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Hypochondriasis in ICD-11

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Abstract

The World Health Organization (WHO) is currently revisiting the International Classification of Diseases and related health problems (ICD). In the tenth version of the ICD, approved in 1990, hypochondriacal symptoms are described in the context of both the primary condition Hypochondriacal Disorder, and as secondary symptoms within a range of other mental disorders. An expanding research base since 1990 makes a critical evaluation and revision of both the definition and classification of Hypochondriacal Disorder timely. This paper addresses the considerations reviewed by members of the WHO working group on obsessive-compulsive and related disorders in their proposal for the description and classification of Hypochondriasis (Illness Anxiety Disorder). The proposed revision emphasizes the phenomenological overlap with both anxiety disorders (e.g., fear, hypervigilance to bodily symptoms, and avoidance) and obsessive-compulsive and related disorders (e.g., preoccupation and repetitive behaviours) and the distinction from the somatoform disorders (presence of somatic symptom is not a critical characteristic). The revision aims at better recognition and treatment of patients with Hypochondriasis within the broad range of global health care settings.

Key words

Hypochondriasis, illness anxiety disorder, obsessive-compulsive and related disorders, definition, classification

Introduction

The World Health Organization (WHO) is currently revisiting the International Classification of Diseases and related health problems (ICD). The tenth version of the ICD was approved in 1990 (WHO, 1992),[1] almost 25 years ago. The revision to ICD-11 requires attention to the relevant historical background as well as to more recent developments in understanding of clinical entities related to illness preoccupation and fear. This paper addresses the question of how hypochondriasis should be described and classified in the ICD-11, and addresses the considerations reviewed by the members of the WHO working group on obsessive-compulsive and related disorders in their proposal for the description and classification of this disorder.

Preoccupation with bodily symptoms and fear of suffering from a serious disease falls on a continuum ranging from a very mild concern about some unusual bodily sensation or observation to severe preoccupation and fear or conviction in individuals in whom thoughts and actions are centered around the over-estimated risk of having or getting a serious life-threatening illness.[2] Taxometric studies have empirically confirmed that health anxiety is a dimensional rather than a categorical construct.[3,4] Normal expressions of concern about health and alertness towards bodily symptoms may be a useful response to changes in the body that are caused by medical conditions and that warrant medical evaluation and/or treatment. Certainly, from an evolutionary perspective an appropriate level of anxiety and responding to somatic alarm symptoms may have adaptive value. However, when the concern about health becomes a matter of preoccupation and continuous fear or distress, it interferes with daily life.

Individuals with such concerns may meet the criteria for the DSM-IV-TR and ICD-10 diagnoses of hypochondriasis and hypochondriacal disorder, respectively. Severe hypochondriasis has negative impacts on quality of life, social and occupational functioning, and health care resource utilization, and is thus a relevant mental disorder to recognize and treat in clinical practice. Although health care practitioners are familiar with those patients who seek reassurance during repeated visits to health care services, resulting in high health care costs, unnecessary

diagnostic interventions and disturbed patient-doctor relationships, hypochondriasis can also lead to severe avoidance, risking unfavorable patient delay in case of actual diseases. In most patients with hypochondriasis, symptoms wax and wane, with acute exacerbations triggered by stressful periods, due to e.g. a loss of a family member, a past experience of actual organic disease, and social circumstances, or in response to hospital and disease-related items on popular media.[5]

