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Gail Steketee

The Oxford Handbook of
Obsessive Compulsive and
Spectrum Disorders

The Oxford Handbook of Obsessive
Compulsive and Spectrum Disorders

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Edited by

Gail Steketee

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The *Oxford Library of Psychology*, a landmark series of handbooks, is published by Oxford University Press, one of the world's oldest and most highly respected publishers, with a tradition of publishing significant books in psychology. The ambitious goal of the *Oxford Library of Psychology* is nothing less than to span a vibrant, wide-ranging field and, in so doing, to fill a clear market need.

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nation's and world's most productive and best-respected psychologists have agreed to edit *Library* handbooks or write authoritative chapters in their areas of expertise.

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Peter E. Nathan
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Dr. Gail Steketee is Dean and Professor at Boston University’s School of Social Work. She has conducted numerous research studies on the psychopathology and treatment of anxiety and related problems, especially obsessive compulsive spectrum disorders, including hoarding. She has published over 200 articles and chapters, as well as 12 books. She gives frequent lectures and workshops on hoarding, OCD, and related topics to professional and public audiences in the United States and abroad.

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PART 1

Introduction and
Overview

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Introduction

Gail Steketee

Abstract

The Oxford Handbook of Obsessive Compulsive and Spectrum Disorders reviews current literature on obsessive compulsive disorder (OCD) and its associated spectrum conditions of body dysmorphic disorder (BDD), hoarding, trichotillomania and tic disorders. Authors who are leading researchers in their fields summarize and synthesize the current knowledge about these OC spectrum disorders to provide a road map for the field and open the door to new research and further study. This introduction previews the contents of the book and highlights some of the challenges in current research on epidemiology, features, and diagnosis, as well as biological and psychosocial theories and treatments for these conditions.

Keywords: OCD, obsessive compulsive spectrum, nosology, psychosocial theory, biological theory, therapy

The task of developing a comprehensive and up-to-date reference book on obsessive compulsive disorder (OCD) and obsessive compulsive spectrum disorders (OCSs) is challenging. Our goal in compiling the chapters for this volume was to summarize and synthesize the current knowledge about these mental health disorders in order to provide a road map for the field and open the door to new research and further study. This volume is part of the *Oxford Library of Psychology*, a landmark series of handbooks that will span the entire field of psychology, from the broad disciplinary level to the focused, in-depth topic level. This *Oxford Handbook of Obsessive Compulsive and Spectrum Disorders* reviews the major psychological disorders of OCD and its associated spectrum conditions with breadth, comprehensiveness, and excellent scholarship by authors who are leading researchers in their fields. This introduction highlights a few of the challenges in deciding what to include and what to place elsewhere in the Oxford handbook series, and how to

cover the broad and sometimes uneven knowledge base for each of the spectrum conditions.

Among the first tasks was to determine what disorders would be included and which ones would not. Defined by the U.S.-based *Diagnostic and Statistical Manual of Mental Disorders* (the DSM-IV-TR, APA, 2000) or its World Health Organization (2007) counterpart, the International Classification of Diseases (ICD-10), the conditions described in this book reside in a somewhat informal category of OCSs that groups together a handful of mental health problems thought to be related to OCD (see also Hollander, 2007). Along with OCD in its many forms or subtypes, we have included body dysmorphic disorder (BDD), hoarding, tic disorders and Tourette's Syndrome, as well as trichotillomania and related habit disorders of skin picking and nail biting. These disorders have traditionally been included in prior writings on OCS (e.g., Allen, King, & Hollander, 2003; Wetterneck, Teng, & Stanley, 2010). Not included in this book is

hypochondriasis or health anxiety, a condition often associated with OC spectrum conditions by virtue of its obsession-like focus on health and bodily concerns and avoidant and compulsive behaviors, such as checking body parts and functions. The rationale for this decision was somewhat arbitrary and partly a function of arranging the coverage of the handbook series where hypochondriasis is covered (Martin Anthony and Murray Stein's *The Oxford Handbook of Anxiety and Related Disorders*, among others). Also omitted were anorexia and bulimia, eating disorders that have been included in Stewart Agras's *The Oxford Handbook of Eating Disorders* and James Lock's *The Oxford Handbook of Developmental Perspectives on Adolescent Eating Disorders*. Other candidates for inclusion might have been the impulse control disorders, which bear some similarity to the habit disorders mentioned above and also to tic disorders. In addition to trichotillomania, which is included in this volume (see Chapters 5 and 23), these include intermittent explosive disorder, kleptomania, pyromania, and pathological gambling, which appear to more closely resemble addictions than OC spectrum conditions. These disorders have been included in Jon Grant's and Marc Potenza's *The Oxford Handbook of Impulse Control Disorders*.

As will be evident in the chapters contained here, these OCSD diagnoses bear some relationship to OCD with regard to nosology and phenomenology, although differences are clearly evident in onset, course, and biological features, as well as strategies for assessment and effective types of treatments. However, sometimes even the nosological relationship to OCD appears tenuous. For example, hoarding disorder appears to be driven by both positive and negative emotional states and to lack the characteristic ritualistic behaviors of OCD (see Chapter 4). The habit disorders often lack the hallmark obsessions of OCD (see Chapter 5). Even the requirement for impairment and distress may vary. DSM diagnoses in general, and OC spectrum conditions in particular, share the requirement of provoking significant distress and impairment in functioning to cross the line between mere subclinical symptoms and a DSM clinical disorder. Perhaps the sole exception to this is hoarding, which is in diagnostic flux at this time. Diagnostic criteria for hoarding have been proposed for the next revision of the DSM (DSM-V, expected in 2012), and these are detailed in Chapter 4. Interestingly, the almost legendary low-insight aspect of hoarding for many sufferers has led diagnosticians to develop

criteria that do not require that hoarding sufferers themselves experience distress (as many do not report this), but that the distress might be experienced mainly by others living with and near them. This is a departure from the usual DSM requirement for both distress and impairment typically associated with OCD and other anxiety and mood disorders.

This volume begins with reviews of the diagnostic features, epidemiology, and phenomenology of OCD, BDD, hoarding, tic disorders, and trichotillomania, in Chapters 2 through 5. These chapters provide extensive literature reviews of the prevalence of these conditions, their association with anxiety, mood, and other comorbid disorders, and potential etiological factors. As Calamari, Chik, Pontarelli, and DeJong indicate in Chapter 2 on OCD, clarification of the heterogeneity within disorders like OCD can help advance theories about etiology, as well as research on treatments, and suggest where these and seemingly related conditions lie in our psychiatric disorder nomenclature. These reviews inevitably point to the ongoing debate about what features the OCSDs share, along what dimensions they differ, where each should be placed in the taxonomy of psychiatric disorders, and whether these conditions in fact belong in the broad category of OC spectrum conditions. Figure 1.1 presents a modified map of the dimensions along which several OCSD conditions might vary with regard to mood (euphoria to dysphoria) and behavioral propensities (harm avoidance to impulsivity; see also Lochner et al., 2005; Summerfeldt, Hood, Antony, Richter, & Swinson, 2004). On these dimensions, BDD falls on the most dysphoric and harm-avoidant end, with its frequent suicidal features and poor insight into the irrationality of the fears of imagined ugliness. OCD appears similar, with high rates of depression and avoidant behaviors. In contrast, impulse control disorders rest in the opposing end, with euphoric mood and impulsivity. In between are hoarding and habit disorders like trichotillomania. This figure does not contain reference to a third dimension of cognitive features (beliefs and cognitive processes) that might also help distinguish these conditions, as some chapters in this volume suggest (see Chapters 8, 12 and 18). How biological aspects (genetic, neurobiology) might be represented is yet another missing element.

Among the five chapters outlining symptoms and features of OCSDs, Calamari and colleagues (Chapter 2) point to OCD's heterogeneity. While this may be less true of conditions like BDD and

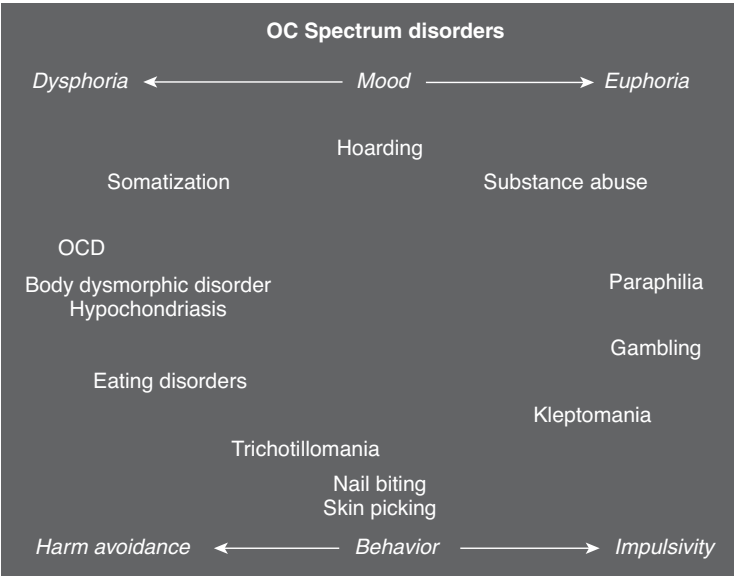


Fig. 1.1. A modified map of the dimensions along which several obsessive-compulsive/spectrum disorder conditions might vary with regard to mood (euphoria to dysphoria) and behavioral propensities (harm avoidance to impulsivity).

trichotillomania, heterogeneity certainly characterizes the larger category of OCSDs. These authors also note the potential value of studying both the subclinical and clinical levels of these conditions, an important point with regard to understanding the critical factors that affect their development and worsening. In Chapter 3, Kelly and Phillips highlight the very serious comorbidity that commonly characterizes BDD, including major depression, hypochondriasis, and psychotic disorders. This underresearched condition is perhaps one of the most severe within the OCSD grouping. Hoarding is the newest member of the spectrum conditions, as its departure from its former diagnostic role as a symptom of obsessive compulsive personality disorder and a subtype of OCD is based on research published within the past decade. Described in detail by Rasmussen and Frost in Chapter 4, it is perhaps one of the more confusing OC spectrum conditions from a nosological and phenomenological point of view. Chapter 5 by Ricketts and colleagues outlines the features of tic disorders and trichotillomania, a repetitive behaviors group sometimes referred to as *habit disorders*, in which symptoms rise and fall with changes in mood. As these authors note, information about crosscultural aspects of these conditions is limited, a statement that also applies to other OCSDs.

Next are three chapters that discuss various biological aspects of OCSDs. In Chapter 6, Samuels

and colleagues review more than two decades of research on genetic aspects; findings indicate that specific genes for OCD and these spectrum conditions have not yet been identified, but there is little doubt that genetic linkages play a role. In Chapter 7, Mataix-Cols and van den Heuvel cover the neurobiological aspects of OCSDs and note that it remains unclear how they relate to one another from this perspective, a task complicated by the heterogeneity of OCD and related disorders, especially hoarding. In the third of these chapters on biology, Radomsky and Alcolado (Chapter 8) examine information-processing in OCD and spectrum disorders, describing a variety of experimental methodologies designed to elucidate the both the features and the mechanisms behind symptoms of these conditions. These three chapters do an excellent job of organizing the research findings to better understand OCSDs, just as they point to the great need for further research in these important areas.

Four chapters examine social, family, and personality features, as well as psychological models for understanding OCD and spectrum disorders. In Chapter 9, Renshaw, Caska, Rodrigues, and Blais point to serious patient impairments in social and family functioning, as well as problems among family members who also display distress and relationship problems with their afflicted relatives. Unfortunately, family accommodation and strong negative emotional reactions can contribute to

treatment failure among those with OCD, but little is known about family responses in the spectrum conditions. Pinto and Eisen (Chapter 10) review the relationship of OCD to personality disorders, especially OCPD, a long studied but little understood association. They point to the need to examine dimensional personality traits rather than merely categorical groupings of personality disorders in order to inform theoretical models of OCSDs, noting that much remains to be done in this arena. Cassin and Rector (Chapter 11) review the largely untested psychodynamic models, and focus mainly on behavioral models with their 40 years of empirical support for explaining the symptoms of OCD and related disorders. However, as the authors note, these models only partly explain these disorders, and mainly the persistence of symptoms rather than their etiology. In Chapter 12, Taylor, Abramowitz, McKay and Cuttler detail the much more recent cognitive models for understanding OCD and the evidence supporting predictions derived from these models, as well as applications to related OCSDs. As noted for behavioral models in Chapter 11, these authors concur that cognitive theories only partly explain OCSDs. Their recommendations for improving upon the explanatory power of these models include examining special features like disgust, as well as developmental and cultural aspects, and tying dysfunctional beliefs to information-processing and neuroscience findings.

Two chapters focus on assessment methods. Chapter 13, by Dorfan and Woody, focuses mainly on assessing OCD symptoms, whereas Purdon's Chapter 14 covers measurement of comorbidity, insight, family features, and functioning. Assessment methods for determining severity and features of BDD, hoarding, tics, and trichotillomania are not provided in a separate chapter but included within earlier chapters describing research on these conditions.

The largest portion of this volume focuses on treatment, with six chapters on treatments for OCD and three chapters on treatments for OC spectrum disorders. In the first group, Dougherty, Rauch and Jenike review pharmacological treatments in Chapter 15, mainly considering the substantial literature on selective serotonin reuptake inhibitors, or SSRIs, as major first-line treatments for OCD, with other monotherapies and augmentation strategies as second-line medication treatments. McLaughlin and Greenberg (Chapter 16) describe various nonmedication biological interventions, including neurosurgical methods such as cingulotomy, capsulotomy,

leucotomy, and tractotomy, as well as deep brain stimulation. Not surprisingly, given the possibility of serious side effects, they point to the need for caution and careful review required before these methods can be applied. Chapter 17, by Abramowitz, Taylor, and McKay, reviews exposure treatments for OCD, noting that these are among the oldest and most effective methods available. They describe common variants and potential mechanisms of action, as well as comparative efficacy in relation to other methods, and predictors of outcome and strategies for improving outcomes. In Chapter 18, Whittal and Robichaud detail cognitive methods of therapy based on the empirically demonstrated assumption that intrusive thoughts are a universal phenomenon, but when interpreted negatively can become clinical obsessions. They point to the possible mechanisms of action of cognitive interventions that address various types of beliefs. Tolin (Chapter 19) reviews literature on the efficacy of combining medications and cognitive and behavioral therapy (CBT) for OCD, finding that combination therapies that include CBT have a small but significant advantage over single therapies. He points to new strategies for combining therapies to potentiate the mechanisms of CBT. The final chapter in this group by Muroff, Ross, and Rothfarb (Chapter 20) is on complementary and alternative approaches to treating OCD. These authors summarize research on such therapies as yoga, herbal remedies, motivational strategies, and bibliotherapy, as well as alternative methods more closely related to standard CBT, with a special focus on technology-supported treatments.

