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Does work on obsessive–compulsive spectrum disorders contribute to understanding the heterogeneity of obsessive–compulsive disorder?

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Abstract

Background: There is a growing literature on the concept of an obsessive–compulsive spectrum of disorders. Here, we consider the different dimensions on which obsessive–compulsive spectrum (OCSDs) lie, and focus on how the concepts from this literature may help understand the heterogeneity of obsessive–compulsive disorder (OCD).
Methods: A computerized literature search (MEDLINE: 1964–2005) was used to collect studies addressing different dimensions on which the OCSDs lie. Against this backdrop, we report on a cluster analysis of OCSDs within OCD.
Results: OCSDs may lie on several different dimensions. Our cluster analysis found that in OCD there were 3 clusters of OCD spectrum symptoms: (1) "Reward deficiency" (including trichotillomania, pathological gambling, hypersexual disorder and Tourette's disorder), (2) "Impulsivity" (including compulsive shopping, kleptomania, eating disorders, self-injury and intermittent explosive disorder), and (3) "Somatic" (including body dysmorphic disorder and hypochondriasis).
Conclusions: It is unlikely that OC symptoms and disorders fall on any single phenomenological dimension; instead, multiple different constructs may be required to map this nosological space. Although there is evidence for the validity of some of the relevant dimensions, additional work is required to delineate more fully the endophenotypes that underlie OC symptoms and disorders.

Keywords: Cluster analysis; Heterogeneity; Obsessive–compulsive disorder; Obsessive–compulsive spectrum disorder; Subtypes

1. Introduction

The notion of a spectrum of obsessive–compulsive disorders dates back at least as far as the works of Freud (Freud, 1908), who posited a continuum between obsessive–compulsive character, neurosis, and psychosis (Stein and Stone, 1997). Subsequent psychoanalytic theorists retained this core model (Salzman, 1968). According to the psychoanalytic model, each of these conditions involves a specific configuration of unconscious drives and defenses, although additional variables may intervene to determine where on the spectrum a particular patient lies.

Today, notions of obsessive–compulsive spectrum disorders (OCSDs) reflect our growing understanding of the psychobiological mechanisms that mediate obsessive–compulsive disorder (OCD). Different authors have emphasized the genetic, chemical, immunological, and anatomical mechanisms that underlie both OCD and other overlapping neuropsychiatric disorders (Stein, 2000b). A dimensional nature of obsessive–compulsive symptomatology is increasingly highlighted, and integrative hypotheses about the psychobiological mechanisms accounting for these continuities are posited.

Abbreviations: ADHD, attention deficit/hyperactivity disorder; BDD, body dysmorphic disorder; CT, computed tomography; CTD, chronic tic disorder; GAD, generalized anxiety disorder; HYP, hypochondriasis; IED, intermittent explosive disorder; MRI, magnetic resonance imaging; OCD, obsessive–compulsive disorder; OCSD, obsessive–compulsive spectrum disorder; OCPD, obsessive–compulsive personality disorder; PANDAS, paediatric autoimmune neuropsychiatric disorders associated with streptococcal infections; PDs, personality disorders; PTSD, posttraumatic stress disorder; SRIs, selective reuptake inhibitors; 5-HT, serotonin; SMD, stereotypic movement disorder; SC, Sydenham's chorea; TD, Tourette's disorder; TTM, trichotillomania; VBRs, ventricular brain ratios.

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The dimensional or spectrum models of OCD have arguably proven useful insofar as they emphasize the continuous nature of psychopathology, provide hypotheses about the relevant underlying mechanisms, focus the attention of clinicians on a range of disorders with OCD related features, and suggest that these can be effectively treated with current anti-OCD medications. Nevertheless, the questions of how best to define the putative OCD spectrums, and how best to understand their psychobiology, remain contested. In this paper, recent developments in this area are summarized, and their implications for understanding the heterogeneity of OCD are considered.

2. Methods

A computerized literature search (MEDLINE: 1964–2005) was used to collect studies on recent developments addressing the spectrum-idea within OCD. Against this backdrop, we also report on an empirical cluster analysis of OCSDs within OCD.

3. Results

3.1. Phenomenology of OCD spectrum disorders

Different authors have emphasized a range of phenomenological dimensions on which obsessive–compulsive symptoms might lie.