Historical background

Hypochondriasis as a psychiatric concept and diagnosis has been the subject of considerable controversy over the centuries. Today, hypochondriasis is considered a mental disorder, but in the seventeenth century it referred to a common somatic condition, with the name 'hypochondria', introduced by Hippocrates and literally meaning 'below the cartilage', and suggesting the involvement of abdominal organs. The transformation of the description over time, with the initial reference to the mental condition in the early nineteenth century, has been described extensively by Noyes.[6] In short, summarizing this historical overview, in the seventeenth century authors, still strongly influenced by Galen's views of pathogenesis, related hypochondriasis to melancholic personality traits, caused by somatic digestive disturbances. Psychological concepts became more prominent in the description of hypochondriasis from the late eighteenth century. At that time it was thought that a depressive 'morbid' state changes the body awareness, resulting in digestive disturbances. Although attention started to switch from the intestines to the brain at that time, hypochondriasis became regarded as a neurosis, i.e., a functional rather than structural disturbance. Fear of serious illness was emphasized as principle characteristic, the presence of digestive symptoms were no longer considered as crucial, and the bodily preoccupation and hypervigilance and the abnormal illness behaviors started to receive attention. During this 'physical-to-mental' transformation of the concept of hypochondriasis, it became one of many mental disorders. The historical review by Noyes, mainly focusing on the 17th, 18th and 19th century, shows the influential role of social and cultural factors in shaping the description of the disorder over time, and the uncertainty about how to classify the disorder in relation to other clinical entities.

Psychodynamic theories of hypochondriasis mainly focused on the role of (unconscious) guilt over sexual and hostile wishes, fantasies and feelings that must be disguised to avoid overwhelming fear of punishment, bodily damage (castration) and death.[7] The psychodynamic term 'hypochondriacal neurosis' was adopted by DSM-II, and despite criticism and controversy of both the relevant terminology and construct, the term 'hypochondriasis' and 'hypochondriacal disorder' persisted in subsequent revisions of DSM and ICD.[8]

Current concepts of hypochondriasis have been considerably influenced by cognitive-behavioral approaches.[2] Salkovskis and Warwick, for example, have suggested that the preoccupation with (ill) health is the key cognitive component and the seeking of reassurance from physicians as well as repeated checking of the body is the most crucial behavioural component. They put forward the idea that repetitive reassurance seeking is a form of avoidance which serves to maintain the preoccupation with health, just as compulsions increase the impact of obsessions and distress over the long-term in patients with obsessive-compulsive disorder (OCD).[9,10] Since medical reassurance results in immediate relief followed by the longer-term return of anxiety, they proposed that these avoidance behaviors are important maintaining factors and a major focus for treatment. Their case reports indicate that treatments focused on elimination of reassurance (response prevention) and facilitation of self-directed exposure and cognitive change (cognitive reappraisal) are successful in the reduction of discomfort and attenuation of the urge to seek reassurance on the long-term.

The long-lasting debate on both the terminology and the conceptualization of hypochondriasis is currently focused on the following issues:[11] 1) is hypochondriasis a distinct primary medical entity or a secondary feature of other psychopathologies? 2) what are the discriminating diagnostic features of hypochondriasis and how can these be differentiated from normality? and 3) how to classify hypochondriasis taking into account its relation to somatoform disorders, anxiety disorders and obsessive-compulsive and related disorders? Here we summarize the existing but limited literature on these issues, recent developments in relation to DSM-5, and propose the options for ICD-11.

The ICD-10 approach to hypochondriasis

In the ICD-10 (WHO, 1992)[1] hypochondriacal symptoms are described in the context of both the primary condition hypochondriasis, and as secondary symptoms of a range of other mental entities (e.g., delusional disorder, and depression). As primary entities within the category of somatoform disorders, F45.2 Hypochondriacal Disorders represent five related and partly overlapping sub-entities, i.e., body dysmorphic disorder (BDD), dysmorphophobia, hypochondriacal neurosis, hypochondriasis and nosophobia. The main characteristics of hypochondriacal disorder in ICD-10 concern 1) the persistent belief in the presence of at least one serious physical illness underlying the presenting symptom(s), even though repeated investigations and examinations have identified no adequate physical explanation, or a persistent preoccupation with a presumed deformity or disfigurement; and 2) the persistent refusal to accept the advice and reassurance of several different doctors that there is no physical illness or abnormality underlying the symptoms.