The next three chapters address treatments specifically developed for body dysmorphic disorder, hoarding, and tic and trichotillomania disorders. With regard to BDD, in Chapter 21, Greenberg Chosak, Fang, and Wilhelm point to the efficacy and limitations of separate and combined medications and cognitive-behavioral therapies. They also note that cosmetic procedures favored by patients are typically ineffective, and that early intervention is critical to limit the morbidity associated with BDD. In Chapter 22, Grisham, Norberg, and Certoma describe treatments for compulsive hoarding as an urgent public health priority. They comment on the poor response to standard pharmacological and psychological treatments, according to mainly retrospective research, and review the somewhat more positive outcomes to CBT that is derived from a model for understanding hoarding. Franklin, Antinoro, Ricketts, and Woods (Chapter 23) describe

the methods and outcomes of treatments for tic disorders and trichotillomania. They indicate that cognitive therapy techniques are not typically included in psychosocial treatments, and that behavioral therapies including habit reversal training (HRT) are promising for both conditions.

Three final chapters cover OCD and spectrum conditions in older adults, children and adolescents, and across cultures. In Chapter 24, Carmin, Calamari, and Ownby focus on older adults, noting the need to study interventions for late life OCD that are designed to address possible medical and cognitive limitations, as well as beliefs about intrusive thoughts and compulsive behaviors. On the other end of the developmental spectrum, Storch et al. (Chapter 25) summarize the phenomenology, etiology, and treatment of OCSDs in children and adolescents. They propose novel CBT augmentation methods for OCD using D-cycloserine, as well as other modifications of CBT and medications, and point to the severely limited research on treatments for BDD and trichotillomania in children. Nedeljkovic, Moulding, Foroughi, and Kyrios discuss cultural aspects of OCD and OCSDs in Chapter 26. They consider the role of cultural and religious factors in how OCD symptoms are perceived, assessed, and diagnosed, as well as how patients present for help. Their review of the effects of treatments across countries, and within minority cultures from Western countries, indicates the extremely limited information available about cultural aspects of OC spectrum conditions.

Finally, we (Steketee & McCorkle, Chapter 27) close with a discussion of the topics of most compelling need for further research on obsessive

compulsive and spectrum disorders. Here we review a number of the major issues raised in the research summarized across the chapters of this volume, especially as they pertain to the need to better understand the etiology of these conditions, their biological and social contexts, and the biological and psychosocial interventions that derive from these. It is our genuine hope that readers will benefit from the detailed research summaries contained in this book and use them to guide future research and clinical interventions.

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PART 2

Phenomenology
and Epidemiology

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Phenomenology and Epidemiology of Obsessive Compulsive Disorder

John E. Calamari, Heather M. Chik, Noelle K. Pontarelli, and Brandon L. DeJong

Abstract

Obsessive compulsive disorder (OCD) is a complex, often debilitating syndrome that significantly diminishes quality of life. Although the exact prevalence of OCD is unclear, estimates suggest that it is a common form of psychopathology in the West and throughout the world. A challenge to researchers and clinicians is the significant heterogeneity of OCD. Initial heterogeneity research points to important subtypes of the disorder. Elucidation of disorder heterogeneity might advance etiologic theory and treatment research, and suggest where OCD or OCD-like conditions should be placed in a comprehensive psychiatric disorder nosology. OCD more often occurs with other psychiatric disorders, and evaluation of OCD comorbidity will help clarify this condition's relation to anxiety disorders, mood disorders, and conditions posited to be part of a broad OCD spectrum. Despite significant advancements, much work remains before we can fully understand obsessional disorders and the relation of OCD to commonly experienced negative intrusive thoughts.

Keywords: Obsessive compulsive disorder, phenomenology, epidemiology, comorbidity, heterogeneity

Obsessive compulsive disorder (OCD) is a common and often debilitating condition that is defined in the current psychiatric disorder taxonomy by the experience of obsessions or compulsions that cause marked distress and impairment (*Diagnostic and Statistical Manual*, 4th edition, text revision, American Psychiatric Association [APA], 2000 [DSM-IV-TR]). In the current volume, both OCD and obsessive compulsive spectrum disorders are reviewed. Obsessive compulsive spectrum disorders are syndromes posited to be related in important ways to OCD, sharing phenomenological features, etiologic processes, or similar responsiveness to specific interventions. Although we focus in this chapter only on the phenomenology and epidemiology of OCD as currently defined, our review inevitably touches on issues important to the ongoing debate on where OCD should be placed in the psychiatric disorder taxonomy, and whether there

are importantly related disorders that should be incorporated in a broader OCD spectrum category. We review the defining features of OCD and how the syndrome might be similar or different from the anxiety disorders, among which OCD is included in the DSM-IV-TR. Because OCD infrequently occurs without other conditions, we evaluate these regularly seen comorbidities as important to understanding the phenomenology of OCD. We examine the frequency of specific comorbidities, and then consider the implications for understanding OCD as a distinct syndrome or as a disorder with features that might significantly overlap with several other conditions. OCD's relatedness to other syndromes has important implications for where the disorder might be placed in the taxonomy.

A challenge to understanding OCD phenomenology is the disorder's significant heterogeneity (see McKay et al., 2004, for a review). We overview

approaches to understanding OCD heterogeneity, including evaluations of symptom differences, demographic factors, and age at onset. Age at onset appears more variable than initially appreciated, and early-onset variants of the disorder might be associated with different comorbidities and patterns of heritability (e.g., Geller et al., 1998). We discuss recent advances in the study of OCD heterogeneity, as well as some of the limitations of the approaches used to study this issue.

We included in our review of OCD heterogeneity an examination of the variability seen in patients' insight into the excessiveness of their obsessional concerns and related neutralizing behaviors. OCD with poor insight, incorporated in the psychiatric classification system in the fourth edition of the Diagnostic and Statistical Manual (APA, 1994 [DSM-IV]), is recognized as a particularly important clinical subgroup because of the possible implications for treatment. We review the challenges to assessing the specific overvalued ideas of obsessional patients. We examine both variability in patient insight, posited to range from complete rationality to delusion (Kozak & Foa, 1994), and discuss whether overvalued ideas appear to be stable over time, variable during the course of OCD, or modifiable in response to specific interventions.

Rachman and De Silva's (1978) seminal study on clinical and nonclinical obsessions, and the related empirical work that followed, can be considered the foundation on which contemporary cognitive theories and therapies of OCD rest. Rachman and De Silva's observation that most healthy individuals experienced obsession-like intrusive thoughts, and that clinical and nonclinical obsessions were difficult for skilled mental health professionals to distinguish based on their content, accelerated the development of cognitive theories and the adaptation of Beck's (1976) cognitive specificity hypothesis to OCD. The development of an OCD-specific cognitive theory and therapy has progressed rapidly (see Frost & Steketee, 2002 for a review; see Salkovskis, 1985; 1989). We briefly review the empirical work on similarities and differences between clinical and nonclinical obsessions, including recent studies suggesting that important content differences might exist (e.g., Rassin & Muris, 2006). This line of investigation has critical implications for understanding OCD phenomenology.

Lastly, we review the epidemiology of OCD and discuss the many challenges to estimating the prevalence of a disorder with highly diverse symptom presentations. The ubiquitous nature of intrusive

thought experiences makes distinguishing between a clinical obsessional syndrome and commonly experienced negative thoughts challenging. Although we critically review evidence on OCD prevalence, the available information continues to support understandings of OCD as a common psychiatric condition, rather than the rare disorder it was once posited to be (see Swinson, Antony, Rachman, & Richter, 1998, for review).

The Phenomenology of Obsessive Compulsive Disorder

Early Conceptualizations of Obsessional Syndromes

Obsessional symptoms have been documented throughout written history, suggesting that the disorder has existed for many centuries. Early accounts of individuals' obsessional symptoms reveal that religious authorities were often relied on to explain these difficulties. Obsessional symptoms were understood to reflect the individual's spiritual well being, and interventions congruent with that belief were offered. As Neziroglu and Yaryura-Tobias (1997) and Panksepp (2004) noted in their reviews, people with obsessions and compulsions were sometimes treated using methods reserved for the correction of blasphemy, as their symptoms were seen as signs of possession. Individuals exhibiting thoughts or behaviors that were deemed blasphemous were subjected to exorcisms, which sometimes took the form of torture. The intervention was intended to restore the obsessional individual to normality (Neziroglu & Yaryura-Tobias, 1997).

In later accounts of obsessiveness, symptoms remained connected to moral and spiritual issues. At the beginning of the seventeenth century, Shakespeare, in one of his most famous works, wrote of the guilt and accompanying ritualistic handwashing behaviors of Lady Macbeth. Robert Burton, in his *Anatomy of Melancholy* (1621/1847), described obsessions and compulsions as "religious melancholy." He foreshadowed current conceptualizations of obsessions and compulsions when he described a particular individual who "[i]f he be in a silent auditory, as at a sermon, he is afraid he shall speak aloud and unaware, something indecent, unfit to be said" (p. 234).

These early understandings of obsessional symptoms as related to morality might have connected the syndrome to the scrupulosity symptoms described in historical accounts, and now identified as an important variant of OCD (e.g., Nelson, Abramowitz, Whiteside, & Deacon, 2006).

O'Flaherty (1966) described individuals who were "persistently concerned with incident, thought, word, or deed," whose "thoughts caused uneasiness and distress," and who experienced these symptoms while being otherwise "healthy, normal, and free of other pathological disorders," (O'Flaherty, as cited in Rapoport, 1989, p. 312). Earlier, Jeremy Taylor described in *Ductor Dubitantium* in 1660, individuals free of other pathological disorders who experienced religious scruples in excess. He described those people as "...[R]epent[ing] when they have not sinned, and accus[ing] themselves without form or matter; their virtues make them tremble, and in their innocence they are afraid; they at no hand would sin, and know not on which hand to avoid it" (1660/1855, p. 263), suggesting that behaviors were repeatedly performed in order to reduce the individual's subjective levels of distress. A similar description was given by Saint Alphonsus Liguori in 1773 (cited in Rapoport, 1989) when he described the scrupulosity he had examined as "[a] groundless fear of sinning that arises from erroneous ideas."

The connecting of OCD symptoms to religiosity continued into the twentieth century. At the behest of the Roman Catholic Church, a study was conducted that examined the pastoral treatment of scrupulosity (Mullen, 1927). In the study, 400 women in a Catholic high school were asked about their scrupulosity symptoms, and about any cleaning and washing habits they felt compelled to perform. Some study participants observed that such symptoms seemed to run in their family. The symptoms reported by participants, including fearing that their analysis of the morality of an action was incorrect, are similar to contemporary conceptualizations of OCD (Rapoport, 1989).

Starting in the 1800s, a shift began from describing obsessive compulsive symptoms in religious terms, toward understanding the syndrome as a medical condition (Krochmalik & Menzies, 2003). Esquirol, in his textbook *Traite des Maladies Mentales* (Esquirol, 1845/1938), presented the case of "Mademoiselle F." He used the term *monomania*, or partial insanity, to describe a physical disease of the brain, which occurred without fever and was characterized by partial lesion of intellect, the emotions, or the will. The affected individual was said to be "chained to actions that neither reason nor emotion have originated, that conscience rejects and will cannot suppress" (Esquirol, cited in Bynum, Porter, & Shepherd, 2005, p. 170). Esquirol indicated that this "disordered intellect" or "disordered will," led to thoughts and rituals that were both recurrent and

unwanted, and that were characterized by magical thinking (Panksepp, 2004). He observed that although the repetitive symptoms were described as irresistible by those with the condition, individuals had insight into the nature of their symptoms, inasmuch as they "...[c]arried out actions they considered as bizarre and absurd...but were aware of their state, able to talk about it, and longed to be rid of it" (Esquirol, cited in Bynum et al., 2005, p. 170).

By the 1850s, the conceptualization of obsessional disorders as monomania was criticized for several reasons (Bynum et al., 2005). This conceptualization was seen as resulting from an overly mechanistic application of faculty psychology. Here, the mind was viewed as having separate divisions, or modules, which were assigned to carrying out a particular task. These divisions were thought to respond to training, where behaviors could be enhanced through practice or diminished if practice did not occur (Benjamin, 2007). Thus, the mind was treated as if it were a muscle that could be strengthened in order to control the will and emotions. This conceptualization was also rejected for being too broad, attempting to explain many clinical states, and not accounting for variability in individual symptomatology or the subjective experiences of individuals with specific conditions.

Alvarenga et al. (2007) reviewed theories of obsessional disorders in Europe in the 1800s. They described how new theories developed because of the backlash against the monomania concept. Dagonet (1870) considered compulsive behaviors to be impulsions, acts that were irresistible and imposed on the mind, much like hallucinations. Those with obsessive compulsive symptoms were thought to have had their will overcome and their impulsions given form in their obsessions. While Dagonet's (1870) view of obsessional symptoms as disorders of will or emotion were dominant in France in the later 1800s, German physicians of the same period tended to understand obsessive compulsive symptoms as resulting from a disorder of intellect. They posited that irrational thoughts occurred because of physical changes in the brain, which in turn affected cognition. Griesenger published several cases in 1868 of a disorder that involved questioning or rumination that resulted from an "impairment of ideas," and designated them as *Grubelnsucht*, from the Old German *Grubeln*, meaning to "wreck one's brains," and *suchen*, meaning "to seek" (Berrios, 1996). Westphal shared this view, also conceptualizing obsessive compulsive behaviors as arising out of disordered

intellectual functioning (Westphal, 1878). Westphal theorized that emotional dysregulation was insufficient by itself to cause obsessional symptoms. Symptoms resulted from difficulties in inhibiting negative intrusive thoughts, the excessive awareness of one's thoughts, and understanding related repetitive actions as being excessive. Westphal also hypothesized that there might be a genetic predisposition for obsessional disorders (Alverenga et al., 2007). Westphal was one of the first to provide a comprehensive description that he designated *Zwangsvorstellung*, translated as "obsession" in Europe and "compulsion" in the United States. His work is credited as leading to the current nomenclature of "obsessive compulsive" (Alverenga et al., 2007).

