body-Focused Repetitive Behaviour Disorders call for distinct assessment methods that may include physical examination and reports from collateral informants. Treatment approaches also differ somewhat, and include the use of habit reversal, dopamine antagonists, and modulators of glutamate. It has been suggested that Body-Focused Repetitive Behaviour Disorders might better be considered an Impulse control disorder because some patients report relief and gratification from the behaviour similar to those who engage in other impulsive activities (e.g., kleptomania), impulsive traits appear to co-occur frequently with Body-Focused Repetitive Behaviour Disorders, and there may be high familiality with Disorders due to Substance Use (Hollander et al., 2009). The Working Group decided that the evidence was stronger for the classification of these disorders among the OCRD.

The proposed guidance distinguishing Body-Focused Repetitive Behaviour Disorder from other disorders indicates that in other OCRD, particularly OCD and body dysmorphic disorder, hair pulling and skin picking behaviours may be present but performed in response to disorder-specific obsessions/preoccupations, for example to achieve symmetry in OCD or to alter appearance in body dysmorphic disorder. Stereotyped movement disorder is distinct from Body-Focused Repetitive Behaviour Disorders because of the presence of seemingly driven

and nonfunctional motor behaviors such as head banging, body rocking, self-biting, generally composed of patterned and predictable coordinated movements, that emerge at a very early age (Freeman et al., 2010), Finally, clinicians are alerted to other health conditions (e.g., skin inflammation) as well as patterns of substance use (e.g., dopamine releasing drugs) that may be associated with repetitive behaviours targeting the integument.

Cross-referenced disorders

The ICD-11 classification includes a system of "multiple parenting," which allows diagnostic categories found in other chapters or groupings to be cross-referenced when these could legitimately be placed in more than one section of the classification. Multiple parenting is intended to enhance clinical utility by ensuring that health care providers will consider crossreferenced disorders in differential diagnosis or in recognizing co-morbidities that affect treatment planning and implementation. ICD-11 entities proposed for cross-referencing in the ORD grouping include Tourette syndrome, which is primary parented in the ICD-11 chapter on Diseases of the Nervous System, and personality disorder with anankastic features from the Personality Disorders grouping.

The Working Group has recommended that Tourette syndrome be cross-referenced to the OCRD grouping for several reasons (Woods and Thomsen, 2014). First, studies of Tourette syndrome have demonstrated its high comorbidity with OCD (Freeman et al., 2000) (Scharf et al., 2012). Second, factor analytic studies suggest that complex tics are highly related to OCD severity (Alsobrook and Pauls, 2002), and symmetry-related obsessions are associated with tic symptoms (McKay et al., 2004). Third, there is evidence for a familial link between OCD and Tourette syndrome (Davis et al., 2013). Brain imaging studies also suggest that these disorders both involve disruption in cortico-striato-thalamocortical pathways (Milad and Rauch, 2012). Finally, OCD and Tourette syndrome share the phenomenology of repetitive behaviors serving to temporarily reduce aversive experiences, primarily obsessions in the case of OCD, and sensory "premonitory urges" in the case of Tourette syndrome (Miguel et al., 1995). The

essential features proposed for a diagnosis of Tourette syndrome in ICD-11 (Woods and Thomsen, 2014) include the presence of one or more motor tics and one or more vocal tics, which may or may not manifest concurrently or continuously, over a period of at least one year with onset during the developmental period. The guidelines emphasize that tics wax and wane through time (e.g., worsening during periods of stress) (Woods and Thomsen, 2014). The proposed guidelines recognize the challenge of differentiating Tourette syndrome from OCD. and specify that repetitive, recurrent movements or vocalizations in Tourette syndrome are differentiated because they appear unintentional in nature, clearly utilize a discrete muscle group, and are not aimed at neutralizing obsessions or reducing anxiety. The guidelines also recognize that the disorder can co-occur, and indicate that both diagnoses may be assigned if the full essential features of both disorders are present.

The ICD-11 Working Group on Personality Disorders has proposed a major revision to this section of the classification reflecting accruing evidence regarding the dimensionality of personality pathology (Bernstein et al., 2007) and the lack of the validity of existing personality disorder categories (Skodol et al., 2005). As proposed for ICD-11, assignment of a personality disorder diagnosis is based on the presence of a general pervasive and persistent disturbance in inter- and intrapersonal functioning, which is then rated according to the severity of the disturbance (Tyrer et al., 2015). The personality disorder can also be qualified according to trait domains that describe the underlying personality structure. These include an "anankastic features" domain that describes individuals who exhibit perfectionism, extreme need to control their own and others' behavior, and rigid adherence to rules. This variant of personality disorders is proposed for cross-referencing to the OCRD grouping because of the significant similarities in phenomenology (although there are also important differences such as a lack of distressing obsessions and time consuming compulsions) as well as co-occurrence with disorders that manifest in compulsive behavior (Coles et al., 2008; Phillips and McElroy, 2000; Pinto et al., 2006). Personality disorder with anankastic features is highly co-occurring with OCD and also shares a significant familial link (Bienvenu et al., 2012; Samuels et al., 2000). Furthermore, there is recent evidence for a neuropsychological profile reflecting cognitive inflexibility and perseveration in non-clinical cases of personality disorder with anankastic features that matches that of individuals with OCD (Fineberg et al., 2015).

Conclusion and Limitations

The ICD-11 Working Group surveyed the evidence and placed a high priority on clinical utility in proposing a new grouping of Obsessive-Compulsive and Related Disorders. The proposal is informed by studies indicating that the disorders included in the grouping have similarities with respect to a number of validators including neurocircuitry (Milad and Rauch, 2012), neurochemistry (e.g., Nikolaus et al., 2010), familiality (Bienvenu et al., 2012), and genetic risk factors (Monzani et al., 2014). Furthermore, they frequently co-occur (Lochner et al., 2005) and have overlapping responses to specific psychopharmacological and psychotherapeutic treatments (Fineberg et al., 2014).