Based on more recent research,[2] some aspects related to the definition of the clinical entity, the relationship to related conditions, and the classification within the somatoform category need to be reconsidered. First, the presence of a physical symptom is not crucial for the diagnosis of hypochondriasis, since in many cases preoccupation with or fear for a serious illness exists without actual somatic symptoms.[12] Second, patients with hypochondriasis seek out reassurance and are happy to learn that there is no immediate threat (in contrast to most patients with other somatoform disorders who seek a diagnosis and keep on seeking to get one), but fail to maintain the immediate feeling of relief after medical reassurance, due to the recurrent preoccupation or concern and return of fear, resulting in avoidance or repetitive reassurance seeking or other repetitive behaviors.[13] Although checking behaviors and reassurance seeking give some relief, the reduction in fear is transient.[14] Some patients predominately experience repetitive behaviors, whereas other patients mainly show strong avoidance or switch between avoidance and checking behaviors over time.

In the DSM-IV-TR (APA, 2000)[15], hypochondriasis and BDD are separate entities within the category of somatoform disorders. This is consistent with the growing literature indicating that BDD is a distinct entity with diagnostic validity and clinical utility.[16] The diagnostic criteria for hypochondriasis in DSM-IV include the

preoccupation with or fear for a serious disease, based on the person's misinterpretation of bodily symptoms.[2] DSM-IV also includes a minimal duration of six months and an optional specifier 'poor insight', for patients who do not recognize that the concern is excessive or unreasonable.

In the context of current diagnostic classification in DSM-IV-TR and ICD-10, and now also DSM-5 (see below), hypochondriasisis is considered a somatoform disorder,[1,12,15] but it has always been at the crossroads of different categories. The fact that the presence of somatic symptoms is not a diagnostic criterion for hypochondriasis is inconsistent with the classification within the somatoform disorders. Moreover, since the key clinical features (preoccupation, anxiety, bodily hypervigilance and avoidance behaviors) and the most effective treatment strategy (cognitive behavior therapy, mostly including exposure in vivo with response prevention) in hypochondriasis largely overlap with those in anxiety disorders as panic disorder, social anxiety disorder, generalized anxiety disorder, and obsessive-compulsive disorder (OCD), classification within the Anxiety Disorders category or the Obsessive-Compulsive and Related Disorders category would be more consistent with the more recent conceptualizations of the disorder.[2]

- add Table 1 here -

Illness anxiety disorder and somatic symptom disorder in DSM-5

In DSM-5 hypochondriasis appeared, within the category of Somatic Symptom and Related Disorders (formerly known as somatoform disorders), partly as illness anxiety disorder and partly as somatic symptom disorder.[12] The common feature of the Somatic Symptom and Related Disorders is the prominence of somatic symptoms associated with significant distress and impairment. The category consists of somatic symptom disorder, illness anxiety disorder, conversion disorder, psychological factors affecting other medical conditions, factitious disorders, other specified somatic symptom and related disorders, and unspecified somatic symptom and related disorder. Depending on the symptoms of the individual, and particular the presence or absence of somatic symptoms, the patient that would have been diagnosed as hypochondriasis in the DSM-IV-TR, will now be diagnosed as illness

anxiety disorder (where somatic symptoms are absent or only mild) or as somatic symptom disorder (where one or more somatic symptoms are distressing or result in significant disruption of daily life). Within the illness anxiety disorder entity, two specifiers have been defined, a care-seeking type with high health care utilization and a care-avoidant type. Where the definition of the illness anxiety disorder is specific and includes a cognitive component (preoccupation), an affective component (substantial anxiety), and a behavioral component (care-avoidant and care-seeking health-related behaviors), the definition of somatic symptom disorder is broader ('thoughts, feelings and behaviors related to present somatic symptoms'). The definition of illness anxiety disorder does not include the feature 'hypervigilance to bodily symptoms' as a diagnostic criterion, but mentions that 'the individual is easily alarmed about personal health status'. It also includes a criterion on the differential diagnosis with other disorders, such as somatic symptom disorder, panic disorder, generalized anxiety disorder, body dysmorphic disorder, obsessive-compulsive disorder, or delusional disorder, somatic type. Both entities include a duration criterion, of at least 6 months, to underline the chronicity of the disorders. No insight specifiers have been defined for illness anxiety disorder and somatic symptom disorder, in contrast to some related disorders, e.g., OCD, BDD.