As conceptualizations of obsessive compulsive symptoms evolved, there was a shift toward more explicitly relating human experience to the disorder (e.g., the increased stress that resulted from urbanization). The term *neurasthenia* was introduced by Beard in 1869 to define a heterogeneous disorder that included obsessional symptoms (Beard, 1869). Neurasthenia, as defined by Beard, included intrusive thought experiences and the performance of rituals, but was also characterized by mental and physical fatigue and muscular weakness (Beard, 1869). Individuals with neurasthenia were thought not to have sufficient psychological tension (nervous energy) to perform more sophisticated mental activities. The nervous energy that these individuals did have was instead redirected toward more primitive functions, precipitating obsessions and compulsions (van der Hart & Friedman, 1989).

Swinson et al. (1998) have reviewed more recent conceptualizations of OCD. At the turn of the twentieth century, there was a movement away from the neurasthenic construct. Janet considered anxiety to be a secondary characteristic of OCD, and introduced the concept of *psychasthenia* (Swinson et al., 1998). Janet believed that a sense of imperfection, or of incompletely achieving an objective, characterized those with obsessive compulsive syndromes. Anxiety was theorized to be a reaction to, rather than a precipitant of, the obsessional symptoms. North American audiences did not as readily embrace Janet's view, a theory that had features that overlapped with the psychoanalytic conceptualization of obsessional disorders. In 1895, Freud (1895/1958) published an article in which he distinguished what he called an *anxiety neurosis* and the concept of neurasthenia. Due to the popularity of psychoanalysis in the late nineteenth and early

twentieth centuries, Freud's conceptualization of OCD became dominant. Freud's ideas continued to be highly influential as the first psychiatric taxonomies were developed in the United States. The first two editions of the *Diagnostic and Statistical Manual* of the American Psychiatric Association, (APA, 1952; 1968) used his psychoanalytic conceptualizations as the basis for disorder classification.

In summary, conceptualizations of obsessive compulsive symptoms, before Freud's highly influential work, pointed to a distinct syndrome that had important phenomenological differences from other forms of psychopathology. Early on, the core phenomenology of the disorder was believed to involve the experience of unwanted thoughts that the individual could exert little control over (Burton, 1621/1847; Esquirol, cited in Bynum et al., 2005; O'Flaherty, 1966; Rapoport, 1989). Compulsive behaviors were likewise identified as a core aspect of the syndrome in early understandings of obsessional conditions (Burton, 1621/1847; Esquirol, cited in Bynum et al., 2005; Dagonet, 1870; Neziroglu & Yaryura-Tobias, 1997). The afflicted individual was again understood to have limited ability to prevent these repetitive actions (Burton, 1621/1847; Esquirol, as cited in Bynum et al., 2005; Mullen, 1927; O'Flaherty, as cited in Rapoport, 1989; J. Taylor, 1660/1855; Westphal, 1878). Thus, in the early descriptions of the syndrome, volitional control of thought and behavior was more often believed to have been lost. The functional relationship between obsessions and compulsions was sometimes recognized in early descriptions of obsessional conditions, with individuals understood to perform their ritualized behaviors to decrease their subjective level of stress (Liguori, as cited in Rapoport, 1989; Taylor, 1660/1855). Compulsive behaviors were not seen as anxiety-reducing in their own right, but as related to intrusive cognition. The ego-dystonic nature of the experienced intrusions was also often recognized (Burton, 1621/1847; Esquirol, as cited in Bynum et al., 2005; O'Flaherty, as cited in Rapoport, 1989). Individuals with the syndrome were seen as often recognizing the excessive nature of their obsessional concerns and behaviors (Esquirol, as cited in Bynum et al., 2005; O'Flaherty, as cited in Rapoport, 1989; Taylor, 1660/1845).

Psychoanalytic Theory and Obsessional Disorders

Freud conceptualized obsessive compulsive symptoms as symbolizing the patient's unconscious struggle over drives that were unacceptable at a

conscious level (Freud, 1913/1958). Individuals with obsessional disorders, Freud maintained, had their defensive system, specifically repression, fail, thereby allowing improper or unwanted thoughts to enter into consciousness. As a result, these individuals focused their energy on repeatedly and exactly performing tasks in order to avoid conscious awareness of previously repressed material. That is, they distracted themselves from thinking about what they unconsciously felt they should not think about (Carr, 1974; Rachman, 1963). Psychoanalytic theorists posited that the root cause of obsessional syndromes was the “precocity” of ego development, a mismatch between the development of the libido and the ego. According to the theory, individuals who progress through the psychosexual stages normally develop the libido first, followed by the ego. In the case of those with obsessive compulsive symptoms, the reverse was thought to be true, which predisposed the individual to a pathologically immature and incomplete mode of relating to others. Thus, with respect to object relations, hate would precede love and “obsessional neurotics have to develop a super-morality in order to protect their object-love from the hostility lurking behind it” (Freud, 1913/1958, p. 325). Freud underscored this opposition between love and hate for the object in his analysis of the “Rat Man,” one of the first published treatments of an individual with OCD. Here, Freud advanced the opinion that this opposition among psychic forces was the source of the doubting, compulsive behavior, and ambivalence that, he argued, are characteristic of obsessional neurosis (Freud, 1909/1958).

Freud maintained that adults with obsessive compulsive syndromes manifested several broad characteristics. First, they were fixated at the anal-sadistic psychosexual stage of development, preoccupied with a need for control, and exhibited the “anal triad” personality traits of orderliness, parsimony, and obstinacy. Additionally, these individuals had a very rigid and demanding set of external prohibitions, which dictated their behavior. Freud observed that for obsessional patients, having a particular unacceptable thought (e.g., harming an infant), was experienced as intensely distressing, almost as if the person had actually performed the action (Freud, 1909/1958). Freud’s observation is congruent with contemporary cognitive theories of OCD emphasizing beliefs in the importance of thought (Rachman, 1997), and dysfunctional metacognitive beliefs in thought–action fusion (e.g., thought influencing events in the world, or thought

as a moral act, see Thordarson & Shafran, 2002, for a review).

In Freud’s model, the overuse of particular defense mechanisms characterized those with obsessive compulsive symptoms, particularly the use of reaction formation, intellectualization and isolation, and undoing. Freud attributed the syndrome to psychogenic processes; learning and conditioning, neuropathology, and genetic predisposition were not considered.

In psychoanalytic models, the content of compulsive symptoms was related to behaviors that previously served to reduce anxiety, but these behaviors had now become exaggerated and overgeneralized; such as engaging in handwashing to avoid criticism from one’s parents (Dollard & Miller, 1950). More contemporary psychoanalytic theorists have used object-relations approaches that focus not only on the patient, but on the patient’s impression of the behavior of others (Kempke & Luyten, 2007).

Conceptualizations of Obsessive Compulsive Disorder in the Psychiatric Disorder Taxonomy

Next, we review the evolution of conceptualizations of OCD as reflected in the most influential psychopathology taxonomy, the *Diagnostic and Statistical Manual of Mental Disorders* of the American Psychiatric Association. We examine how the phenomenology of OCD has been described in this classification system since the early 1950s until the present. We briefly review several issues being debated as the next edition of this classification system is being developed.

The First and Second Editions of the Diagnostic and Statistical Manual of Mental Disorders of the American Psychiatric Association

Psychoanalytic theory greatly influenced the classification and treatment of mental disorders in the United States for several decades. The first edition of the DSM (DSM-I; APA, 1952) brought together for the first time descriptions of mental disorders, and placed the identified syndromes in a classification framework. In the first major revision of that taxonomy (DSM-II; APA, 1968), the classification methods, as well as the accompanying text for describing disorders, were drawn from the mental disorders section of the eighth edition of the International Classification of Diseases (World Health Organization, 1965). During this period, psychoanalytic theory continued to dominate

the field. In these models, psychopathology was believed to be secondary to the experience of anxiety, which was caused by intrapsychic conflicts. In the DSM-I (APA, 1952), anxiety was described as “a danger signal felt and perceived by the conscious portion of the personality” and “produced by a threat from within the personality” (p. 31). How the individual responded to this anxiety determined the type of reaction (e.g., “obsessive compulsive reaction”) in this diagnostic system. In the DSM-II (APA, 1968), anxiety was defined as “anxious over concern extending to panic, commonly associated with somatic symptoms that must be distinguished from normal apprehension, or fear” (p. 39). Psychodynamic theorists posited that mental disorders and the associated symptoms existed on a continuum with nonpathological behavior. All people were seen as experiencing intrapsychic conflicts and the associated anxiety symptoms to an extent, and on an extreme point on the continuum, because of severe unconscious conflict, were those who developed psychoses (Mayes & Horwitz, 2005). Neuroses were described as involving anxiety that was “felt and expressed directly, or controlled unconsciously or automatically by conversion, displacement, and various other psychological mechanisms” (APA, 1952, p. 31). Thus, the different categories of psychopathology were guided by the underlying methods the affected individual was believed to use to deal with internal conflict. This early psychiatric taxonomy was driven by the dominant theory of the time, rather than by the behavioral criteria (e.g., the frequency of certain symptoms; the presence of several defining symptoms from a list of core behaviors) that characterizes the current classification system (First, Frances, & Pincus, 2004).

In the DSM-I, what is currently known as OCD was designated “obsessive compulsive reaction” and was included in a broader category of Psychoneurotic Disorders. The defining characteristic of the Psychoneurotic Disorders was anxiety. Individuals might receive this diagnosis if they experienced ideas that were unwanted, or felt compelled to perform rituals (specified as “touching, counting, ceremonials, hand-washing, or recurring thoughts”), which might be seen by the individual to be excessive or unreasonable (APA, 1952, p. 33). In the DSM-II, OCD was classified as a neurosis, and conditions included in this broad category were characterized by anxiety from which the individual desired relief. The “obsessive compulsive neurosis” was defined in a manner almost identical to that of the “obsessive compulsive reaction” of the DSM-I, with the

addition that “[a]nxiety and distress are often present either if the patient is prevented from completing his compulsive ritual or if he is concerned about being unable to control it himself” (APA, 1968, p. 40).

Obsessive Compulsive Disorder in the Contemporary Psychiatric Taxonomy

A significantly different approach was taken to the classification of psychopathology in the third edition of the DSM (APA; 1980). The often vague and brief descriptions of syndromes in DSM-II resulted in poor diagnostic reliability (Beck, Ward, Mendelson, Mock, & Erbaugh, 1962; Nathan, Andberg, Behan, & Patch, 1969). An attempt was made to define syndromes reliably, and to make such definitions independent of specific etiologic theories of the disorder (Bayer & Spitzer, 1985; Millon, 1983). The result was an atheoretical classification system and a significantly greater number of diagnostic categories. Psychopathology syndromes were largely defined by sets of observable symptoms considered to reflect the core overt phenomenology of specific disorders (Millon, 1983; Spitzer, Williams, & Skodol, 1980). The emphasis placed on behavioral descriptions and symptom clusters and the attempt to maintain a largely descriptive and atheoretical classification system comes with both costs and benefits. Classification systems have several purposes, including the reliable definition of a syndrome to facilitate communication among scientists and clinicians. Additionally, a well-structured classification system should incorporate existing empirical data while promoting ongoing study of unanswered questions.

How well does the current psychiatric disorder nosology address core OCD phenomenology? Abramowitz and Deacon (2005) argued that there are several important limitations. An implied assumption in the DSM, that the presence of obsessions or compulsions is necessary and sufficient to consider the symptom cluster OCD, ignores important OCD phenomenology. This assumption could result in some types of symptoms being considered OCD or OCD-related based on only superficial similarities. Abramowitz and Deacon suggested that this focus ignores the core functional characteristics of the disorder (e.g., negative intrusive thoughts that elevate distress and compulsions undertaken to neutralize this discomfort).

In the DSM-III (APA; 1980), OCD was placed under the broad heading of Anxiety Disorders, specifically, and under the subheading of Anxiety

States. The other Anxiety Disorders were panic disorder and generalized anxiety disorder (GAD). The other two subheadings of the Anxiety Disorders were Phobic Disorders, and Post-Traumatic Stress Disorders. Agoraphobia with panic attacks, agoraphobia without panic attacks, social phobia, and simple phobia comprised the Phobic Disorders. Acute and chronic (or delayed) post-traumatic stress disorder (PTSD) stood alone in the Post-Traumatic Stress Disorders category. The hallmark of OCD, according to the DSM-III, was the recurrence of obsessions or compulsions that caused significant distress or “interfere with social or role functioning” (p. 235). Obsessions were defined as “recurrent, persistent ideas, thoughts, images, or impulses that are ego-dystonic. . .and are experienced as senseless or repugnant” (p. 235). Individuals with OCD attempted to ignore or suppress the thoughts, images, or impulses they experienced. Compulsions, on the other hand, were defined as “repetitive and seemingly purposeful behaviors that are performed according to certain rules or in a stereotyped fashion” (p. 235). The behaviors are “designed to produce or prevent some future event or situation. However, either the activity is not connected in a realistic way with what it is designed to produce or prevent, or may be clearly excessive” (p. 235). Further, in the DSM-III, individuals with the disorder were described not as only trying to resist doing the compulsions (at least initially), but they also were understood in general to recognize “the senselessness of the behavior (this may not be true for young children). . .” (p. 235). An additional distinction made between the compulsive behaviors associated with OCD, and other repetitive maladaptive behaviors, was that the affected individual did not perform the behavior to derive pleasure, but rather to experience a release of tension.

The conceptualization of OCD in the psychiatric taxonomy has not changed dramatically since DSM-III, although several issues important to understanding OCD phenomenology are reflected in the modifications to the diagnostic criteria. In DSM-III-R (APA, 1987), the nine diagnoses under the broad heading of Anxiety Disorders were no longer subdivided into Phobic versus Anxiety Neurosis. Emphasis was placed on better defining obsessions and compulsions while also emphasizing the degree of distress and impairment required for the diagnosis. New to this edition was the inclusion of the time-consuming nature of obsessions and compulsions. The DSM-III-R indicated obsessions and compulsions should “take more than an hour

a day” (p. 247). Excellent reliability was reported for a current principal diagnosis of OCD using the Anxiety Disorders Interview Schedule-Revised (ADIS-R; di Nardo, Moras, Barlow, Rapee, & Brown, 1993), but poor reliability was found for the OCD diagnosis when using the Structured Clinical Interview for DSM-III-R (Skre, Onstad, Torgersen, & Kringlen, 1991).