The Working Group proposed revisions to the guidelines for the OCRD intended to enhance clinical utility, paying particular attention to the fact that the ICD will be used to diagnose conditions globally in general and specialty settings with varied resources. It is anticipated that the creation of the OCRD grouping and the inclusion of several new conditions (i.e., body dysmorphic disorder, hoarding disorder, olfactory reference disorder, and excoriation disorder) will contribute to accurate identification of patients so that they receive services in a more timely manner as well as to research efforts aimed at improving our understanding of the prevalence, assessment, and treatment of these disorders.

Alternative nosological conceptualizations have been described in the literature and vary substantially. These range from proposing that the disorders slated for inclusion in the ICD-11 OCRD grouping be placed in existing groupings such as anxiety disorders, somatoform disorders, and impulse control disorders to proposing a broader OCRD concept along an impulsive-compulsive continuum that would also incorporate a variety of other groupings of

disorders (e.g., impulse control disorders, attention deficit hyperactivity disorder, and in some formulations substance abuse disorders and feeding and eating disorders). Although alternative taxonomies have some merit and empirical basis, the proposed ICD-11 OCRD grouping is most likely to achieve the goals of maximizing clinical utility and global applicability.

The proposals described in this article will be systematically tested in field studies administered via the internet using standardized case material (Evans, 2015) as well as with real patients in clinical settings (Keeley, in press), based on which they will be modified prior to finalization for submission to the World Health Assembly. Mental health and primary care professionals interested in participating in field studies for ICD-11 Mental and Behavioural Disorders are encouraged to register in any of nine languages as a part of the Global Clinical Practice Network (Reed, 2015) at www.globalclinicalpractice.net.

References

- Abramovitch, A., Dar, R., Hermesh, H., Schweiger, A., 2012. Comparative neuropsychology of adult obsessive-compulsive disorder and attention deficit/hyperactivity disorder: implications for a novel executive overload model of OCD. Journal of neuropsychology 6, 161-191.
- Alsobrook, J.P., 2nd, Pauls, D.L., 2002. A factor analysis of tic symptoms in Gilles de la Tourette's syndrome. The American journal of psychiatry 159, 291-296.
- APA, 2013. Diagnostic and statistical manual of mental disorders (5th ed.). American Psychiatric Association, Washington, D.C.
- Barsky, A.J., Wyshak, G., Klerman, G.L., 1992. Psychiatric comorbidity in DSM-III-R hypochondriasis. Archives of general psychiatry 49, 101-108.
- Begum, M., McKenna, P.J., 2011. Olfactory reference syndrome: a systematic review of the world literature. Psychological medicine 41, 453-461.
- Bernstein, D.P., Iscan, C., Maser, J., Boards of Directors of the Association for Research in Personality Disorders, International Society for the Study of Personality Disorders. 2007. Opinions of personality disorder experts regarding the DSM-IV personality disorders classification system. Journal of Personality Disorders, 536-551.
- Bienvenu, O.J., Samuels, J.F., Wuyek, L.A., Liang, K.Y., Wang, Y., Grados, M.A., Cullen, B.A., Riddle, M.A., Greenberg, B.D., Rasmussen, S.A., Fyer, A.J., Pinto, A., Rauch, S.L., Pauls, D.L., McCracken, J.T., Piacentini, J., Murphy, D.L., Knowles, J.A., Nestadt, G., 2012. Is obsessive-compulsive disorder an anxiety disorder, and what, if any, are spectrum conditions? A family study perspective. Psychological medicine 42, 1-13.
- Chamberlain, S.R., Menzies, L.A., Fineberg, N.A., Del Campo, N., Suckling, J., Craig, K., Muller, U., Robbins, T.W., Bullmore, E.T., Sahakian, B.J., 2008. Grey matter abnormalities in trichotillomania: morphometric magnetic resonance imaging study. The British journal of psychiatry: the journal of mental science 193, 216-221.
- Clark, D.M., 1986. A cognitive approach to panic. Behaviour research and therapy 24, 461-470.