Apart from the potential risk of the overlapping criteria of the somatic symptom disorder and the illness anxiety disorder, it is notable that DSM-5 kept hypochondriasis with the category of Somatic Symptom and Related Disorders instead of moving it to the Anxiety Disorders category or the Obsessive-Compulsive and Related Disorders category.

Considerations for ICD-11

Phenomenology

We propose the following definition of the phenotype: illness anxiety disorder refers to a persistent preoccupation with or fear about the possibility of having one or more serious progressive or life-threatening diseases. The preoccupation is associated with a hypervigilance to and catastrophic misinterpretation of bodily signs or symptoms, including normal or commonplace sensations, and is accompanied by avoidance and/or repetitive behaviours. The preoccupation and/or fear is not simply a

reasonable concern related to a specific context of the patient, it persists or reoccurs despite appropriate medical evaluation and reassurance and causes clinically significant distress or impairment in important areas of functioning.

As the definition indicates, the phenotype is characterized by four main domains of dysfunction: preoccupation and misinterpretation (cognitive component), fear/anxiety (affective component), hypervigilance to bodily symptoms (attentional component), and avoidance and repetitive behaviours (behavioural component). The preoccupations show overlap with worries in patients with generalized anxiety disorder (GAD),[17,18] but in GAD the concerns have a more general content, often related to daily activities and there are also a range of other concerns. The preoccupations also show overlap with the obsessions in OCD,[19,20] but the important difference is that in hypochondriasis the thoughts are only related the concern of having or getting a serious illness. Hypervigilance to and catastrophic misinterpretation of bodily signs or symptoms is also present in patients with panic disorder, but panic attacks are a core feature of panic disorder.[21] In some cases of hypochondriasis where the illness concerns are mainly related to the cardiovascular system, differentiation between hypochondriasis and panic disorder might be difficult. Avoidance and repetitive safety-seeking behaviours (e.g., checking body, information seeking, reassurance seeking) are common in patients with OCD[22] and BDD[23] as well. Although the phenotype of hypochondriasis shows little overlap with somatoform disorders, some patients with hypochondriasis often present with somatic symptoms. In these patients, in contrast to somatoform patients, it is not the physical symptoms that are the main reason for distress and disability, but rather the concern about such symptoms.

Some comparative studies have been published on the phenomenological and neurobiological overlap and differentiation between hypochondriasis, panic disorder and OCD.[24-26] These studies show that hypochondriasis shares characteristics with both disorders (panic attacks, obsessions, compulsions, attentional bias to disorder-specific or threat-related information, and aberrant recruitment of fronto-striatal and limbic brain circuits), yet also indicate that hypochondriasis is a separate entity.

In most patients with hypochondriasis, symptoms wax and wane over time. Both the behaviours and associated insight can change significantly during the course of the disorder. Also, in the case of poor insight, it is important to diagnose

hypochondriasis (illness anxiety disorder), from delusional or psychotic disorder, since this distinction has important clinical implications. Although most of the relevant literature is based on patients with delusional and non-delusional body dysmorphic disorder, it shows more similarities than differences (also related to response to pharmacology),[27] and one might expect the same issues to arise in hypochondriasis.

Classification

Hypochondriasis is a separate diagnostic entity that lies exactly at the crossroads of 3 categories, showing overlap with somatoform disorders (in DSM-5 now called somatic symptom and related disorders), anxiety disorders, and obsessive-compulsive and related disorders. Since a mental disorder can only be classified under one primary category, the decision on which category fits best is always a compromise.