Based on the field trial for the DSM-IV (APA; 1994), two important recommendations were made for improving the criteria of OCD in the DSM-IV (Foa et al., 1995a, 1995b). In the field trial, most individuals with OCD were uncertain about whether their obsessive-compulsive symptoms were unreasonable or excessive, and most had both mental and behavioral compulsions. As a result, the DSM-IV acknowledged the variability in patient insight. A specifier of “with poor insight” was added to the criteria of OCD. Although adults with OCD should, at some point, recognize the excessiveness or unreasonableness of their obsessions and compulsions, the DSM-IV acknowledged that insight is likely to vary between individuals, and to vary over time and situations within individuals. The poor insight specifier is applied when the individual does not recognize the excessiveness or unreasonableness of their obsessions and compulsions most of the time during their current episode (APA; 1994). The insight variability seen in OCD is reviewed in a later section of this chapter. Furthermore, the DSM-IV included mental acts (e.g., praying, counting, repeating words silently) within the definition of compulsions. Further, in the DSM-IV the differentiation of core OCD phenomenology from the symptoms seen in other conditions (e.g., the excessive worries about real-life problems characteristic of generalized anxiety disorder) was clarified.

Finally, the DSM-IV and its text revision (APA; 2000) described a greater number of obsession and compulsion symptoms (i.e., repeated thoughts about contamination, doubts, having things in a particular order, aggressive impulses, sexual imagery, as common obsessions; washing and cleaning, counting, checking, requesting or demanding assurances, repeating actions, and ordering, as compulsions) acknowledging the significant symptom heterogeneity of OCD. Hoarding was not explicitly acknowledged as a variant of OCD.

Obsessive Compulsive Disorder and the Next Psychiatric Disorder Taxonomy

As the next major revision of the psychiatric disorder taxonomy [DSM-V] progresses, we consider in

this section what changes in the classification and conceptualization of OCD might occur. These changes will likely emerge from an integration of the extensive empirical work on OCD.

OCD has been classified under the rubrics of anxiety disorders, neuroses, or psychoneurotic disorders for almost a century (Tynes, White, & Steketee, 1990). The more recent classification of OCD as an anxiety disorder has not been without controversy. Although the revisions in the psychiatric taxonomy seen in the DSM-II made the system generally congruent with the eighth edition of the International Classification of Diseases (ICD-8), OCD was no longer classified as an anxiety disorder in the ICD-8 system at that time. The phenomenology of OCD was judged importantly different from the anxiety disorders (Montgomery, 1993). Some taxonomists continue to argue that OCD should not be classified as an anxiety disorder, understanding anxiety symptoms as secondary to core OCD processes (Mataix-Cols, Pertusa, & Leckman, 2007). Further, proponents of this change argue that the neurobiological distinctiveness of OCD from several other anxiety disorders is now better understood, and supports reclassification of the disorder (Bartz & Hollander, 2006). Counterarguments to the reclassification of OCD have included contentions that all the anxiety disorders have defining features in addition to the experience of anxiety, and that although specific neurobiological processes were associated with some anxiety disorders, there are significant overlapping features among these conditions (e.g., striatal involvement; commonalities in the neurotransmitter systems involved; see D. J. Stein, 2008, for a review). Mataix-Cols et al. (2007) surveyed 187 OCD experts and found that 60% believed OCD should be reclassified, while 40% maintained that OCD should remain an anxiety disorder.

A related issue for the DSM-V is the OCD disorder spectrum. Hollander, Braun, and Simeon (2008) advocated removing OCD from the anxiety disorders, and development of a distinct category for OCD and OCD-related disorders—obsessive compulsive spectrum disorders, or sometimes called *obsessive compulsive related disorders* (OCRDs; Hollander et al. 2009). Hollander and colleagues argued that development of an OCRD classification would aid in diagnosis and screening, as well as bring the classification of these disorders in line with that of the World Health Organization ICD system. Hollander et al. (2008) suggested that OCRDs can be conceptualized as lying on a

spectrum of compulsivity-impulsivity, with risk-averse and harm related disorders on one end of this spectrum (e.g., disorders where compulsions are performed to reduce perceived threat or anxiety, such as OCD, body dysmorphic disorder, and anorexia nervosa). Disorders characterized by risk-taking, gratification seeking, and impulsivity were posited to lie at the other end of the compulsivity-impulsivity continuum (e.g., sexual compulsions, pathological gambling, and binge eating). Hollander and colleagues argued that there is significant empirical support for the proposed OCRD classification, including overlapping phenomenology across the conditions proposed for inclusion. Hollander and colleagues contended that OCRDs also have similar comorbidities, commonalities in heritability and associated genetic anomalies, similar brain circuitry and neurotransmitter system involvement, and share a positive response to related treatments.

Storch, Abramowitz, and Goodman (2008) critically reviewed the data often used to support development of the OCRD classification. The authors concluded that reclassification of OCD into a new OCRD category was not well supported and at best premature. Storch et al. (2008) argued that the OCRD category classification is poorly defined, and that there is no easily operationalized cutoff between compulsivity and impulsivity or indication that this conceptualization is useful for elucidating OCD. Further, Storch et al. (2008) noted that there is not a consensus among mental health practitioners that the approach has clinical utility (Mataix-Cols et al., 2007). Storch and colleagues indicated that emphasizing repetitive behaviors as a defining aspect of the spectrum criteria overlooks other, more fundamental phenomenological features of OCD, such as the reduction of obsession-related fears through performance of compulsions. The criticisms directed at the proposed OCD spectrum appear to focus on the limitations of a classification system not guided by well-developed theory (cf. Follette & Houts, 1996).

Disorders proposed for the OCD spectrum category are addictions, autism, body dysmorphic disorder, chronic tic disorders, eating disorders, hypochondriasis, impulse-control disorders (e.g., pathological gambling), and OCD (Hollander & Zohar, 2004; D. J. Stein & Lochner, 2006; Storch, Abramowitz et al., 2008). Again, Bartz and Hollander (2006) argued that the spectrum classification is based on important commonalities in the phenomenology of the proposed disorders, and that

these commonalities include similarities in patient characteristics, course of the disorders, comorbidity patterns, neurobiology, and treatment response. Some psychopathologists have recommended that if the spectrum construct is adopted, it should be defined more narrowly and include body dysmorphic disorder, trichotillomania, tic disorders, and hypochondriasis. In this approach, OCD would be treated as a heterogeneous condition, with specifiers for each of its presentations (e.g., contamination/cleaning, symmetry/order/repeating/counting, hoarding, harm, obsessions and checking, and sexual and religious obsessions; Mataix-Cols et al., 2007). Additionally, the hoarding subtype might be specified as a separate OCD-related disorder and have its own diagnostic criteria (Mataix-Cols et al., 2007). Recently, the DSM-V Work Group on obsessive compulsive related disorders came to a consensus to not include addictive disorders, several conditions classified as impulse control disorders (e.g., pathological gambling), and binge eating in the OCRDs (Hollander et al. 2009).

Other issues that may affect OCD as the DSM-V is constructed are proposals that mood and anxiety disorders be collapsed into a broader emotional disorders category (Watson, 2005). Additionally, Fontenelle et al. (2008) advocated that more research be done on a possible spectrum of conditions with common perceptual disturbances, symptoms typically found in psychotic disorders but potentially associated with OCD.

Clearly, there is much empirical work needed to integrate disparate perspectives on where OCD should be placed in a comprehensive nosological system. Changes in the classification of OCD should be driven by the available science on this complex disorder. Any changes in the classification of OCD and conditions posited to be OCD-related should function to promote new research, while enabling mental health professionals to more successfully diagnose and treat these disorders.

Conditions Co-occurring with Obsessive Compulsive Disorder

Understanding comorbidity in OCD is important for several reasons. The co-occurrence of another psychological disorder with OCD is usually associated with greater symptom severity, diminished treatment response, a poorer prognosis (Abramowitz, Franklin, Street, Kozak, & Foa, 2000; Brown & Barlow, 1992; Hansen, Vogel, Stiles, & Götestam, 2007; Masellis, Rector, & Richter, 2003; Storch, Merlo et al., 2008; Tükel, Polat, Ozdemir, Aksut, &

Turksoy, 2002), and greater impairment in quality of life (Huppert, Simpson, Nissenson, Liebowitz, & Foa, 2009). Additionally, OCD infrequently occurs without other disorders (e.g., Weissman et al., 1994). The frequent comorbidity of syndromes has significant implications for the classification of emotional disorders (Brown, Campbell, Lehman, Grisham, & Mancill, 2001). For example, the high rates of comorbidity of anxiety and mood disorders has caused Watson (2005) to propose that mood and anxiety disorders should be collapsed into a broader emotional disorders category.

HOW OFTEN DOES OBSESSIVE COMPULSIVE DISORDER CO-OCCUR WITH OTHER PSYCHIATRIC DISORDERS?

High rates of diagnostic comorbidity have been found with OCD, although few surveys involved large-scale epidemiological studies (e.g., Angst et al., 2004; Ruscio, Stein, Chiu, & Kessler, 2010; A. R. Torres et al., 2006; Weissman et al., 1994). Early surveys used the DSM-III definition of OCD, whereas more recent investigations have adopted the DSM-IV diagnostic criteria. Weissman et al. (1994) conducted an epidemiological survey in seven countries and found 49% of individuals diagnosed with OCD experienced a comorbid anxiety disorder and 27% experienced comorbid major depression. DSM-III diagnostic criteria were used in the study. In the recent National Comorbidity Survey Replication study, a nationally representative survey of U.S. adults, Ruscio et al. (2010) reported substantial comorbidity not only with anxiety (75.8%) and mood (63.3%) disorders, but also with impulse control (55.9%) and substance use disorders (38.6%) using DSM-IV diagnostic criteria.

Surveys conducted in anxiety clinics have also used DSM-IV criteria for evaluating comorbidity. In these studies, 48%–64% of OCD patients had at least one additional Axis I diagnosis at the time of evaluation (Antony, Downie, & Swinson, 1998; Brown, Campbell et al., 2001; Denys, Tenney, van Megen, de Geus, & Westenberg, 2004). The most common additional diagnoses were social phobia (3.6%–41.4%) and major depression (20.7%–24.1%), followed by specific phobia (0.95%–20.7%), dysthymic disorder (2.8%–13.8%), panic disorder with/without agoraphobia (4%–11.5%), generalized anxiety disorder (0.95%–12%), somatoform disorders (1%–3.8%), and PTSD (0%–1.6%) (Antony et al., 1998; Brown et al., 2001; Denys et al., 2004). Comorbidity rates with disorders not classified as anxiety or mood disorders were

not as high: tic-related disorders (3.6%–13%), eating disorders (2.4%–5%), impulse control disorders such as trichotillomania (4.6%–9%), and skin picking (15%) (Antony et al., 1998; Denys et al., 2004). When lifetime comorbidity was considered, fewer than 15% of cases had a sole diagnosis of OCD (Brown et al., 2001; Diniz et al., 2004; LaSalle et al., 2004). Furthermore, those with earlier onset OCD typically had more lifetime comorbid psychiatric conditions (de Mathis et al., 2008; LaSalle et al., 2004).

With growing evidence for the heterogeneity of OCD (McKay et al., 2004), recent studies have examined comorbidity patterns for different OCD symptom presentations. To evaluate whether OCD symptom subtypes had different comorbid disorders, Hasler et al. (2005) first factor- and cluster-analyzed both the Yale-Brown Obsessive-Compulsive Scale Symptom Checklist and the Thoughts and Behaviors Inventory, finding support for a four-factor/cluster model. Their Factor I (aggressive, sexual, religious, and somatic obsessions, and checking compulsions) was broadly associated with comorbid major depression and anxiety disorders, including GAD, panic disorder, agoraphobia, social anxiety disorder, specific phobia, and substance use disorders. Factor II (obsession of symmetry, and repeating, counting, and ordering/arranging compulsions) was associated with bipolar disorder and panic disorder/agoraphobia, and substance use disorders. Factor III (contamination obsessions and cleaning compulsions) was positively associated with eating disorders but negatively associated with Tourette's disorder. Interestingly, no associations were found between Factor IV (hoarding obsessions and compulsions) and any other psychiatric conditions.

Hasler et al.'s (2005) findings were incongruent with other studies that found hoarding patients to have significantly more co-occurring disorders than non-hoarding OCD patients (Lochner et al., 2005; Samuels et al., 2007; Wheaton, Timpano, LaSalle-Ricci, & Murphy, 2008). These differences likely result from the method used to define the hoarding subgroup. Hasler et al. (2005) defined their hoarding subgroup based on multivariate analysis of two self-report measures, whereas Lochner et al. (2005), Samuels et al. (2007), and Wheaton et al. (2008) classified their hoarding subgroup based on clinician-administered structured interviews. Lochner et al. (2005) and Samuels et al. (2007) reported increased rates of obsessive compulsive personality disorder (OCPD) among hoarding patients compared to non-hoarding OCD patients. This finding

differentiates OCD patients with prominent hoarding symptoms from other OCD patients who have more often been diagnosed with comorbid dependent and avoidant personality disorders (Summerfeldt, Huta, & Swinson, 1998).

Depression and other anxiety disorders occur frequently with individuals who have a primary OCD diagnosis. Yet, when major depression or other anxiety disorders are primary, OCD is infrequently found as a secondary diagnosis even when lifetime rates of comorbidity are considered (Antony et al., 1998; Brown, Campbell et al., 2001; Crino & Andrews, 1996). When the chronology of disorder onset is carefully evaluated, comorbid anxiety disorders tended to precede OCD, whereas comorbid depression tended to occur after the onset of OCD (Brown, Campbell et al., 2001; Ruscio et al., 2010). Comorbid impulse control disorders were also found to begin at an earlier age than OCD (Ruscio et al., 2010). However, findings regarding comorbid substance use disorders are inconsistent; whereas Mancebo et al. (2009) found a majority (70%) of participants reported the onset of OCD preceded substance use disorder, Ruscio et al. (2010) found substance use disorders began at an earlier age than OCD for most (58.9%). After the onset of OCD, an individual remains at elevated risk for developing other anxiety, mood, eating, and tic disorders as long as the episode persists (Yaryura-Tobias et al., 2000).