- Cohen, S.C., Leckman, J.F., Bloch, M.H., 2013, Clinical assessment of Tourette syndrome and tic disorders. Neuroscience and biobehavioral reviews 37, 997-1007.
- Coles, M.E., Pinto, A., Mancebo, M.C., Rasmussen, S.A., Eisen, J.L., 2008. OCD with comorbid OCPD: a subtype of OCD? Journal of psychiatric research 42, 289-296.
- Creed, F., Gureje, O., 2012. Emerging themes in the revision of the classification of somatoform disorders. International review of psychiatry 24, 556-567.
- Davis, L.K., Yu, D., Keenan, C.L., Gamazon, E.R., Konkashbaev, A.I., Derks, E.M., Neale, B.M., Yang, J., Lee, S.H., Evans, P., Barr, C.L., Bellodi, L., Benarroch, F., Berrio, G.B., Bienvenu, O.J., Bloch, M.H., Blom, R.M., Bruun, R.D., Budman, C.L., Camarena, B., Campbell, D., Cappi, C., Cardona Silgado, J.C., Cath, D.C., Cavallini, M.C., Chavira, D.A., Chouinard, S., Conti, D.V., Cook, E.H., Coric, V., Cullen, B.A., Deforce, D., Delorme, R., Dion, Y., Edlund, C.K., Egberts, K., Falkai, P., Fernandez, T.V., Gallagher, P.J., Garrido, H., Geller, D., Girard, S.L., Grabe, H.J., Grados, M.A., Greenberg, B.D., Gross-Tsur, V., Haddad, S., Heiman, G.A., Hemmings, S.M., Hounie, A.G., Illmann, C., Jankovic, J., Jenike, M.A., Kennedy, J.L., King, R.A., Kremeyer, B., Kurlan, R., Lanzagorta, N., Leboyer, M., Leckman, J.F., Lennertz, L., Liu, C., Lochner, C., Lowe, T.L., Macciardi, F., McCracken, J.T., McGrath, L.M., Mesa Restrepo, S.C., Moessner, R., Morgan, J., Muller, H., Murphy, D.L., Naarden, A.L., Ochoa, W.C., Ophoff, R.A., Osiecki, L., Pakstis, A.J., Pato, M.T., Pato, C.N., Piacentini, J., Pittenger, C., Pollak, Y., Rauch, S.L., Renner, T.J., Reus, V.I., Richter, M.A., Riddle, M.A., Robertson, M.M., Romero, R., Rosario, M.C., Rosenberg, D., Rouleau, G.A., Ruhrmann, S., Ruiz-Linares, A., Sampaio, A.S., Samuels, J., Sandor, P., Sheppard, B., Singer, H.S., Smit, J.H., Stein, D.J., Strengman, E., Tischfield, J.A., Valencia Duarte, A.V., Vallada, H., Van Nieuwerburgh, F., Veenstra-Vanderweele, J., Walitza, S., Wang, Y., Wendland, J.R., Westenberg, H.G., Shugart, Y.Y., Miguel, E.C., McMahon, W., Wagner, M., Nicolini, H., Posthuma, D., Hanna, G.L., Heutink, P., Denys, D., Arnold, P.D., Oostra, B.A., Nestadt, G., Freimer, N.B., Pauls, D.L., Wray, N.R., Stewart, S.E., Mathews, C.A., Knowles, J.A., Cox, N.J., Scharf, J.M., 2013. Partitioning the heritability of Tourette syndrome and obsessive compulsive disorder reveals differences in genetic architecture. PLoS genetics 9, e1003864.
- Disorders, I.A.G.f.t.R.o.I.-M.a.B., 2011. A conceptual framework for the revision of the ICD-10 classification of mental and behavioural disorders. World Psychiatry 10, 86-92.
- Eisen, J.L., Rasmussen, S.A., 1993. Obsessive compulsive disorder with psychotic features. The Journal of clinical psychiatry 54, 373-379.
- Evans, S.C., Roberts, M. C., Keeley, J. W., Blossom, J. B., Amaro, C. M., Garcia, A. M., Stough, C. O., Canter, K. S., Robles, R., & Reed, G. M., 2015. Using vignette methodologies for study clinicians' decision-making: Validity, utility, and application in ICD-11 field studies. International Journal of Clinical and Health Psychology.
- Ferrao, Y.A., Shavitt, R.G., Prado, H., Fontenelle, L.F., Malavazzi, D.M., de Mathis, M.A., Hounie, A.G., Miguel, E.C., do Rosario, M.C., 2012. Sensory phenomena associated with repetitive behaviors in obsessive-compulsive disorder: an exploratory study of 1001 patients. Psychiatry research 197, 253-258.
- Fineberg, N.A., Chamberlain, S.R., Goudriaan, A.E., Stein, D.J., Vanderschuren, L.J., Gillan, C.M., Shekar, S., Gorwood, P.A., Voon, V., Morein-Zamir, S., Denys, D., Sahakian, B.J., Moeller, F.G., Robbins, T.W., Potenza, M.N., 2014. New developments in human neurocognition: clinical, genetic, and brain imaging correlates of impulsivity and compulsivity. CNS spectrums 19, 69-89.
- Fineberg, N.A., Day, G.A., de Koenigswarter, N., Reghunandanan, S., Kolli, S., Jefferies-Sewell, K., Hranov, G., Laws, K.R., 2015. The neuropsychology of obsessive-compulsive personality disorder: a new analysis. CNS spectrums, 1-10.