The least optimal classification is among the somatoform disorders. Although classification with the somatoform disorders might be intuitive for those patients who present with many somatic symptoms, there are three reasons to change the existing approach. First, in many patients with hypochondriasis no or only mild somatic symptoms are present, and if present the interference with daily functioning is not resulting from the somatic distress or disability but is rather the consequence of the fear about the symptoms and the related behaviour. Second, patients with hypochondriasis are eager to find reassurance that nothing serious is happening in their body (although the reassurance only results in transient relief of distress and may maintain the preoccupation over the long-term), patients with other somatoform disorders wish a diagnosis. Third, the therapeutic approach differs from the treatment of most somatoform disorders but largely overlaps with most anxiety disorders: cognitive behavior therapy, including exposure in vivo with response prevention.[28]

In the process of moving hypochondriasis to a category with more related disorders, two good alternatives exist. Most key characteristics of hypochondriasis, i.e., anxiety, hypervigilance to and catastrophic misinterpretation of bodily symptoms, and avoidance strongly resemble the phenotype of other anxiety disorders, mainly panic disorder.[26] In 2 comparative brain imaging studies on attentional bias[24] and executive functioning[25] in OCD, panic disorder and hypochondriasis, the task-related neural activation patterns showed both overlap and

differentiation between the disorders. Gropalis et al. (2012) compared 65 patients with hypochondriasis, 94 patients with somatoform disorders (including somatization disorder, undifferentiated somatoform disorder and pain disorder), and 224 patients with anxiety disorders (including panic disorder with/without agoraphobia, GAD and OCD) regarding demographic variables, clinical features and naturalistic treatment outcomes. They found a closer connection between hypochondriasis and anxiety disorders than between hypochondriasis and somatoform disorders.[29]

Given the repetitive characteristics of hypochondriasis, both cognitive (i.e., preoccupation) and behavioral (i.e., compulsive checking of the body and internet, repetitive seeking for reassurance from health professionals), the overlap with OCD[20,30] and BDD[16], which will be categorized as obsessive-compulsive and related disorders, classification of hypochondriasis with these disorders might be an alternative option. Considering the fact that BDD and hypochondriasis were diagnosed together as hypochondriacal disorder in ICD-10, the most conservative approach would be to keep both disorders in the same category; the obsessive-compulsive and related disorders, which in turn are closely related to the anxiety disorders. Since hypochondriasis shares symptoms with OCD[30] and responds to the same treatments (cognitive behaviour therapy and serotonergic antidepressants),[31,32] classification within the obsessive-compulsive and related disorders category adds to the clinical utility of the classification system. Although the same arguments hold for the overlap with other anxiety disorders, justifying a 2nd parent classification of hypochondriasis among the anxiety disorders, it's not the case for the somatoform disorders.

Terminology

Not only has the conceptualization of hypochondriasis been a matter of debate for centuries, but also the name 'hypochondriasis' has been controversial for decades, due to its potentially confusing and pejorative aspects. Depending on the conceptualization of the disorders, alternative terms have been proposed during the last 3 decades: 'abnormal illness behaviour',[33] 'disease phobia',[34] 'illness phobia',[35] 'health anxiety',[2,36] 'specific phobia for illness',[37] 'illness preoccupation disorder',[11] 'heightened illness concern' (Fallon scale), and now in DSM-5 'illness anxiety disorder' and 'somatic symptom disorder'. Considering the main characteristics of the

disorder, illness anxiety disorder or illness preoccupation disorder would be reasonable alternatives for the term 'hypochondriasis'. Although the term "hypochondriasis" has some archaic and pejorative elements, the phrase "illness anxiety" may not be easily translated across all languages, and it seems odd to categorize an "anxiety disorder" primarily in a chapter other than the anxiety disorders. A compromise is to maintain the name "Hypochondriasis", but to include in parenthesis the term "illness anxiety disorder". This is consistent with a 2nd parent classification of hypochondriasis among the anxiety disorders and would also maintain continuity with DSM-5.