SPECIFIC COMORBID CONDITIONS – MOOD DISORDERS

The occurrence of a major depressive episode in persons with OCD is high, ranging from 20.7%–24.1%; followed by dysthymia, ranging from 2.8%–13.8% (Brown, Campbell et al., Antony et al., 1998; 2001; Denys et al., 2004). These rates are much higher for comorbid depressive disorder, lifetime (61%–66%), and dysthymia, lifetime (12%–24%) (Brown, Campbell et al., 2001; Diniz et al., 2004; LaSalle et al., 2004). Bipolar disorders (I and II) appear to accompany OCD less frequently, with lifetime comorbidity rates ranging from 9% to 13% (Diniz et al., 2004; LaSalle et al., 2004; Maina, Albert, Pessina, & Bogetto, 2007), although bipolar disorder type II is more frequently associated with OCD than bipolar disorder type I (Maina et al., 2007).

Major depression comorbidity sometimes has a highly detrimental effect on OCD. Obsessional patients with comorbid major depression had more severe OCD symptoms, a greater tendency to

misinterpret the significance of intrusive thoughts, poorer insight into the senselessness of their concerns (Abramowitz, Storch, Keeley, & Cordell, 2007), and significantly reduced quality of life (Cassin, Richter, Zhang, & Rector, 2009) compared to patients without comorbid depression. It appears that OCD patients with comorbid major depression do show significant gains in treatment (Abramowitz & Foa, 2000; Rector, Cassin, & Richter, 2009), but their posttreatment symptom level is still significantly greater than symptom levels of OCD patients without concurrent depression (Abramowitz & Foa, 2000). Rector et al. (2009) found that severe levels of depressive symptoms did not substantially interfere with treatment gains from cognitive-behavioral therapy, although additional treatment strategies may be warranted to reduce high treatment dropout rates. Highly depressed OCD patients also appear to be at greater risk for relapse following treatment discontinuation (Abramowitz & Foa, 2000).

The clinical impact of comorbid bipolar disorder in OCD has only recently been investigated. OCD patients with comorbid bipolar disorder were more likely to be male; report more sexual, religious, aggressive, impulsive, and hoarding obsessions, and checking, repeating, ordering, and hoarding compulsions; report more suicide attempts and hospitalizations; and had higher rates of substance use disorders (Diniz et al., 2004; Maina et al., 2007; Perugi et al., 1997; Perugi et al., 2002). In addition, OCD patients with comorbid bipolar disorder have shown significantly higher rates of a Cluster A (42.9%) or B (57.1%) personality disorders, especially narcissistic and antisocial personality disorder. OCD patients without this comorbidity have consistently lower rates of personality disorders (Cluster A: 21.3% versus Cluster B: 29%) (Maina et al., 2007). Taken together, comorbid bipolar disorder in OCD patients might lead to a poor response to, or compliance with, pharmacological or psychological treatments.

SPECIFIC COMORBID CONDITIONS – ANXIETY DISORDERS

Many individuals with a principal diagnosis of OCD experience additional anxiety symptoms and disorders. The most common comorbid anxiety disorder using DSM-IV diagnostic criteria was social phobia (3.6%–41.4%), followed by specific phobia (0.95%–20.7%), panic disorder with or without agoraphobia (4%–11.5%), GAD (0.95%–12%), somatoform disorder (1%–3.8%),

and PTSD (0%–1.6%) (Antony et al., 1998; Brown, Campbell et al., 2001; Denys et al., 2004). Overall, evidence of symptom overlap and diagnostic co-occurrence of anxiety disorders with OCD suggests that these disorders are sufficiently related to indicate that they may share a common underlying diathesis such as negative affectivity or neuroticism (Brown, 1998). In some cases, trauma appears to have precipitated the OCD symptoms and is likely to require special attention during treatment (de Silva & Marks, 1999), although others found a low rate of trauma-related disorders occurring before (2.9%), or during the same year the OCD began (1.5%) (Grabe et al., 2008). In one study, no significant improvements in OCD and depression were found with patients with comorbid PTSD after a course of behavior therapy (Gershuny, Baer, Jenike, Minichiello, & Wilhelm, 2002). When GAD co-occurs with OCD, it appears to intensify specific OCD-related dysfunctional beliefs with patients experiencing more pathological responsibility and indecisiveness (Abramowitz & Foa, 1998), and these patients may be more likely to drop out of behavior treatment (Chambless & Steketee, 1999).

SPECIFIC COMORBID CONDITIONS – DISORDERS POSITED TO BE PART OF AN OCD SPECTRUM

As previously described, conditions proposed to be part of an OCD spectrum include somatoform disorders (i.e., body dysmorphic disorder [BDD], hypochondriasis), eating disorders (anorexia and bulimia), impulse control disorders (i.e., trichotillomania, kleptomania, pathological gambling), paraphilias and nonparaphilic sexual addictions, and movement disorders such as tics and Tourette's syndrome (Goldsmith, Shapira, Phillips, & McElroy, 1998; Hollander & Wong, 2000).

Similar to OCD, symptoms of BDD include recurrent persistent thoughts and compulsive behaviors (e.g., mirror checking; Wilhelm & Neziroglu, 2002). By contrast, the recurrent thoughts are exclusively appearance-related (Wilhelm & Neziroglu, 2002) and insight is often limited or absent (Eisen, Phillips, Coles, & Rasmussen, 2004). Comorbid BDD within samples of patients with OCD is high (12.9%–19%; Diniz et al., 2004; du Toit, van Kradenburg, Niehaus, & Stein, 2001; Phillips, Gunderson, Mallya, McElroy, & Carter, 1998; Stewart, Stack, & Wilhelm, 2008). OCD patients with comorbid BDD often exhibited greater psychopathology and functional impairment, and more frequently experienced comorbid mental disorders.

These patients experienced earlier onset OCD, had more severe depression, and higher comorbidity with bulimia, substance use disorders, bipolar II disorder, and social anxiety. These patients also reported lower quality of life than those without comorbid BDD (Didie et al., 2007; Frare, Perugi, Ruffolo, & Toni, 2007; Phillips et al., 2007; Stewart et al., 2008). OCD treatment response was found to be unaffected by the presence of BDD, however (Stewart et al., 2008).

Hypochondriasis is characterized by fears of having, or the idea that one has, a serious disease based on misinterpretation of bodily symptoms. Overlaps are evident in the contamination fears and checking and reassurance-seeking behaviors in individuals with hypochondriasis and OCD (Furer, Walker, & Stein, 2007). Prevalence rates of comorbid hypochondriasis range from 2.8%–7.1% (Denys et al., 2004; du Toit et al., 2001). When patients with OCD also exhibit excessive health concerns, they appear to have less insight into their obsessive fears than those without such concerns (Abramowitz, Brigidi, & Foa, 1999), thus potentially interfering with motivation and compliance in treatment.

Significant overlap in phenomenology has been found between eating disorders and OCD. However, the fears and worries of those with anorexia nervosa or bulimia nervosa are focused exclusively on body weight and image (Rothenberg, 1986). At times, the fears of weight gain may lead to compulsive behaviors centered on eating, cooking, and exercise that are similar to OCD rituals (Rothenberg, 1986). Comparisons between OCD and eating disorders suggest shared personality traits such as perfectionism and rigidity (Anderluh, Tchanturia, Rabe-Hesketh, & Treasure, 2003; Jiminez-Murcia et al., 2007), common neuropsychological impairments (Sherman et al., 2006), and similar levels of obsessional beliefs (Lavender, Shubert, De Silva, & Treasure, 2006). In a cross-sectional examination of 815 OCD patients, Sallet et al. (2010) found that comorbid eating disorders were not necessarily associated with greater OCD symptomatology, but suggested that this comorbidity was indicative of more severe general psychopathology (e.g., elevated levels of anxiety and depression, higher frequency of suicide attempts, higher prevalence of several Axis I disorders including impulse control disorders and BDD).

Unlike OCD, the fears in eating disorder patients are generally not ego-dystonic, but are in keeping with the person's belief system regarding the importance of shape and weight (Vitousek, 1996).

When OCD-related contamination fears lead to a reduction in food intake and significant weight loss, patients may be referred for the treatment of an eating disorder, but the psychopathology is that of OCD (Shafran, 2002). Although the similarities between eating disorders and OCD can complicate the symptom picture, they co-occur infrequently. Point prevalence comorbidity rates are relatively low (anorexia: 0.05%–2.4%, bulimia: 1%–3.5%, binge eating: 0%–4.5%) as are lifetime comorbidity rates (anorexia: 2.6%–9%, bulimia: 2.5%–10%, binge eating: 0%–7.9%) (du Toit et al., 2001; LaSalle et al., 2004; Sallet et al., 2010).

Impulse control disorders, including pathological gambling and trichotillomania, are problems that involve repetitious behavior that causes distress, harm, or interference (Radomsky, Bohné, & O'Connor, 2007). Unlike OCD, in which compulsions are usually designed to reduce anxiety or prevent unwanted or catastrophic events from occurring, the repeated behavior in impulse control disorders is commonly carried out to reduce feelings of tension or to generate certain soothing or pleasurable sensations (Radomsky et al., 2007). It is important to distinguish compulsive from impulsive behaviors, as the needed treatment intervention varies depending on this distinction (Radomsky et al., 2007). In particular, habit reversal training (Azrin & Peterson, 1988) is most effective when applied to symptoms of hair-pulling and skin picking, whereas exposure and response prevention (ERP) is most effective when treating symptoms of OCD (Radomsky et al., 2007).

In large OCD clinical samples, comorbidity with impulse control disorders was 16.4%–37% (lifetime), and 3.0%–35.5% for point prevalence (du Toit et al., 2001; Fontenelle, Mendlowicz, & Versiani, 2005; Grant, Mancebo, Pinto, Eisen, & Rasmussen, 2006; Richter, Summerfeldt, Antony, & Swinson, 2003). Ruscio et al. (2010) reported higher lifetime comorbidity with impulse control disorders in their analysis of the National Comorbidity Survey Replication data. In evaluations of OCD clinical samples, the most common lifetime comorbidity for impulse control problems was skin picking (8.9%–15.0%), followed by nail biting (4.1%), and trichotillomania (1.4%–12.9%). The most common concurrently diagnosed impulse control disorders included skin picking (7.8%–13.3%), nail biting (2.4%), trichotillomania (1.0%–7.1%), and pathological gambling (0.3%–2.2%). Individuals with OCD with concurrent impulse control disorders had an earlier age of OCD

onset, significantly worse OCD symptom severity, particularly compulsive symptoms, and poorer functioning and quality of life (Fontenelle et al., 2005; Grant et al., 2006). They were also more likely to show poorer treatment response than OCD patients without any history of impulse control disorder (Matsunaga et al., 2005).

Studies show that rates of comorbid Tourette's syndrome are relatively low (2.1%–2.4%) (Denys et al., 2004; du Toit et al., 2001). Yet, in studies of adults with Tourette's syndrome, approximately 30% to 40% experience obsessive compulsive symptoms (Leckman, 1993). During the typical course of Tourette's syndrome, tics appear earlier, and obsessive compulsive behaviors later, often overtaking the tics as the predominant presenting complaint (Bloch et al., 2006). In fact, earlier age of OCD onset (i.e., before 10 years of age) is associated with a significant increase in comorbid tic disorders (Janowitz et al., 2009). It is not uncommon for obsessive compulsive symptoms to persist into adulthood, whereas the tics have dissipated or disappeared (Bloch et al., 2006). Furthermore, tic-related OCD has been associated with higher frequencies of sensory phenomena preceding or accompanying compulsions (Leckman, Walker, Goodman, Pauls, & Cohen, 1994; Miguel et al., 2000). Few studies have tested the effects of CBT in OCD patients with comorbid tic disorder. However, in a recent uncontrolled trial of group CBT, significant improvement in OCD symptom severity was observed with adolescent patients, with and without tic-related OCD, suggesting that the presence of comorbid tic-disorders may not attenuate response to behavioral group treatment with adolescents (Himle, Fischer, van Etten, Janeck, & Hanna, 2003).

SPECIFIC COMORBID CONDITIONS – ALCOHOL AND OTHER SUBSTANCE USE DISORDER

Comorbidity between OCD and substance use disorders is important for several reasons. There is evidence that taking certain substances (e.g., cocaine or methamphetamine) may exacerbate OCD symptoms, while other substances (e.g., opiates) might alleviate OCD symptoms (Koizumi, 1985; Koran et al., 2005; Satel & McDougale, 1991), although little is known regarding the mechanisms involved. OCD patients with comorbid alcohol use disorders have reported that they use alcohol to reduce their obsessive compulsive symptoms (Gentil et al., 2009). Nevertheless, only a few studies have examined the comorbidity between OCD and substance

use problems. Studies have been undertaken with individuals receiving treatment for a substance use disorder (Eisen & Rasmussen, 1989; Fals-Stewart & Angarano, 1994; Riemann, McNally, & Cox, 1992), as well as with individuals receiving treatment for OCD (Denys et al., 2004; Diniz et al., 2004; Mancebo, Grant, Pinto, Eisen, & Rasmussen, 2009; Rasmussen & Eisen, 1998; Yaryura-Tobias et al., 2000).

Estimates made from the Epidemiological Catchment Area (ECA) data put lifetime OCD–alcohol use disorders at 24%, and lifetime OCD–other drug use disorders at 18% (Karno, Golding, Sorenson, & Burnam, 1988). OCD prevalence rates among individuals receiving treatment for a substance use disorder ranged from 6% to 12% (Eisen & Rasmussen, 1989; Riemann et al., 1992), two to six times higher than the prevalence in the general population. Lifetime rates of substance use disorder in individuals treated at OCD specialty clinics and in other psychiatric and mental health settings ranged from 10% to 27% (Diniz et al., 2004; Mancebo et al., 2009; Rasmussen & Eisen, 1998; Yaryura-Tobias et al., 2000).