- Fineberg, N.A., Sharma, P., Sivakumaran, T., Sahakian, B., Chamberlain, S.R., 2007. Does obsessive-compulsive personality disorder belong within the obsessive-compulsive spectrum? CNS spectrums 12, 467-482.
- First, M.B., Reed, G.M., Hyman, S.E., Saxena, S., 2015. The development of the ICD-11 Clinical Descriptions and Diagnostic Guidelines for Mental and Behavioural Disorders. World Psychiatry 14, 82-90.
- Foa, E.B., Kozak, M.J., Goodman, W.K., Hollander, E., Jenike, M.A., Rasmussen, S.A., 1995. DSM-IV field trial: obsessive-compulsive disorder. The American journal of psychiatry 152, 90-96.
- Fontenelle, L.F., Grant, J.E., 2014. Hoarding disorder: a new diagnostic category in ICD-11? Revista brasileira de psiguiatria 36 Suppl 1, 28-39.
- Freeman, R.D., Fast, D.K., Burd, L., Kerbeshian, J., Robertson, M.M., Sandor, P., 2000. An international perspective on Tourette syndrome: selected findings from 3,500 individuals in 22 countries. Developmental medicine and child neurology 42, 436-447.
- Freeman, R.D., Soltanifar, A., Baer, S., 2010, Stereotypic movement disorder; easily missed. Developmental medicine and child neurology 52, 733-738.
- Frost, R.O., Hartl, T.L., 1996. A cognitive-behavioral model of compulsive hoarding. Behaviour research and therapy 34, 341-350.
- Frost, R.O., Hristova, V., Steketee, G., Tolin, D.F., 2013. Activities of Daily Living Scale in Hoarding Disorder. Journal of obsessive-compulsive and related disorders 2, 85-90.
- Gillan, C.M., Robbins, T.W., 2014. Goal-directed learning and obsessive-compulsive disorder. Philosophical transactions of the Royal Society of London. Series B, Biological sciences
- Grant, J.E., Odlaug, B.L., Chamberlain, S.R., Keuthen, N.J., Lochner, C., Stein, D.J., 2012. Skin picking disorder. The American journal of psychiatry 169, 1143-1149.
- Grant, J.E., Stein, D.J., 2014. Body-focused repetitive behavior disorders in ICD-11. Revista brasileira de psiquiatria 36 Suppl 1, 59-64.
- Greeven, A., van Balkom, A.J., van der Leeden, R., Merkelbach, J.W., van den Heuvel, O.A., Spinhoven, P., 2009. Cognitive behavioral therapy versus paroxetine in the treatment of hypochondriasis: an 18-month naturalistic follow-up. Journal of behavior therapy and experimental psychiatry 40, 487-496.
- Greeven, A., van Balkom, A.J., Visser, S., Merkelbach, J.W., van Rood, Y.R., van Dyck, R., Van der Does, A.J., Zitman, F.G., Spinhoven, P., 2007. Cognitive behavior therapy and paroxetine in the treatment of hypochondriasis: a randomized controlled trial. The American journal of psychiatry 164, 91-99.
- Himle, J.A., M.L., V.E., Janeck, A.S., Fischer, D.J., 2006. Insight as a predictor of treatment outcome in behavioral group treatment for obsessive-compulsive disorder. Cognitive Therapy Research 30, 661-666.
- Hollander, E., Kim, S., Braun, A., Simeon, D., Zohar, J., 2009. Cross-cutting issues and future directions for the OCD spectrum. Psychiatry research 170, 3-6.
- Hollander, E., Wong, C.M., 1995. Obsessive-compulsive spectrum disorders. The Journal of clinical psychiatry 56 Suppl 4, 3-6; discussion 53-55.
- Hrabosky, J.I., Cash, T.F., Veale, D., Neziroglu, F., Soll, E.A., Garner, D.M., Strachan-Kinser, M., Bakke, B., Clauss, L.J., Phillips, K.A., 2009. Multidimensional body image comparisons among patients with eating disorders, body dysmorphic disorder, and clinical controls: a multisite study. Body image 6, 155-163.
- Husted, D.S., Shapira, N.A., Goodman, W.K., 2006. The neurocircuitry of obsessive-compulsive disorder and disgust. Progress in neuro-psychopharmacology & biological psychiatry 30. 389-399.
- Keeley, J.W., Reed, G. M., Roberts, M. C., Evans, S. C., Medina-Mora, M. E., Robles, R., Rebello, T., Sharan, P., Gureje, O., First, M. B., Andrews, H. F., Ayuso-Mateos, J. L.,

- Gaebel, W., Zielasek, J., & Saxena, S., in press, Developing a science of clinical utility in diagnostic classification systems: Field study strategies for ICD-11 Mental and Behavioural Disorders. American Psychologist.
- Keuthen, N.J., Koran, L.M., Aboujaoude, E., Large, M.D., Serpe, R.T., 2010. The prevalence of pathologic skin picking in US adults. Comprehensive psychiatry 51, 183-186.
- Koran, L.M., Abujaoude, E., Large, M.D., Serpe, R.T., 2008. The prevalence of body dysmorphic disorder in the United States adult population. CNS spectrums 13, 316-322.
- Lochner, C., Grant, J.E., Odlaug, B.L., Stein, D.J., 2012a. DSM-5 field survey: skin picking disorder. Annals of clinical psychiatry: official journal of the American Academy of Clinical Psychiatrists 24, 300-304.
- Lochner, C., Grant, J.E., Odlaug, B.L., Woods, D.W., Keuthen, N.J., Stein, D.J., 2012b. DSM-5 field survey: hair-pulling disorder (trichotillomania). Depression and anxiety 29, 1025-1031.
- Lochner, C., Hemmings, S.M., Kinnear, C.J., Niehaus, D.J., Nel, D.G., Corfield, V.A., Moolman-Smook, J.C., Seedat, S., Stein, D.J., 2005. Cluster analysis of obsessive-compulsive spectrum disorders in patients with obsessive-compulsive disorder; clinical and genetic correlates. Comprehensive psychiatry 46, 14-19.
- Lochner, C., Simeon, D., Niehaus, D.J., Stein, D.J., 2002. Trichotillomania and skin-picking: a phenomenological comparison. Depression and anxiety 15, 83-86.
- Malasi, T.H., el-Hilu, S.M., Mirza, I.A., el-Islam, M.F., 1990. Olfactory delusional syndrome with various aetiologies. The British journal of psychiatry: the journal of mental science 156, 256-260.
- Mancuso, S.G., Knoesen, N.P., Castle, D.J., 2010. Delusional versus nondelusional body dysmorphic disorder. Comprehensive psychiatry 51, 177-182.
- Mataix-Cols, D., Billotti, D., Fernandez de la Cruz, L., Nordsletten, A.E., 2013. The London field trial for hoarding disorder. Psychological medicine 43, 837-847.
- Mataix-Cols, D., Frost, R.O., Pertusa, A., Clark, L.A., Saxena, S., Leckman, J.F., Stein, D.J., Matsunaga, H., Wilhelm, S., 2010. Hoarding disorder: a new diagnosis for DSM-V? Depression and anxiety 27, 556-572.
- Mathews, C.A., 2014. Hoarding disorder: more than just a problem of too much stuff. The Journal of clinical psychiatry 75, 893-894.
- Mathews, C.A., Grados, M.A., 2011. Familiality of Tourette Syndrome, Obsessive-Compulsive Disorder, and Attention-Deficit/Hyperactivity Disorder: Heritability Analysis in a Large Sib-Pair Sample. Journal of the American Academy of Child & Adolescent Psychiatry 50, 46-54.
- McKay, D., Abramowitz, J.S., Calamari, J.E., Kyrios, M., Radomsky, A., Sookman, D., Taylor, S., Wilhelm, S., 2004. A critical evaluation of obsessive-compulsive disorder subtypes: symptoms versus mechanisms. Clinical psychology review 24, 283-313.
- McKay, D., Sookman, D., Neziroglu, F., Wilhelm, S., Stein, D.J., Kyrios, M., Matthews, K., Veale, D., 2015. Efficacy of cognitive-behavioral therapy for obsessive-compulsive disorder. Psychiatry research 225, 236-246.
- Meyer, J.F., Frost, R.O., Brown, T.A., Steketee, G., Tolin, D.F., 2013. A Multitrait-Multimethod Matrix Investigation of Hoarding. Journal of obsessive-compulsive and related disorders 2. 273-280.
- Miguel, E.C., Coffey, B.J., Baer, L., Savage, C.R., Rauch, S.L., Jenike, M.A., 1995. Phenomenology of intentional repetitive behaviors in obsessive-compulsive disorder and Tourette's disorder. The Journal of clinical psychiatry 56, 246-255.
- Milad, M.R., Rauch, S.L., 2012. Obsessive-compulsive disorder: beyond segregated corticostriatal pathways. Trends in cognitive sciences 16, 43-51.
- Monzani, B., Rijsdijk, F., Harris, J., Mataix-Cols, D., 2014. The structure of genetic and environmental risk factors for dimensional representations of DSM-5 obsessive-compulsive spectrum disorders. JAMA psychiatry 71, 182-189.