Conclusion

For the revision of the ICD-10, we propose that hypochondriasis will be classified as illness anxiety disorder within the category of obsessive-compulsive and related disorders. Illness anxiety disorder is defined as a persistent preoccupation with or fear about the possibility of having one or more serious progressive or life-threatening diseases, accompanied by hypervigilance to and catastrophic misinterpretation of bodily signs or symptoms, including normal or commonplace sensations, resulting in both avoidance and reassurance-seeking behaviours, persisting or reoccurring despite medical evaluation and reassurance. The definition shows considerable overlap with anxiety disorders and obsessive-compulsive and related disorders. Classification among the obsessive-compulsive and related disorders, with a 2nd parent classification among the anxiety disorders, will improve the recognition of the disorder and encourage the use of appropriate treatments within the broad range of global health care settings. Finally we propose that the insight specifier for hypochondriasis be similar to that used for OCD and BDD.

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Note

O.A. van den Heuvel and D. Veale are members of the WHO working group on the classification of obsessive-compulsive and related disorders, chaired by D.J. Stein, reporting to the International Advisory Group for the Revision of the ICD-10 Mental and Behavioural Disorders. The views expressed in this article are those of the authors as representatives of the working group on Obsessive-Compulsive and Related Disorders, and do not represent the official policies or positions of the International Advisory Group or the WHO.

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References

[1] World Health Organization. International Classification of Diseases and related health problems, 10th revision. Geneva: World Health Organization, 1992.

[2] Salkovskis PM, Warwick HMC. Morbid preoccupations, health anxiety and reassurance: a cognitive-behavioral approach to hypochondriasis. Behav Res Ther. 1986;24:597-602.

[3] Ferguson E. A taxometric analysis of health anxiety. Psychol Med. 2009;39:277-85.

[4] Longley SL, Broman-Fulks JJ, Calamari JE, Noyes R, Wade M, Orlando CM. A taxometric study of hypochondriasis symptoms. Behavior Therapy. 2010;41:505-14.

[5] Taylor S, Admundson GJG. Treating health anxiety: a cognitive-behavioral approach. New York: Guilford, 2004.

[6] Noyes R. The transformation of hypochondriasis in British medicine - 1680-1830. Soc History of Medicine. 2011;24:281-198.

[7] Lipsitt DR. Psychodynamic perspectives on hypochondriasis (p. 183-199). In: Hypochondriasis: modern perspectives on an ancient malady. Ed. Stacevic V and Lipsitt DR. Oxford: Oxford University Press 2001.

[8] Hyler SE, Sussman N. Somatoform disorders: before and after DSM-II. Hospital Commun Psychiatry. 1984;35:469-78.

[9] Rachman SJ. Some similarities and differences between obsessional ruminations and morbid preoccupations. Can Psychiatr Ass. 1974;18:71-73.

[10] Rachman SJ, de Silva P, Roper G. The passing of two stage theory of fear and avoidance: fresh possibilities. Behav Res Ther. 1976;14:445-453.

[11] Stein DJ. Hypochondriasis in ICD-11. World Psychiatry. 2012;11(Supp1):100-104.

[12] American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders, fifth edition (DSM-5). Washington DC: American Psychiatric Association, 2013 (pg 309-327).

[13] Rachman S. Health anxiety disorders: a cognitive construal. Behav Res Ther. 2012;50:502-512.

[14] Warwick HM, Salkovskis PM. Hypochondriasis. Behav Res Ther.1990;28:105-117.

[15] American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders, 4th edition (Text Revision). Washington DC: American Psychiatric Association, 2000.

[16] Phillips KA, Wilhelm S, Koran LM, Didie ER, Fallon BA, Feusner J, Stein DJ. Body dysmorphic disorder: some key issues for DSM-V. Depress Anxiety. 2010;27:573-591.