Only recently have the characteristics of individuals with a primary diagnosis of OCD and comorbid substance use disorder been systematically examined in a large clinical samples (Gentil et al., 2009; Mancebo et al., 2009). Mancebo et al. found that 27% of their sample met lifetime criteria for an alcohol use disorder only (abuse or dependence), 11% met criteria for both an alcohol and a drug use disorder, and 3% met criteria for drug use disorder only. Nearly twice as many individuals met criteria for dependence than abuse. The most commonly abused substances were alcohol, cannabis, and cocaine. However, only 5% of the participants met current (past month) criteria for a substance use disorder. Gentil et al. (2009) reported that only 7.5% of the OCD patients in their sample presented with alcohol use disorders. Participants with comorbid substance use disorders and OCD presented with more severe OCD symptoms, poorer insight regarding their OCD symptoms, poorer quality of life, greater impairment in overall psychosocial functioning, and were more likely to report suicide attempts than those without substance use disorders (Mancebo et al., 2009). Gentil et al. (2009) found that OCD patients with comorbid alcohol use disorders were more likely to be men, to have received previous psychiatric treatment, had greater levels of hoarding symptoms, and higher rates of comorbid GAD, somatization disorders, and compulsive

sexual behavior. Comorbid borderline personality disorder was associated with increased risk of alcohol and/or drug use disorder for OCD patients, whereas early onset of OCD (defined as age 15 or younger) was associated with increased lifetime rates of alcohol use disorder only (Mancebo et al., 2009). Gentil et al. also found that more than 80% of their participants with comorbid alcohol use disorders experienced their first obsessive compulsive symptoms during childhood, and alcohol misuse began more often during early adulthood.

SPECIFIC COMORBID CONDITIONS – SCHIZOPHRENIA AND OTHER PSYCHOTIC DISORDERS

The co-occurrence of OCD in patients with schizophrenia and related disorders has been increasingly recognized, with 7.8% to 40% of patients with a primary schizophrenia diagnosis also meeting criteria for OCD (Eisen, Beer, Pato, Venditto, & Rasmussen, 1997; Poyurovsky et al., 2001; Poyurovsky & Koran, 2005; Tibbo, Kroetsch, Chue, & Warneke, 2000). However, only 1.7% to 4% of OCD patients were found to meet criteria for schizophrenia or other psychotic disorders such as schizoaffective disorder (de Haan, Dudek-Hodge, Verhoeven, & Denys, 2009; Denys et al., 2004; Eisen & Rasmussen, 1993). Thus, OCD patients do not appear to be at elevated risk for developing schizophrenia (Poyurovsky & Koran, 2005), whereas the reverse might be more likely. The reasons for the high incidence of OCD in patients with primary schizophrenia is not well understood, although the presence of obsessive compulsive symptomatology appears to be associated with higher global, positive, and negative psychotic symptoms (Cunill, Castells, & Simeon, 2009).

SPECIFIC COMORBID CONDITIONS – OBSESSIVE COMPULSIVE PERSONALITY DISORDER

Obsessive compulsive personality disorder (OCPD) is defined as “a preoccupation with orderliness, perfectionism, and mental and interpersonal control, at the expense of flexibility, openness, and efficiency” (APA; 2000, p. 725). Despite similarity in diagnostic labels, there is little evidence that OCPD is related to OCD. Although personality disorder comorbidity is common (50%–65%), the most common personality disorders with OCD are dependent and avoidant (Summerfeldt et al., 1998). Moreover, OCPD occurs in many people who never develop an Axis I disorder, and more frequently

co-occurs in psychiatric conditions other than OCD (Rasmussen & Eisen, 1992).

In summary, OCD most often occurs with other psychiatric disorders. Often, but not always, OCD onset will precede the development of the frequently seen comorbid anxiety and mood disorders. Given the negative effect comorbid disorders appear to have on symptom severity, treatment response, and the prognosis for OCD patients, clinicians must conduct careful evaluations of each patient to identify comorbid disorders and to make decisions about appropriate treatment. Ledley, Pai, and Franklin (2007) presented a detailed guide for diagnosing OCD and co-occurring anxiety disorders. Ledley and colleagues first called for careful assessment to determine if observed symptoms warrant an additional diagnosis (e.g., unexpected panic attacks, fear of future panic experiences, and a diagnosis of panic disorder), or whether symptoms can subsumed under the individual's OCD (e.g., panic attacks that occur only in response to a feared contaminant). When comorbid conditions do occur, pragmatic considerations will determine whether the condition must be treated first (e.g., severe agoraphobic avoidance interfering with leaving the home), as there has been very limited research on this issue. Ledley et al. suggested that most often OCD can be effectively treated when comorbid conditions are present, and often reductions in the symptoms of OCD will produce positive change in the coexisting anxiety disorders.

Widiger and Clark (2000) concluded in their review that the co-occurrence of mental disorders cannot be explained by either symptom overlap in the diagnostic criteria or specific methodological problems. Widiger and Clark contend that comorbidity patterns reflect underlying commonalities in core processes. Based on comorbidity data, and the important studies completed to date on the structure of emotion with mood and anxiety disorders (e.g., Brown, Chorpita, & Barlow, 1998; Zinbarg & Barlow, 1996), the greatest support exists for OCD's association with anxiety and mood disorders. Studies of the structure of emotion with anxiety disorder patients, as defined in the DSM-IV, offer some support for hierarchical models that address the comorbidity of anxiety and mood disorders and the association of both conditions to higher-order personality dimensions (e.g., negative affectivity; Watson, 2005). Broader evaluations of the structure of emotion and the applications of multivariate analyses are needed, with clinical samples with OCD diagnoses and spectrum

diagnoses, to better elucidate relations between these conditions.

Obsessive Compulsive Disorder Heterogeneity

Although commonalities seen in individuals with OCD (e.g., intrusive thoughts and repetitive behaviors) are emphasized in the current psychiatric disorder taxonomy (DSM-IV-TR), the heterogeneous presentation of patients meeting diagnostic criteria distinguishes the syndrome from most other conditions. OCD heterogeneity occurs across multiple dimensions including gender differences in age at onset, different patterns of comorbidity, and the significant variability seen in the obsessional symptoms and compulsive behaviors of patients. More recently, behavioral scientists have attempted to elucidate OCD heterogeneity by examining variability on measures of constructs and processes posited to be importantly related to the etiology of the disorder. This research is often conducted with carefully diagnosed clinical samples, and important differences have been found on several measures of processes posited to be important to the development of OCD (Calamari et al., 2006; Saxena et al., 2004; S. Taylor et al., 2006). We review OCD heterogeneity with the understanding that the issue is essential to elucidating the complex phenomenology of the disorder. Variability in the phenotypic expression of OCD obscures findings from treatment outcome studies, and makes more difficult the elucidation of etiologic processes, including the search for vulnerability genes (Miguel et al., 2005).

Comorbidity and Demographic Variables

Some researchers have focused on patterns of comorbid conditions (see the prior section in this chapter on OCD comorbidity) to elucidate disorder heterogeneity. For example, OCD co-occurring with tic disorders is often associated with symmetry concerns (e.g., Hemmings et al., 2004; Leckman et al., 1995), occurs more often in males (e.g., Geller et al., 1998), and in some studies has been associated with a diminished treatment response to some interventions (e.g., March et al., 2007). Although important relationships between comorbidity patterns and OCD severity and life interference have been reported, McKay et al. (2004), in their review of OCD heterogeneity, concluded that further work was needed on OCD subtyping schemes based on comorbidity patterns before the importance of this variable to understanding OCD heterogeneity could be determined. Nestadt et al. (2009) have more

recently used multilevel latent class analysis to determine if important OCD subtypes could be identified based on comorbidity. The presence of eight comorbid psychiatric disorders was evaluated, including anxiety, tic, mood, and somatization disorders. Nestadt et al. found support for a two- or three-class solution. The more descriptive three-class solution was characterized by a subgroup with OCD and major depressive disorder as the most frequent additional condition. A second latent class was characterized “comorbid tic-related conditions and infrequent mood disorders,” while the third subgroup often experienced comorbid panic disorder and mood difficulties. Significant gender and OCD symptom differences were found across subgroups.

Evaluation of differences seen in the age at onset of OCD has been a productive line of research. Although OCD was once understood to begin in early adulthood (see Antony et al., 1998, for a review), onset in very young children has been reported (cf. Freeman et al., 2007), and an early-onset variant of the disorder is now well recognized. Careful evaluations of the literature on older adults suggest that a late-onset subgroup might exist who experience OCD for the first time after age 65 (see Carmin et al., Chapter 24, for a review). Although the age-at-onset literature is limited by several methodological issues, including frequent dependence on retrospective self-report (cf. Henry, Moffitt, Caspi, Langley, & Silva, 1994), available evidence indicates that OCD onset is not limited to the early adult years. Initial studies of early-onset OCD suggest it might be an important disorder subtype.

Hanna, Fischer, Chadha, Himle, and Van Etten (2005) evaluated individuals with early- and later-onset OCD. They assessed lifetime OCD symptoms and measured several symptom classes including aberrant grooming behaviors, attention deficit hyperactivity disorder, tic disorders, depressive disorders, and other anxiety disorders. They found that ordering compulsions were significantly more common in early-onset OCD, as were aberrant grooming and skin-picking. Tükel et al. (2005) found more males in their early-onset group, as has been reported previously (e.g., Geller et al., 1998). Symmetry and exactness obsessions, religious obsessions, hoarding and saving obsessions, and hoarding and collecting compulsions were significantly more frequent in the early-onset group (Tükel et al., 2005). Hemmings et al. (2004) evaluated a large South African clinical sample. Early onset was associated with an increased frequency of tics, Tourette’s

disorder, and trichotillomania. To elucidate age-at-onset differences in OCD, Delorme et al. (2005) used admixture analysis, a method for identifying subgroups. Using this approach, they found evidence for two OCD subtypes, one group with a mean age at onset of 11.1 (4.1) years, and a second group with a mean age of 23.5 (11.1). The early-onset OCD group more frequently had comorbid Tourette's syndrome, and had an increased family history of OCD.

Ulloa, Nicolini, Avila, and Fernández-Guasti (2007) compared children with OCD to adults with late-onset OCD, on their response to a standardized treatment with clomipramine. The children's group had more males and more frequent comorbidities than the adult group. Although adults reported a higher frequency of medication side effects compared to children, adults had better treatment outcome. Differences between early- and late-onset OCD subgroups in response to pharmacotherapy have not always been found though (e.g., Uguz, Askin, Cilli, & Besiroglu, 2006), nor have differences sometimes been found in responsiveness to cognitive-behavioral therapies (e.g., March et al., 2007).

Eapen, Pauls, and Robertson (2006) suggested that although genetic factors are significant in predisposing individuals to OCD, not all forms of the disorder appear equally heritable, suggesting that additional explanations for this variability are needed. Differences in age at onset might be an important aspect of OCD heterogeneity for elucidating heritability. In several studies, the early-onset variant of the disorder was found more heritable (e.g., Nestadt et al., 2000; Pauls, Alsobrook, Goodman, Rasmussen, & Leckman, 1995). Chabane et al. (2005) investigated the characteristics of an early-onset OCD clinical sample that included children, adolescents, and adults, all of whom had early-onset OCD. The first-degree biological relatives of the early-onset proband were also evaluated. The average age of onset of OCD was 9.98 (3.2) years, and 44% of the probands had a comorbid tic disorder. First-degree relatives had higher rates of OCD and tic disorders; 32.6% of the probands had a positive family history of OCD. The authors concluded that their findings were consistent with other reports in the literature where elevated rates of OCD were reported in the relatives of individuals with early-onset OCD.

Symptom Heterogeneity

The most frequently used approach for studying OCD heterogeneity has been evaluations of

differences seen in obsessions and compulsions (Calamari, Wiegartz, & Janeck, 1999). The approach implicitly assumes that important differences (e.g., etiology, factors maintaining the disorder, response to treatment) underlie the substantial symptom heterogeneity that characterizes OCD. More recent work on OCD symptom heterogeneity suggests this assumption is correct, and there has been a burgeoning of research in this area.

Initial evaluations of OCD symptom heterogeneity focused on patients' major compulsive behavior (checkers versus washers; e.g., Hodgson & Rachman, 1977). Although the approach made significant contributions to understanding OCD, the strategy was limited by several factors (Calamari et al., 1999), including the tendency of patients to present with multiple types of symptoms (e.g., Hodgson & Rachman, 1977) of greater or lesser importance to their OCD. To evaluate these complex symptom patterns, researchers applied several types of multivariate statistics. Factor analysis has most often been used to identify the latent dimensions of several measures of OCD symptoms. Multiple research groups have used the Yale-Brown Obsessive-Compulsive Scale Symptom Checklist (YBOCS-CL; Goodman et al., 1989) to assess OCD symptoms, because this measure lists a broad range of OCD symptoms in 15 obsession and compulsion categories. The use of the YBOCS-CL for this purpose is limited by the largely unknown psychometric properties of the checklist portion of the Yale-Brown Obsessive-Compulsive Scale. Further, factor analysis of the checklist items suggests that specific items might not connect well to the 15 obsessions and compulsion categories (Feinstein, Fallon, Petkova, & Liebowitz, 2003; Summerfeldt, Richter, Antony, & Swinson, 1999).

Other researchers have used cluster analysis to elucidate OCD symptom heterogeneity (e.g., Abramowitz, Franklin, Schawartz, & Furr, 2003; Calamari et al., 1999; Calamari et al., 2004), a technique for forming homogeneous groups within complex data sets (e.g., Borgen & Barnett, 1987). Calamari et al. (2004) suggested that cluster analysis might offer advantages for evaluating OCD symptom heterogeneity. Cluster analysis results in the assignment of each participant to a single subgroup, while in factor analysis, variance is usually partitioned among several sources or factors. In factor analysis, each participant can be assigned a score on each of the identified factors, and these scores might not connect a participant to any of the identified latent dimensions (e.g., a participant

might have high or low scores on any combination of the identified latent dimensions). Further, when factor analysis suggests a complex latent structure involving multiple dimensions, evaluation of individuals' scores on these latent dimensions might reveal commonalities between individual profiles suggesting subtypes or clusters.

The superiority of the dimensional versus the categorical (i.e., cluster analysis) approach for understanding OCD symptom heterogeneity remains controversial (see reviews by Leckman, Mataix-Cols, & Rosario-Campos, 2005; and S. Taylor, 2005). Mataix-Cols, Rosario-Campos, and Leckman (2005) proposed a dimensional model of OCD to understand disorder heterogeneity. They argued that replicable symptom dimensions are identified in factor analytic studies, and that the identified symptom dimensions were associated with distinct patterns of comorbidity, genetic transmission, specific neural substrates, and differences in treatment response, validating the approach. Mataix-Cols et al. (2005) concluded that the complex clinical presentation of OCD could be summarized with a few consistently identified and temporally stable symptom dimensions. In a recent meta-analysis of factor analytic evaluations of OCD symptom measures, Bloch, Landeros-Weisenberger, Rosario, Pittenger, and Leckman (2008) concluded that there are four reliably identified dimensions: (1) symmetry—symmetry obsessions and repeating, ordering, and counting compulsions; (2) forbidden thoughts—aggression, sexual, religious, and somatic obsessions and checking compulsions; (3) cleaning—cleaning and contamination; and (4) hoarding—hoarding obsessions and compulsions.