- Mufaddel, A., Osman, O.T., Almugaddam, F., Jafferany, M., 2013. A review of body dysmorphic disorder and its presentation in different clinical settings. The primary care companion to CNS disorders 15.
- Neziroglu, F., McKay, D., Yarvura-Tobias, J.A., 2000. Overlapping and distinctive features of hypochondriasis and obsessive-compulsive disorder. Journal of anxiety disorders 14, 603-
- Nikolaus, S., Antke, C., Beu, M., Muller, H.W., 2010. Cortical GABA, striatal dopamine and midbrain serotonin as the key players in compulsive and anxiety disorders--results from in vivo imaging studies. Reviews in the neurosciences 21, 119-139.
- Noyes, R., Jr., Kathol, R.G., Fisher, M.M., Phillips, B.M., Suelzer, M.T., Woodman, C.L., 1994. Psychiatric comorbidity among patients with hypochondriasis. General hospital psychiatry 16, 78-87.
- O'Dwyer, A.M., Marks, I., 2000. Obsessive-compulsive disorder and delusions revisited. The British journal of psychiatry: the journal of mental science 176, 281-284.
- Odlaug, B.L., Grant, J.E., 2008. Trichotillomania and Pathologic Skin Picking: clinical comparison with an examination of comorbidity. Annals of clinical psychiatry: official journal of the American Academy of Clinical Psychiatrists 20, 57-63.
- Olatunji, B.O., Ebesutani, C., David, B., Fan, Q., McGrath, P.B., 2011. Disgust proneness and obsessive-compulsive symptoms in a clinical sample: structural differentiation from negative affect. Journal of anxiety disorders 25, 932-938.
- Osman, S., Cooper, M., Hackmann, A., Veale, D., 2004. Spontaneously occurring images and early memories in people with body dysmorphic disorder. Memory 12, 428-436.
- Phillips, K.A., 1991. Body dysmorphic disorder: the distress of imagined ugliness. The American journal of psychiatry 148, 1138-1149.
- Phillips, K.A., Albertini, R.S., Rasmussen, S.A., 2002. A randomized placebo-controlled trial of fluoxetine in body dysmorphic disorder. Archives of general psychiatry 59, 381-388.
- Phillips, K.A., Diaz, S.F., 1997. Gender differences in body dysmorphic disorder. The Journal of nervous and mental disease 185, 570-577.
- Phillips, K.A., Hart, A.S., Simpson, H.B., Stein, D.J., 2014. Delusional versus nondelusional body dysmorphic disorder: recommendations for DSM-5. CNS spectrums 19, 10-20.
- Phillips, K.A., Hollander, E., Rasmussen, S.A., Aronowitz, B.R., DeCaria, C., Goodman, W.K., 1997. A severity rating scale for body dysmorphic disorder: development, reliability, and validity of a modified version of the Yale-Brown Obsessive Compulsive Scale. Psychopharmacology bulletin 33, 17-22.
- Phillips, K.A., McElroy, S.L., 2000. Personality disorders and traits in patients with body dysmorphic disorder. Comprehensive psychiatry 41, 229-236.
- Phillips, K.A., McElroy, S.L., Hudson, J.I., Pope, H.G., Jr., 1995. Body dysmorphic disorder: an obsessive-compulsive spectrum disorder, a form of affective spectrum disorder, or both? The Journal of clinical psychiatry 56 Suppl 4, 41-51; discussion 52.
- Phillips, K.A., Menard, W., 2011. Olfactory reference syndrome: demographic and clinical features of imagined body odor. General hospital psychiatry 33, 398-406.
- Phillips, K.A., Menard, W., Fay, C., Weisberg, R., 2005. Demographic characteristics, phenomenology, comorbidity, and family history in 200 individuals with body dysmorphic disorder. Psychosomatics 46, 317-325.
- Phillips, K.A., Stein, D.J., Rauch, S.L., Hollander, E., Fallon, B.A., Barsky, A., Fineberg, N., Mataix-Cols, D., Ferrao, Y.A., Saxena, S., Wilhelm, S., Kelly, M.M., Clark, L.A., Pinto, A., Bienvenu, O.J., Farrow, J., Leckman, J., 2010. Should an obsessive-compulsive spectrum grouping of disorders be included in DSM-V? Depression and anxiety 27, 528-555.
- Pinto, A., Mancebo, M.C., Eisen, J.L., Pagano, M.E., Rasmussen, S.A., 2006. The Brown Longitudinal Obsessive Compulsive Study: clinical features and symptoms of the sample at intake. The Journal of clinical psychiatry 67, 703-711.