[17] Andrews G, Hobbs MJ, Borkovec TD, Beesdo K, Craske MG, Heimsberg RG, Rapee RM, Ruscio AM, Stanley MA. Generalized worry disorder: a review of DSM-IV generalized anxiety disorder and option for DSN-V. Depression & Anxiety. 2010;27:134-47.

[18] Garfinkle EJ, Behar E. Advances in psychotherapy for generalized anxiety disorder. Curr Psychiatry Rep. 2012;14:303-10.

[19] Barsky AJ. Hypochondriasis and obsessive-compulsive disorder. Psychiatr Clin North Am. 1992;15:791-801.

[20] Fallon BA, Qureshi AI, Laje G, Klein B. Hypochondriasis and its relationship to obsessive-compulsive disorder. Psychiatr Clin North Am. 2000;23:605-16.

[21] Clark DM. A cognitive approach to panic. Behav Res Ther. 1986;24:461-70.

[22] Calkins AW, Berman NC, Wilhelm S. Recent advances in research on cognition and emotion in OCD: a review. Curr Psychiatry Rep. 2013;15:357 (DOI 10.1007/s11920-013-0357-4).

[23] Veale, D**,** Gournay, K, Dryden, W, Boocock, A, Shah, F, Willson, R, Walburn, J. Body Dysmorphic Disorder: a cognitive behavioural model and a pilot randomised controlled trial. Behaviour, Research and Therapy. 1996;34,9:717-729

[24] van den Heuvel OA, Veltman DJ, Groenewegen HJ, Witter MP, Merkelbach J, van Balkom AJ, Cath DC, van Oppen P, van Dyck R. Disorder-specific neuroanatomical differentiation of emotional Stroop interference effects in obsessive-compulsive disorder, panic disorder and hypochondriasis. Arch Gen Psychiatry. 2005;62:922-933

[25] van den Heuvel OA, Mataix-Cols D, Zwitser G, Cath DC, van der Werf YD, Groenewegen HJ, van Balkom AJ, Veltman DJ. Common limbic and frontal-striatal disturbances in patients with obsessive compulsive disorder, panic disorder and hypochondriasis. Psychol Med. 2011;41:2399-410

[26] Deacon B, Abramowitz J. Is hypochondriasis related to obsessive-compulsive disorder, panic disorder or both? An empirical evaluation. J Cogn Psychother. 2008;22:115-127.

[27] Phillips KA, Hart AS, Simpson HB, Stein DJ. Delusional versus nondelusional body dysmorphic disorder: recommendations for DSM-5. CNS Spectr. 2013;10:1-11.

[28] Sørensen P, Birket-Smith M, Wattar U, Buemann I, Salkovskis PM. A randomized clinical trial of cognitive behavioural therapy versus short-term psychodynamic psychotherapy versus no intervention for patients with hypochondriasis. Psychol Med. 2011;41:431-441.

[29] Gropalis M, Bleichhardt G, Witthöft M, Hiller W. Hypochondriasis, somatoform disorders and anxiety disorders; sociodemographic variables, general psychopathology, and naturalistic treatment effects. J Nerv Ment Dis. 2012;200:406-412.

[30] Greeven A, van Balkom AJ, van Rood YR, van Oppen P, Spinhoven P. The boundery between hypochondriasis and obsessive-compulsive disorder: a cross-sectional study from the Netherlands. J Clin Psychiatry. 2006;67:1682-89.

[31] Greeven A, van Balkom AJ, Visser S, Merkelback JW, van Rood YR, van Dyck R, van der Does AJ, Zitman FG, Spinhoven P. Cognitive behavior therapy and paroxetine in the treatment of hypochondriasis: a randomized controlled trial. Am J Psychiatry. 2007;164:91-9.

[32] Greeven A, van Balkom AJ, van der Leeden R, Merkelback JW, van den Heuvel OA, Spinhoven P. Cognitive behavioral therapy versus paroxetine in the treatment of hypochondriasis: an 18-month naturalistic follow-up. J Behav Ther Exp Psychiatry. 2009;40:487-96.