Mataix-Cols et al.'s (2005) model is based on several assumptions that have empirical support in the OCD literature, namely: several types of OCD symptoms often coexist in patients; OCD symptoms are continuous with normal obsessive compulsive phenomena; and OCD symptoms extend beyond the traditional nosological boundaries of OCD. Although dimensional approaches to elucidating OCD symptom heterogeneity have advanced understanding, Calamari (2005) suggested that cluster analysis may offer several advantages over factor analysis in characterizing OCD heterogeneity, and that this categorical approach was not limited in some of the ways Mataix-Cols et al. (2005) suggested. McKay and Neziroglu (2009) critically reviewed methodological approaches for elucidating OCD heterogeneity broadly, and for distinguishing

condition subtypes and condition-related spectrum disorders. McKay and Neziroglu emphasized the importance of a theoretical framework for such studies and posited that no single methodology will be adequate.

Despite the controversies on what analytic approach is best, and the limitations of many of the symptom measures of OCD, symptom heterogeneity studies have resulted in the identification of several replicable dimensions or subgroups. McKay et al. (2004) concluded that contamination/washing, checking, hoarding, and symmetry/ordering emerged from the literature as reliable dimensions or subtypes, a conclusion congruent with Bloch et al. (2008). McKay et al. emphasized that symptom heterogeneity research was limited by the reliance on symptom measures (e.g., the YBOCS-CL) that limit the conceptualization of latent subtypes to largely overt symptoms (e.g., covert compulsions are not adequately assessed). Nevertheless, evaluations of symptom heterogeneity have advanced understanding of OCD. For example, a hoarding subtype of OCD has been reliably identified in symptom heterogeneity studies supporting contentions of the distinctiveness of patients with predominant hoarding difficulties. Researchers have developed comprehensive formulations of the hoarding problem (Frost & Hartl, 1996; Steketee & Frost, 2003) and modifications in treatment for this variant of OCD, developed based on new theories (e.g., Frost & Steketee, 1999; Kyrios, Steketee, Frost, & Oh, 2002). The results of initial evaluations of a model-based cognitive-behavioral therapy for hoarding are promising (Tolin, Frost, & Steketee, 2007), including an Internet-based intervention (Muroff, Steketee, Himle, & Frost, 2010).

OCD heterogeneity researchers have begun to focus on processes that may underlie symptom differences, and which may connect more directly to etiologic mechanisms. For example, Mataix-Cols et al. (2004) evaluated neuropathology differences across OCD symptom dimensions using functional magnetic resonance imaging. Study participants were scanned while viewing alternating blocks of concern-related and neutral pictures. Analyses of covariance, controlling for depression, showed a distinct pattern of activation associated with each symptom dimension in the OCD group. Using whole-brain voxel-based morphometry, van den Heuvel et al. (2009) reported relations between global and regional gray matter and white matter volumes and the symptom dimension scores of OCD patients.

Taylor et al. (2006) and Calamari et al. (2006) evaluated differences in dysfunctional beliefs—beliefs posited to help precipitate OCD in cognitive models. In these studies, two independent, large clinical samples were evaluated with the Obsessional Beliefs Questionnaire, a well-validated measure of OCD-related dysfunctional beliefs (OBQ; Obsessive-Compulsive Cognitions Working Group, 2005). Cluster analysis resulted in identification of two subgroups in both studies: an OCD patient group with elevated dysfunctional beliefs, and an OCD patient group with low dysfunctional beliefs (almost 50% of the clinical sample in both studies). The low-beliefs subgroups scored similarly to a non-clinical sample on the OBQ. The authors concluded that additional dysfunctional beliefs needed to be assessed to capture the concerns of most individuals with OCD, or that other etiologic processes might better explain the development of OCD in the low-beliefs subgroup.

These studies, along with many other evaluations of OCD heterogeneity, demonstrate the significant challenges that researchers face in trying to develop a comprehensive model of OCD as currently conceptualized. As OCD heterogeneity research moves forward, the empirical data needed to better understand OCD phenomenology will become more available, and psychopathologists will have more of the information needed to place this complex disorder in the taxonomy of mental disorders.

Insight Variability in Patients with Obsessive Compulsive Disorder

As described earlier, the specifier “with poor insight” was added to the psychiatric disorder taxonomy in 1994 (DSM-IV; APA, 1994), acknowledging the significant variability in OCD patients’ insight into the excessiveness of their obsessional concerns and compulsive behaviors. Although the importance of the variability seen in OCD patient insight is now acknowledged, the issue continues to provide significant challenges for researchers and clinicians. There is disagreement on what constitutes poor insight (Clark, 2004; Veale, 2007), and some maintain that many of the scales currently used to measure insight have not been shown to be reliable or valid for assessing obsessional patients (Clark, 2004; Neziroglu & Stevens, 2002). According to Veale (2007), it is difficult to assess levels of insight, as individuals with OCD can have a difficult time putting into words what the consequences of their action or inaction might be beyond “not quite right” feelings, or the experience of significant negative

affect. As he stated, it is “difficult to measure the awfulness of experiencing emotion on scales that measure the conviction of belief” (p. 269).

Despite the challenges and many unresolved issues, advances have been made in studying insight in OCD. Poor insight was associated with more severe symptoms as assessed with the Y-BOCS, elevated depression, and higher-state anxiety (Turksoy, Tükel, Özdemir, & Karali, 2002). Bellino (2005) found that patients with poor insight had higher scores on the Y-BOCS compulsions subscale, were more likely to have a chronic course of OCD, and OCD occurred more frequently in their first-degree relatives. Catapano et al. (2010) also found that poor insight was associated with an earlier age at onset, a higher rate of schizophrenia spectrum disorder in OCD patients’ first-degree relatives, and greater comorbidity with schizotypal personality disorder.

Interest in OCD patient insight has, in part, been motivated by the construct’s relationship to treatment response. For example, Foa, Abramowitz, Franklin, and Kozak (1999) found that having poor insight was associated with a diminished treatment response to exposure and response prevention (ERP), although study participants with poor insight did improve significantly. The authors theorized that individuals with poor insight have a more difficult time incorporating new information that is inconsistent with their fixed beliefs (Foa et al., 1999). In several other treatment outcome studies, insight changed (increased) during treatment and was associated with symptom reduction (Alonso et al., 2008; see Clark, 2004, for a review; Eisen et al., 2001). Clark (2004) posited that didactic and experiential elements of cognitive-behavioral therapy for OCD were critical for improving insight and reducing symptom severity. As patients are taught about the nature of negative intrusive thoughts, the appraisal processes they use to understand the experience, and the dysfunctional beliefs they hold, this information will help them begin to challenge their overvalued ideas (Neziroglu & Stevens, 2002). Unfortunately, the very patients that most need treatment will avoid it because poor insight is associated with failure to seek treatment for OCD (Veale, 2007).

Some theorists believe that the insight of most OCD patients is highly variable, and that this occurs independent of involvement in treatment. Clark (2004) maintained that insight in OCD is situationally bound, and that “[f]or most individuals, strength of belief may be unstable and vary across

time and situations” (p. 35). That is, the level of insight is seen to fluctuate across the continuum from total awareness to complete denial or delusion. Neziroglu and colleagues believe otherwise. Neziroglu and Stevens (2002) theorized that poor insight is associated with pathological thought processes that lead to overvalued ideas. These overvalued ideas, in turn, “do not fluctuate spontaneously but are fixed and possibly modifiable only if challenged” (p. 186). Neziroglu and Stevens hypothesized that the stability of overvalued ideas in OCD is supported by disorder-related mood change, which helps support specific dysfunctional beliefs, belief domains outlined by the Obsessive Compulsive Cognitions Working Group (OCCWG, 1997; 2001). This process serves to reinforce the overvalued ideas. Neziroglu and Stevens (2002) identified additional factors that affected the stability of patient insight. These factors included limited cognitive abilities, poor memory, affect regulation difficulty, and attentional biases. In addition, they theorized that different levels of insight exist and are relatively stable, and these differences have been associated with particular patterns of scores on clinical assessment instruments, such as the Minnesota Multiphasic Personality Inventory-2 (MMPI-2). Specifically, low scores on scales 5 and 9 on the MMPI-2 “Correlate roughly with intellectual insight” (Neziroglu & Stevens, 2002, p. 189). This “intellectual” level of insight indicates that the individuals understand that their maladaptive behavior is due to their own thoughts, feelings, or behaviors, but do not take steps to alter them nonetheless.

When OCD patient insight into the excessiveness of their concerns has been completely lacking, their overvalued ideas have sometimes been considered delusional. In the DSM-IV, delusion is defined as “erroneous beliefs that usually involve a misinterpretation of perceptions or experiences” (p. 299), and the difficulty of distinguishing delusion from overvalued ideas is acknowledged. As indicated in the DSM-IV, “the distinction between a delusion and a strongly held idea is sometimes difficult to make and depends in part on the degree of conviction with which the belief is held despite clear contradictory evidence regarding its veracity” (APA, 1994, p. 299). Some researchers have tried to better distinguish delusions from overvalued ideas rather than arguing insight is largely continuous. Some theorists hypothesize that the individual who has overvalued ideas is distressed or upset with the repeated performance of a behavior in response to an obsession, whereas the individual who has

delusions is not (Insel & Akiskal, 1986; Kozak & Foa, 1994). Some theorists have suggested that insight is related to symptom severity, and this contention has been supported (Bellino, 2005). OCD patients with severe symptoms might lose their insight and, in turn, abandon their attempts to resist their obsession (Insel & Akiskal, 1986). There is some evidence that patients with a single obsessional theme are more likely to experience delusional levels of obsessive beliefs (Fear, Sharp, & Healy, 2000). See O’Dwyer and Marks (2000) for an extended review of delusional OCD.

Clinical and Nonclinical Obsessions and Compulsions

In this section of the chapter, we examine similarities and differences between clinical and nonclinical obsessions and compulsions. Clark (2004), in his review of nonclinical obsessions, summarized the importance of this line of research. As researchers have attempted to determine whether obsessional disorders are continuous with the ubiquitous experience of negative intrusive thoughts, several processes that might be responsible for transforming a common experience into OCD have been identified. Decades of experimental research make clear that the study of intrusive cognition in nonclinical and clinical samples provides important information relevant to the development of OCD. Although there are important similarities between nonclinical and clinical obsessions and compulsions, there are also important differences. Identification of the overlapping features and core differences between nonclinical and clinical obsessions and compulsions has advanced etiologic theory and treatment, and further elucidation of these differences will increase understanding of OCD phenomenology. Investigations of the different reactions of clinical and nonclinical groups to intrusive cognitions have proved important, and several specific aspects of the appraisal process have been identified that connect intrusive thoughts to obsessional problems. These appraisal differences are related to the initiation of effortful mental control, efforts that are largely counterproductive. We summarize recent studies on these processes and direct the interested reader to several excellent reviews (see Clark, 2004; Clark & O’Connor, 2005; Clark & Rhyno, 2005; Julien, O’Connor, & Aardema, 2007).

Clark and Rhyno (2005) defined clinically relevant intrusive thoughts as “any distinct, identifiable cognitive event that is unwanted, unintended, and recurrent. It interrupts the flow of thoughts,

interferes in task performance, is associated with negative affect, and is difficult to control” (p. 4). The experience is attributed to an internal origin, is considered unacceptable or unwanted, is repetitive, captures attentional resources, and detracts the individual from ongoing activity (Clark & Rhyno, 2005). It is important in this line of research to distinguish clinically relevant intrusive thoughts from other cognitive processes that are more associated with different forms of psychopathology (e.g., worry; rumination). As Clark and colleagues summarized (Clark, 2004; Clark & Rhyno, 2005), experimental research completed following Rachman and De Silva’s (1978) seminal study on clinical and nonclinical obsessions has largely replicated their initial finding that intrusive thought experiences are common. The majority of nonclinical samples (80%–90%) have reported experiencing obsession-like intrusive thoughts in these studies. Evaluations of the content of nonclinical and clinical obsessions suggest important similarities. Indeed, mental health experts experienced difficulty differentiating nonclinical from clinical obsessions in Rachman and DeSilva’s seminal study.

In recent reviews, and in several new studies of nonclinical obsessions, potentially important differences between clinical and nonclinical obsessions have been reported. The negative intrusive thoughts of nonclinical samples occur less frequently, cause less distress, and are perceived as more controllable (see Clark & O’Connor’s, 2005 review). Rassin and Muris (2006) reanalyzed Rachman and DeSilva’s (1978) data and found that mental health professionals were able to differentiate clinical and nonclinical obsessions beyond chance levels, although not with complete accuracy. In follow-up studies, Rassin and Muris presented nonclinical and clinical obsessions to psychotherapists and psychology students, and both groups were able to distinguish clinical and nonclinical obsessions beyond a chance level. The authors suggested that additional research was needed to identify the content and other characteristics of clinical obsessions that made them recognizable.

Rassin, Cougle, and Muris (2007) presented a student sample with a list of obsessions from clinical and nonclinical groups. Participants reported whether they had ever experienced the particular obsessions listed. Students endorsed significantly more normal than abnormal obsessions. Correlations between the number of endorsed normal and abnormal obsessions and scoring on the short version (van Oppen, Hoekstra, & Emmelkamp, 1995) of

the Padua Inventory (PI; Sanvio, 1988) revealed that both kinds of obsessions were significantly related to PI score, (nonclinical obsessions, $r = 0.36$; clinical obsessions, $r = 0.41$). The authors reported that when analyses controlled for the experience of abnormal obsessions, the correlation between normal obsessions and the PI score disappeared.

Morillo, Belloch, and García-Soriano (2007) evaluated the frequency, content, emotional impact, appraisals, and control strategies used when obsessions, or clinically relevant intrusive thoughts, were experienced by OCD patients, depressed patients, non-obsessive anxious patients, and nonclinical controls. As predicted, the main obsession in the OCD group occurred more frequently than the most upsetting clinically relevant intrusive thoughts reported by the other groups, while the depressed and anxious control groups scored significantly higher than the nonclinical group. The OCD group experienced their main intrusive thought as more unpleasant than the other groups. The OCD and clinically depressed groups did not differ on ratings of related guilt experiences, though. Further, significant differences were found on how often specific thought control strategies were used. The OCD patients used overt neutralizing, reasoning with self, seeking reassurance, suppression, saying a prayer, and reassuring self more often than other groups. In an earlier investigation, Muris, Merckelbach, and Clavan (1997) evaluated the ritualistic behavior of a nonclinical sample. The authors reported that while their rituals were less frequent and less intense than the compulsions of a clinical OCD sample, few content differences were found, suggesting that abnormal and normal compulsions might lie on a continuum.