- Prazeres, A.M., Fontenelle, L.F., Mendlowicz, M.V., de Mathis, M.A., Ferrao, Y.A., de Brito. N.F., Diniz, J.B., Gonzalez, C.H., Quarantini, L.C., Marrocos, R.P., Miguel, E.C., 2010. Olfactory reference syndrome as a subtype of body dysmorphic disorder. The Journal of clinical psychiatry 71, 87-89.
- Pryse-Phillips, W., 1971. An olfactory reference syndrome. Acta psychiatrica Scandinavica 47, 484-509.
- Rachman, S., 2012. Health anxiety disorders: a cognitive construal. Behaviour research and therapy 50, 502-512.
- Ravizza, L., Maina, G., Bogetto, F., 1997. Episodic and chronic obsessive-compulsive disorder. Depression and anxiety 6, 154-158.
- Reed, G.M., Rebello, T. J., Pike, K. M., Medina-Mora, M. E., Gureje, O., Zhao, M., Dai, Y., Roberts, M. C., Maruta, T., Matsumoto, C., Krasnov, V. N., Kulygina, M., Lovell, A. M., Stona, A.-C., Sharan, P., Robles, R., Gaebel, W., Zielasek, J., Khoury, B., Mari, J. de J., Avuso-Mateos, J. L., Evans, S. C., Kogan, C. S., & Saxena, S., 2015. WHO's Global Clinical Practice Network for mental health. Lancet Psychiatry.
- Reed, G.M., Roberts, M.C., Keeley, J., Hooppell, C., Matsumoto, C., Sharan, P., Robles, R., Carvalho, H., Wu, C., Gureje, O., Leal-Leturia, I., Flanagan, E.H., Correia, J.M., Maruta, T., Ayuso-Mateos, J.L., de Jesus Mari, J., Xiao, Z., Evans, S.C., Saxena, S., Medina-Mora, M.E., 2013. Mental health professionals' natural taxonomies of mental disorders: implications for the clinical utility of the ICD-11 and the DSM-5. Journal of clinical psychology 69, 1191-1212.
- Rief, W., Buhlmann, U., Wilhelm, S., Borkenhagen, A., Brahler, E., 2006. The prevalence of body dysmorphic disorder: a population-based survey. Psychological medicine 36, 877-885.
- Rief, W., Hiller, W., Margraf, J., 1998. Cognitive aspects of hypochondriasis and the somatization syndrome. Journal of abnormal psychology 107, 587-595.
- Robbins, T.W., Gillan, C.M., Smith, D.G., de Wit, S., Ersche, K.D., 2012. Neurocognitive endophenotypes of impulsivity and compulsivity: towards dimensional psychiatry. Trends in cognitive sciences 16, 81-91.
- Ruscio, A.M., Stein, D.J., Chiu, W.T., Kessler, R.C., 2010. The epidemiology of obsessivecompulsive disorder in the National Comorbidity Survey Replication. Molecular psychiatry 15, 53-63.
- Samuels, J., Nestadt, G., Bienvenu, O.J., Costa, P.T., Jr., Riddle, M.A., Liang, K.Y., Hoehn-Saric, R., Grados, M.A., Cullen, B.A., 2000. Personality disorders and normal personality dimensions in obsessive-compulsive disorder. The British journal of psychiatry: the journal of mental science 177, 457-462.
- Scharf, J.M., Miller, L.L., Mathews, C.A., Ben-Shlomo, Y., 2012. Prevalence of Tourette syndrome and chronic tics in the population-based Avon longitudinal study of parents and children cohort. Journal of the American Academy of Child and Adolescent Psychiatry 51. 192-201 e195.
- Shavitt, R.G., de Mathis, M.A., Oki, F., Ferrao, Y.A., Fontenelle, L.F., Torres, A.R., Diniz, J.B., Costa, D.L., do Rosario, M.C., Hoexter, M.Q., Miguel, E.C., Simpson, H.B., 2014. Phenomenology of OCD: lessons from a large multicenter study and implications for ICD-11. Journal of psychiatric research 57, 141-148.
- Singer, H.S., 2011. Stereotypic movement disorders. Handbook of clinical neurology 100, 631-639.
- Skodol, A.E., Gunderson, J.G., Shea, M.T., McGlashan, T.H., Morey, L.C., Sanislow, C.A., Bender, D.S., Grilo, C.M., Zanarini, M.C., Yen, S., Pagano, M.E., Stout, R.L., 2005. The Collaborative Longitudinal Personality Disorders Study (CLPS): overview and implications. J Pers Disord 19, 487-504.
- Skoog, G., Skoog, I., 1999. A 40-year follow-up of patients with obsessive-compulsive disorder [see commetns]. Archives of general psychiatry 56, 121-127.