3.1.1. Obsessive–compulsive personality traits

Traditional psychoanalysts posed the theory that obsessional personality traits and obsessional neurosis may be considered dimensionally, with both phenomena sharing the same unconscious mechanisms (Janet, 1903; Freud, 1908). Janet (1903) described the "psychaesthenia state" (i.e. a grouping of personality traits that included feelings of incompleteness, uncertainty, and an inner sense of imperfection), while Freud (1908) emphasized the traits of the anal character (such as obstinacy, parsimony, and orderliness). Both suggested that these characteristics predisposed the person to developing an "obsessional neurosis" (Salzman, 1968). More contemporary authors have moved away from the psychoanalytic approach, and have emphasized familial and biological relationships between OCD and OCPD (Samuels et al., 2000; Stein et al., 1996).

While there is certainly an overlap in the phenomenology of OCPD and OCD (Cavallini et al., 2002), these disorders also differ in a number of important respects. People with OCPD have egosyntonic traits, and typically lack the egodystonic obsessions and compulsions that are typical of OCD. Indeed, although epidemiological and clinical studies consistently demonstrate comorbidity between OCD and OCPD (Samuels et al., 2000), OCD is also associated with a number of other Axis II disorders including avoidant, dependent, histrionic and schizotypal personality disorders (e.g. Summerfeldt et al., 1998). Such findings suggest that OCPD is not a prerequisite for the development of OCD. Furthermore, there is also evidence that OCD can predate the development of PDs such as OCPD.

3.1.2. Varying insight in obsessive–compulsive spectrum disorders

Second, several authors have emphasized that OCD is characterized by varying degrees of insight (Eisen et al., 2001; Foa et al., 1995; Insel and Akiskal, 1986; Lelliott et al., 1988; Matsunaga et al., 2002). DSM-IV (APA, 1994) specifies the existence of a "poor insight" subtype of OCD, with studies reporting poor insight in between 15% and 36% of OCD patients (Eisen et al., 2001; Marazziti et al., 2002; Matsunaga et al., 2002; Turksoy et al., 2002). The notion of a *continuum* or *spectrum* of beliefs seems appropriate (Kozak and Foa, 1994), as patients may have varying levels of insight, and the concept of insight itself includes a number of components such as conviction, bizarreness, and extension, as well as reasonableness and accuracy of beliefs.

Several investigations have focused on the association between insight and clinical variables such as obsessive–compulsive symptom subtypes (Damecour and Charron, 1998), age (Geller et al., 1998), age of onset (Geller et al., 1998; Matsunaga et al., 2002), course (Geller et al., 1998) and severity of OCD (Catapano et al., 2001; Matsunaga et al., 2002; Okasha et al., 1994), presence of health concerns (Abramowitz et al., 1999), comorbidity (Catapano et al., 2001; Matsunaga et al., 2002; Pigott et al., 1994), and response to treatment (Catapano et al., 2001; Eisen et al., 2001; Erzegovesi et al., 2001; Foa, 1979; Foa et al., 1999). Poor insight appears to be most consistently associated with hoarding behaviour, younger age (i.e. juvenile OCD), earlier onset of OCD, increased rates of comorbid cluster A PDs, and poorer responsivity to pharmacotherapy and behaviour therapy.

3.1.3. The spectrum of mood and anxiety disorders

Third, some authors have argued that OCD lies on a spectrum of mood and anxiety disorders. Certainly, obsessive–compulsive symptomatology frequently involves emotions such as fear and depression (Bolton, 1998). Similarly, it has been suggested that anxiety in the presence of the evoking stimulus, the subsequent urge to escape or avoid this particular or similar stimuli, and a response to exposure treatment are features common to all of the anxiety disorders (Marks, 1987), including OCD. The concept of OCD as a disorder characterized by disabling anxiety and significant distress has been consolidated by the DSM-IV (APA, 1994). Although the ICD-10 (World Health Organization, 1992) regards OCD as a disorder that stands on its own, it places OCD within the category of neurotic, stress-related and somatoform disorders.

Certainly, OCD patients are at significantly increased risk for developing depression and anxiety disorders (Crino and Andrews, 1996). In an early study, Karno et al. (1988) found prevalence rates from 12% to 85% for comorbid mood disorders and anxiety disorders in patients with OCD. Many OCD patients present with sub-clinical depression (Rasmussen and Tsuang, 1986), and comorbid anxiety disorders in OCD include social phobia (/social anxiety disorder), simple phobia (/specific phobia), generalized anxiety disorder (GAD) (Eisen