[33] Pilowsky I. The diagnosis of abnormal illness behavior. Austr N Z J Psychiatry. 1971;5:136-8.

[34] Fava GA, Freyberger HJ, Bech P, Christodoulou G, Sensky T, Theorell T, Wise TN. Diagnostic criteria for use in psychosomatic research. Psychother Psychosom. 1995;63:1-8.

[35] Warwick HM, Marks IM. Behavioural treatment of illness phobia and hypochondriasis, a pilot study of 17 cases. Br J Psychiatry. 1988;152:239-41.

[36] Harding KJ, Skritskaya N, Doherty E, Fallon BA. Advances in understanding illness anxiety. Current Psychiatry Rep. 2008;10:311-7.

[37] Noyes R, Carney CP, Langbehn DR. Specific phobia of illness: search for a new subtype. J Anxiety Dis. 2004;18:531-45.

	ICD-10[1]	DSM-IV-TR[15]	DSM-5[12]	ICD-11 (proposal)
Category	Somatoform Disorders	Somatoform Disorders	Somatic Symptom and Related Disorders	Primary category: Obsessive-Compulsive and Related Disorders Secondary category: Anxiety Disorders
Name	Hypochondriacal Disorder (F45.2)	Hypochondriasis (300.7)	Illness Anxiety Disorder (300.7)	Hypochondriasis (Illness Anxiety Disorder)
Diagnostic criteria	A. Persistent belief in the presence of at least one serious physical illness underlying the presenting symptom(s), even though repeated investigations and examinations have identified no adequate physical explanation *or*: persistent preoccupation with a presumed deformity or disfigurement. B. Persistent refusal to accept the advice and reassurance of several different doctors that there is no physical illness or abnormality underlying the symptoms	A. Preoccupation with fears of having, or the idea that one has, a serious disease based on the person's misinterpretation of bodily symptoms B. The preoccupation persists despite appropriate medical evaluation and reassurance. C. The belief is not of delusional intensity (as in Delusional Disorder, Somatic Type) and is not restricted to a circumscribed concern about appearance (as in Body Dysmorphic Disorder) D. The preoccupation causes clinically significant distress or impairment in social, occupational, or other important areas of functioning. E. The duration of the disturbance is at least 6 months. F. The preoccupation is not better accounted for by Generalized Anxiety Disorder, Obsessive-Compulsive Disorder, Panic Disorder, Major Depressive Disorder, Separation Anxiety, or another Somatoform Disorder	A. Preoccupation with having or acquiring a serious illness B. Somatic symptoms are not present or, if present are only mild in intensity. If another medical condition is present or there is a high risk for developing a medical condition, the preoccupation is clearly excessive or disproportionate C. High level of anxiety about health, and the individual is easily alarmed about personal health status D. Excessive health-related behaviors or maladaptive avoidance E. Symptom duration at least 6 months F. Not better explained by another mental disorder	A. Persistent preoccupation with or fear about the possibility of having one or more serious progressive or life-threatening diseases B. The preoccupation is associated with a hypervigilance to and a catastrophic misinterpretation of bodily signs or symptoms, including normal or commonplace sensations C. The preoccupation or fear is not simply a reasonable concern to a specific context of the patient and it persists or reoccurs despite appropriate medical evaluation and reassurance D. One or more of the following behaviours occur in relation to the preoccupation or fear: avoidance, checking, information seeking, and/or requests for reassurance E. The preoccupation or fear causes clinically significant distress or impairment in important areas of functioning F. The diagnosis also includes those with no insight or with delusional beliefs
Includes	Body Dysmorphic Disorder Dysmorphophobia (nondelusional) Hypochondriacal Neurosis Hypochondriasis Nosophobia			
Specifiers		Poor insight	Care-seeking type Care-avoidant type	No insight