- Stein, D.J., 2000, Neurobiology of the obsessive-compulsive spectrum disorders, Biological psychiatry 47, 296-304.
- Stein, D.J., 2012. Hypochondriasis in ICD-11. World Psychiatry 11.
- Stein, D.J., Fontenelle, L.F., Reed, G.M., 2014. Obsessive-compulsive and related disorders in ICD-11. Revista brasileira de psiguiatria 36 Suppl 1, 1-2.
- Steketee, G., Frost, R.O., 2003. Compulsive hoarding: Current status of the research. Clinical psychology review 23.
- Steketee, G., Frost, R.O., Tolin, D.F., Rasmussen, J., Brown, T.A., 2010. Waitlist-controlled trial of cognitive behavior therapy for hoarding disorder. Depression and anxiety 27, 476-484.
- Storch, E.A., Abramowitz, J., Goodman, W.K., 2008. Where does obsessive-compulsive disorder belong in DSM-V? Depression and anxiety 25, 336-347.
- Suzuki, K., Takei, N., Iwata, Y., Sekine, Y., Toyoda, T., Nakamura, K., Minabe, Y., Kawai, M., lyo, M., Mori, N., 2004. Do olfactory reference syndrome and jiko-shu-kyofu (a subtype of taijin-kyofu) share a common entity? Acta psychiatrica Scandinavica 109, 150-155; discussion 155.
- Swedo, S.E., Leonard, H.L., Garvey, M., Mittleman, B., Allen, A.J., Perlmutter, S., Lougee, L., Dow, S., Zamkoff, J., Dubbert, B.K., 1998. Pediatric autoimmune neuropsychiatric disorders associated with streptococcal infections: clinical description of the first 50 cases. The American journal of psychiatry 155, 264-271.
- Teraishi, T., Takahashi, T., Suda, T., Hirano, J., Ogawa, T., Kuwahara, T., Nomura, S., 2012. Successful treatment of olfactory reference syndrome with paroxetine. The Journal of neuropsychiatry and clinical neurosciences 24, E24.
- Timpano, K.R., Exner, C., Glaesmer, H., Rief, W., Keshaviah, A., Brahler, E., Wilhelm, S., 2011. The epidemiology of the proposed DSM-5 hoarding disorder: exploration of the acquisition specifier, associated features, and distress. The Journal of clinical psychiatry 72, 780-786; quiz 878-789.
- Tyrer, P., Reed, G.M., Crawford, M.J., 2015. Classification, assessment, prevalence, and effect of personality disorder. The Lancet 385, 717-726.
- Tyrer, P., Tyrer, H., 2014. The departure of hypochondriasis is no loss. The Australian and New Zealand journal of psychiatry 48, 772-773.
- van den Heuvel, O.A., Mataix-Cols, D., Zwitser, G., Cath, D.C., van der Werf, Y.D., Groenewegen, H.J., van Balkom, A.J., Veltman, D.J., 2011. Common limbic and frontalstriatal disturbances in patients with obsessive compulsive disorder, panic disorder and hypochondriasis. Psychological medicine 41, 2399-2410.
- van den Heuvel, O.A., Veale, D., Stein, D.J., 2014. Hypochondriasis: considerations for ICD-11. Revista brasileira de psiguiatria 36 Suppl 1, 21-27.
- van den Heuvel, O.A., Veltman, D.J., Groenewegen, H.J., Witter, M.P., Merkelbach, J., Cath, D.C., van Balkom, A.J., van Oppen, P., van Dyck, R., 2005. Disorder-specific neuroanatomical correlates of attentional bias in obsessive-compulsive disorder, panic disorder, and hypochondriasis. Archives of general psychiatry 62, 922-933.
- Veale, D., 2002. Over-valued ideas: a conceptual analysis. Behaviour research and therapy 40, 383-400.
- Veale, D., 2004. Body dysmorphic disorder. Postgraduate medical journal 80, 67-71.
- Veale, D., Anson, M., Miles, S., Pieta, M., Costa, A., Ellison, N., 2014. Efficacy of cognitive behaviour therapy versus anxiety management for body dysmorphic disorder: a randomised controlled trial. Psychotherapy and psychosomatics 83, 341-353.
- Veale, D., Boocock, A., Gournay, K., Dryden, W., Shah, F., Willson, R., Walburn, J., 1996. Body dysmorphic disorder. A survey of fifty cases. The British journal of psychiatry: the journal of mental science 169, 196-201.
- Veale, D., Matsunaga, H., 2014. Body dysmorphic disorder and olfactory reference disorder: proposals for ICD-11. Revista brasileira de psiguiatria 36 Suppl 1, 14-20.

- Warwick, H.M., Salkovskis, P.M., 1990. Hypochondriasis. Behaviour research and therapy 28, 105-117.
- Warwick, H.M., Salkovskis, P., 2001. Cognitive-behavioral treatment of hypochondriasis, In: Starcevic, V., Lipsitt, D.R. (Ed.), Hypochondriasis: Modern perspectives on an ancient malady. Oxford University Press, New York.
- Weissman, M.M., Bland, R.C., Canino, G.J., Greenwald, S., Hwu, H.G., Lee, C.K., Newman, S.C., Oakley-Browne, M.A., Rubio-Stipec, M., Wickramaratne, P.J., et al., 1994. The cross national epidemiology of obsessive compulsive disorder. The Cross National Collaborative Group. The Journal of clinical psychiatry 55 Suppl, 5-10.
- WHO, 1992. ICD-10 Classifications of Mental and Behavioural Disorder: Clinical Descriptions and Diagnostic Guidelines. World Health Organization, Geneva, Switzerland.
- WHO, 2013. Mental Health Action Plan 2013 2020.
- WHO, 2014. Constitution of the World Health Organization., World Health Organization basic documents, 48 ed. World Health Organization, Geneva, Switzerland.
- Wilhelm, S., Phillips, K.A., Didie, E., Buhlmann, U., Greenberg, J.L., Fama, J.M., Keshaviah, A., Steketee, G., 2014. Modular cognitive-behavioral therapy for body dysmorphic disorder: a randomized controlled trial. Behavior therapy 45, 314-327.
- Woods, D.W., Thomsen, P.H., 2014. Tourette and tic disorders in ICD-11: standing at the diagnostic crossroads. Revista brasileira de psiguiatria 36 Suppl 1, 51-58.
- Zimmerman, M., Mattia, J.I., 1998. Body dysmorphic disorder in psychiatric outpatients: recognition, prevalence, comorbidity, demographic, and clinical correlates. Comprehensive psychiatry 39, 265-270.

Table 1 Proposed ICD-11 categories of obsessive-compulsive and related disorders

Proposed ICD-11 categories

Essential (required) features

Obsessive-compulsive disorder Previous ICD-10 code, F42

- Presence of obsessions and/or compulsions.
 - Obsessions are repetitive and persistent thoughts (e.g., of contamination), images (e.g., of violent scenes), or impulses/urges (e.g., to stab someone) that are experienced as intrusive, unwanted, and are commonly associated with anxiety. The individual attempts to ignore or suppress obsessions or to neutralize them by performing compulsions.
 - Compulsions (or rituals) are repetitive behaviours (e.g., washing, checking) or mental acts (e.g., repeating words silently) that the individual feels driven to perform in response to an obsession, according to rigid rules, or to achieve a sense of "completeness".
- Obsessions and compulsions must be time-consuming (e.g., take more than 1 hour per day) to warrant the diagnosis.
- The symptoms result in significant distress or significant impairment in personal, family, social, educational, occupational, or other important areas of functioning.

Body Dysmorphic Disorder Previous ICD-10 code, F45.22

- Persistent preoccupation (e.g., at least one hour a day) with one or more perceived defects or flaws in appearance, or ugliness in general, that is either unnoticeable or only slightly noticeable to others.
- Excessive self-consciousness about the perceived defect(s) or flaw(s), often including ideas of self-reference [i.e., the conviction that people are taking notice, judging, or talking about the perceived defect(s) or flaw(s)].
- The preoccupation is manifest by any of the following:
 - repetitive and excessive behaviours, such as repeatedly examining of appearance or the severity of the perceived defect(s) or flaw(s) (e.g., by checking in reflective surfaces or by comparing the relevant feature with that of others);
 - attempts to camouflage or alter the defect (e.g., by undergoing unnecessary cosmetic surgical procedures);
 - attempts to avoid social situations or triggers that increase distress about the perceived defect(s) or
- The symptoms result in significant distress or significant impairment in personal, family, social, educational, occupational, or other important areas of functioning.

Olfactory Reference Disorder New category

- Persistent preoccupation (e.g., at least one hour a day) with a perceived foul or offensive body odour or breath (i.e., halitosis) that is either unnoticeable or slightly noticeable to others such that the individual's concerns are markedly disproportionate to the smell, if any.
- Excessive self-consciousness about the perceived odour, often including ideas of self-reference (i.e., the conviction that people are taking notice, judging, or talking about the odour).
- The preoccupation is manifest by any of the following:
 - repetitive and excessive behaviours, such as

- repeatedly checking for body odour by checking the perceived source of the smell, their clothing, or repeatedly seeking reassurance;
- attempts to camouflage the perceived odour by using perfume or deodorant;
- attempts to prevent the odour by bathing or brushing teeth, or by changing clothing, or by avoiding or ingesting certain foods;
- attempts to avoid social situations or triggers that increase distress about the perceived foul or offensive odour
- The symptoms result in significant distress or significant impairment in personal, family, social, educational, occupational, or other important areas of functioning.

Hypochondriasis (Health Anxiety Disorder)

Previous ICD-10 code, F45.2

- Persistent preoccupation (e.g., at least one hour a day) or fear about the possibility of having one or more serious, progressive or life-threatening illnesses.
- The preoccupation is associated with catastrophic misinterpretations of bodily signs or symptoms, including normal or commonplace sensations (e.g., worrying that a tension headache is indicative of a brain tumor).
- The preoccupation is manifest either in:
 - repetitive and excessive health-related behaviours. such as repeatedly checking of the body for evidence of illness, spending inordinate amounts of time searching for information about the feared illness, repeatedly seeking reassurance (e.g., arranging multiple medical consultations); or
 - maladaptive avoidance behaviour related to health (e.g., avoids medical appointments).
- The symptoms result in significant distress or significant impairment in personal, family, social, educational, occupational or other important areas of functioning.

Hoarding Disorder New category

- Excessive acquisition of, and failure to discard, possessions, regardless of their actual value. Items may be hoarded because of their emotional significance (e.g., association with a significant event, person, place, or time), instrumental characteristics (e.g., perceived usefulness), or intrinsic value (e.g., perceived aesthetic qualities).
- Excessive acquisition is characterized by repetitive urges and/or behaviours related to buying, stealing or amassing items, including those that are free.
- Difficulty discarding items due to a perceived need to save items and distress associated with discarding them.
- Items are accumulated to a degree that living spaces become cluttered and their use or safety is compromised.
- The symptoms result in significant distress or significant impairment in personal, family, social, educational, occupational or other important areas of functioning.

Body-Focused Repetitive Behaviour Disorders, New subgrouping

> Trichotillomania (Hair-Pulling Disorder)

Previous ICD-10 code, F63.3

- Repetitive and persistent pulling of one's hair.
- Attempts to stop or decrease hair-pulling.
- Hair loss results from pulling behaviour.
- The symptoms result in significant distress or significant impairment in personal, family, social, educational, occupational or other important areas of functioning.

Excoriation (Skin-Picking) Disorder New category

- Repetitive and persistent picking of one's skin.
- Attempts to stop or decrease skin-picking.
- Skin lesions resulting from picking behaviour.
- The symptoms result in significant distress or significant impairment in personal, family, social, educational, occupational or other important areas of functioning.