In an investigation of the appraisal of intrusive thought experiences, Corcoran and Woody (2008) evaluated university students’ appraisals of the occurrence of unwanted, clinically relevant intrusive thoughts. Participants considered intrusion-related vignettes and rated how personally significant the intrusions were. Appraisals of the vignettes were moderately correlated with OCD symptoms, and associated with the tendency to interpret unwanted intrusive thoughts as socially unacceptable, as an indication of mental instability, or as immoral. Because the study was carefully designed to make the intrusions obsession-like (i.e., not ego-syntonic worries about life problems), the results point to the importance of appraisal processes for obsessional disorders.

Research on nonclinical obsessions has provided important information that has encouraged the

development of etiologic theories of OCD and refinements in the treatment of the disorder. Several conclusions can be drawn from these studies. The experience of intrusive thoughts is ubiquitous, although careful evaluations of the most clinically relevant intrusive thought themes suggest that the experience might not be as common as once thought. Nonclinical populations experience intrusive thoughts that are similar to obsessions, but intrusions with ego-dystonic content highly similar to the obsessional themes of OCD patients occur much less often in nonclinical samples (Julien et al., 2007). Researchers continue to demonstrate important relations between specific appraisals of intrusive thoughts and effortful mental control strategies and OCD symptoms. Longitudinal studies are needed, possibly with high-risk populations (e.g., children of parents with more heritable types of OCD) to determine if appraisals and mental control efforts are important to the development of obsessional disorders, or are a consequence of developing OCD. Although much has been accomplished in studies of nonclinical obsessions and compulsions, additional work is needed to explain how intrusive thoughts evolve into obsessional disorders for only a small percentage of the population.

Epidemiology of Obsessive Compulsive Disorder

Prevalence of OCD

In epidemiological research, *disorder prevalence* is understood to be the number of all individuals in a population who are affected by a disorder or illness within a specified period. *Lifetime prevalence* refers to the number of individuals who have met criteria for a diagnosis at any point during their life up to the time of assessment. *Period prevalence* rates may also be reported as the percentage of individuals who met criteria for the disorder during a specified period (e.g., the 12 months prior to assessment). These estimates are often reported as a percentage or a ratio between those affected with the disorder in question and the total number of individuals studied. Lastly, *point prevalence* is a measure of the percentage of people in a population who have a disorder at a particular time point, while *incidence* refers to new cases over a specified period (cf. Davison & Neale, 1994).

Before the 1980s, OCD was considered to occur infrequently, “apparently rare in the general population” (DSM-III; APA, 1980, p. 234). Underestimates of the prevalence of OCD resulted in part from the few attempts to estimate prevalence. As summarized

by both Karno, Golding, Sorenson, and Burnam (1988) and Antony, Downie, and Swinson (1998), the few studies that were conducted on the epidemiology of OCD estimated the lifetime prevalence rate to range from a mere 0.05% (Rudin, 1953) to 0.3% (Roth & Luton, 1942). These early studies typically relied on unstandardized clinical observation to determine diagnosis, rather than systematic structured interviewing methods.

Contemporary epidemiologic studies of OCD have used improved methodologies, and prevalence estimates of the disorder have been significantly higher. The World Mental Health (WMH) Survey Initiative conducted the National Comorbidity Survey Replication, a nationally representative survey of adults in the United States (Kessler, Chiu, Demler, Merikangas & Walters, 2005). Ruscio et al. (2010) evaluated the epidemiology of OCD in subsample of 2073 respondents of the National Comorbidity Survey Replication study. The lifetime prevalence of OCD was determined using the Composite International Diagnostic Instrument (CIDI; Robins, Wing, Wittchen, & Helzer, 1988), and a structured version of the Yale–Brown Obsessive Compulsive Scale (Y-BOCS) was used to assess the severity of OCD. Ruscio et al. (2010) found that more than 25% of respondents reported experiencing obsessions or compulsions at some time in their lives, although a relatively small proportion of respondents met full DSM-IV criteria, lifetime (2.3%) or within the 12-month period prior to assessment (1.2%).

Ruscio et al.’s (2010) results were, in general, congruent with earlier reports. The earlier ECA study (Karno et al., 1988) was carried out in five communities in the United States between 1980 and 1984. Face-to-face interviews were conducted in randomly selected households using the Diagnostic Interview Schedule (DIS; Robins, Helzer, Croughan, & Ratcliff, 1981). The lifetime prevalence of OCD was 2.5, a rate 40 to 60 times greater than previously reported (Karno et al., 1988). The 2-week, 1-month, 6-month, and 1-year prevalence rates were 1.2%, 1.3%, 1.5%, and 1.6%, respectively.

Although the ECA study represented a significant advance in epidemiological research, there were several methodological limitations. The DIS was highly structured so it could be used by lay interviewers. The lack of open-ended questions for probing suspected obsessions and compulsions on the DIS might have resulted in an incomplete evaluation of the significance of reported symptoms

(Karno et al., 1988). Follow-up evaluations of the ECA study participants that were conducted by psychiatrists using semistructured interviews found significantly lower rates of OCD diagnoses than were originally reported by the ECA research teams (Anthony et al., 1985; Helzer et al., 1985).

Following the publication of the ECA study results, similar epidemiological surveys were conducted in Edmonton, Alberta, Canada; Puerto Rico; Munich, Germany; Taipei, Taiwan; urban Seoul, rural regions of Korea; and Christchurch, New Zealand. The Cross National Collaborative Group (Horwath & Weissman, 2000; Weissman et al., 1994) compiled the multisite data and found generally consistent lifetime prevalence rates cross-nationally that ranged from 1.9% in Korea to 2.5% in Puerto Rico. Only a 0.4% prevalence rate was reported in Taiwan. Bebbington (1998) reported congruent prevalence estimates (1% in males and 1.5% in females) in the National Psychiatric Morbidity Surveys of Great Britain.

The use of the CIDI (Robins et al., 1988) in recent epidemiologic studies is an important methodological improvement, although some problems remain. The CIDI combines the diagnostic criteria of both the DSM-IV (APA, 1994) and the tenth edition of the International Classification of Diseases (ICD-10; World Health Organization, 1992). Like the DIS, the CIDI is designed to be administered by lay personnel. Studies using the CIDI reported highly variable estimates of the 1-month prevalence of OCD, ranging from as low as 0.3% (Andrade, Walters, Gentil, & Laurenti, 2002) to as high as 3.1% (M. Stein, Forde, Anderson, & Walker, 1997). Fontenelle, Mendlowicz, and Versiani (2006) suggested this variability could be due to several factors, including the brief time frame, the training of the assessors, and the setting in which the evaluation was conducted. Again, use of lay interviewers may have resulted in inflation of prevalence estimates. When Stein et al.'s (1997) participants were reassessed by mental health professionals and diagnoses were made using the Structured Clinical Interview for the DSM-IV Axis I Disorders (SCID; First, Spitzer, Gibbon, & Williams, 1996), the prevalence rate dropped to 0.6%. Among the primary problems with the false positive diagnoses was the tendency for the lay interviewers to label everyday worries and concerns as "obsessions" (M. Stein et al., 1997).

Another challenge for OCD epidemiology research has been the changing diagnostic criteria for the disorder. Although the fifth edition of the

DSM-V is currently in preparation, most of the large epidemiologic surveys of prevalence rates relied on the diagnostic criteria of the third edition of the DSM (APA, 1980). Crino, Slade, and Andrews (2005) recently compared prevalence rates of OCD based on the DSM-III versus the DSM-IV. As previously reviewed in this chapter, the newer edition of the DSM defines more explicitly the nature of both clinical obsessions and compulsions, and better quantifies the levels of distress and impairment that must be experienced in order to meet the diagnostic criteria. Using the more descriptive and stringent criteria for OCD in the DSM-IV, Crino et al. (2005) found the 12-month prevalence rate was 0.6%, significantly less than estimates using DSM-III criteria. Nevertheless, Ruscio et al. (2010) reported much higher lifetime (2.3%) or 12-month rates (1.2%) using DSM-IV criteria.

Although the improved diagnostic criteria of the DSM-IV promotes a clearer distinction between clinical and nonclinical obsessions and compulsions, the emphasis placed on the description of symptomatology rather than the functional relations between thoughts and behaviors (cf. Abramowitz & Deacon, 2005) might be problematic for accurately estimating prevalence. Because the functional relationship between negative intrusive thoughts and rituals designed to neutralize distress is not well articulated in the DSM-IV criteria, less frequently observed obsession or compulsion symptoms might go unrecognized (see the prior section in this chapter on OCD symptom heterogeneity).

Age at Onset, Gender, and Ethnicity

WHEN DOES OCD BEGIN?

The typical age of onset for OCD was believed to be late adolescence into early adulthood (Rachman & Hodgson, 1980; see the earlier discussion on age at onset and OCD heterogeneity in this chapter). The majority of individuals with OCD have reported symptom onset prior to age 25, with an increase in incidence during puberty in some studies (Rasmussen & Eisen, 1992). In recent studies, an early-onset variant of OCD has regularly been identified.

As with adults, the earliest estimates of the prevalence of childhood and adolescent OCD indicated that the disorder was rare. As summarized by Swedo, Leonard, Rapoport, Lenane, and Cheslow (1989), as few as six cases in 3000 children admitted to a psychiatric hospital were believed to have OCD (Berman, 1942). Evaluation of a nonreferred sample in England failed to identify any cases in a sample of

2000 children (Rutter, Tizard, & Whitmore, 1970). Judd (1965) identified five children who met criteria for an “obsessive compulsive reaction” within a pool of 405 children, a prevalence rate more congruent with contemporary estimates. Flament et al. (1988) reported a point prevalence of 1.0% and a lifetime prevalence of 1.9%, indicating that OCD in children and adolescence is not rare. Since Flament et al.’s study, several investigations in the United States (Lewinsohn, Hops, Roberts, Seeley, & Andrews, 1993; Reinherz, Giaconia, Lefkowitz, & Pakiz, 1993; Valleni-Basile, Garrison, Jackson, & Waller, 1994), in New Zealand (Douglass, Moffitt, Dar, & McGee, 1995), and in Israel (Apter, Fallon, King, & Ratzoni, 1996; Zohar, Ratzoni, Pauls, & Apter, 1992) have reported lifetime prevalence rates that vary between 0.53% and 2.95% in children and adolescent samples. Rapoport et al. (2000) suggested some of the variability might be due to differences in methodology (e.g., whether a parent or child’s report is used to determine the diagnosis; mean age of the sample studied).

Rapoport et al. (2000) analyzed data from the National Institute of Mental Health Methods for the Epidemiology of Child and Adolescent Mental Health study (Lahey et al., 1996) to investigate congruence between parent and child reports of symptoms. They found that when parent and child reports of OCD symptoms leading to a diagnosis were compared, agreement was found for only one case out of a total of 35. Little correspondence was found between child and parent symptom reports and the child’s actual diagnostic status. The study included 1,285 pairs of youth and their caregivers from four different areas of the United States. This finding supports Rapoport et al.’s (2000) assertion that children and adolescents are frequently secretive about their OCD symptoms, and parents are uninformed as to what OCD symptoms may look like. These findings suggest that estimates of child and adolescent OCD might be too low if estimates are dependent on parent or child reports.

OCD in late life has been under-studied (see Chapter 24). Perhaps the dearth of literature regarding the occurrence of OCD among older adults is the result of reports where only 15 percent of OCD clinical samples reported that their symptoms began after age 35 (Rasmussen & Tsuang, 1986), results congruent with recent epidemiologic studies (Ruscio et al., 2010). However, anxiety symptomatology might frequently be underestimated with adults aged 65 and older as good assessment tools normed for this age group are lacking (Fuentes &

Cox, 1997). Anxiety disorders in older adults have historically garnered less attention than depressive disorders, despite findings that anxiety disorders are four to eight times more common in this population than depressive disorders (Regier, Boyd, Burke, & Rae, 1988; Weissman et al., 1994; see Carmin et al. in the present volume for an extended discussion of late-life OCD).

GENDER DIFFERENCES

In their review, Lochner and Stein (2001) reported that in clinical samples of OCD (e.g., Rasmussen & Eisen, 1992), equal gender ratios of the disorder are found, while in epidemiological investigations, slightly higher rates of OCD among women were reported (e.g., Karno et al., 1988; Weissman et al., 1994). Interestingly, (Karno et al., 1988) reported sex differences were no longer statistically significant after controlling for the impact of other demographic variables such as employment status in the ECA study.

A number of studies have reported that there are specific types of symptoms that differentially affect men and women (e.g., Castle, Deale, & Marks, 1995; Lensi et al., 1996). For example, women were more likely to present with aggressive obsessions and more cleaning compulsions, while men reported a greater incidence of sexual obsessions and obsessions related to symmetry and exactness (Lensi et al., 1996). As suggested by Lensi and colleagues (1996), these gender differences may indicate that sociocultural factors can influence the expression of OCD symptoms.

RACE AND ETHNICITY

As noted in a later section of this chapter, cross-national epidemiological studies suggest consistent rates of OCD internationally. In the United States, the prevalence of OCD was equivalent among Hispanics and those of European descent, with significantly lower prevalence rates found among African Americans (Karno et al., 1988). Friedman et al. (2003) found that African Americans and Caribbean Americans with OCD were more likely than Caucasians to be misdiagnosed at first with panic disorder. Friedman, Hatch, Paradis, Popkin, and Shalita (1993) suggested that African Americans might be more likely to present to general medical providers rather than to mental health specialists, and that this difference might explain the reported lower prevalence rates. Friedman et al. (1993) found a high rate of OCD in a group of African Americans presenting to a dermatologist. Neighbors (1988)

suggested that African Americans typically consult those within their social network, such as friends, family members, and clergy, during times of emotional distress. For several reasons, it seems, few African Americans present to mental health centers for treatment in general, or for the treatment of OCD.

Longitudinal Course of OCD

LONGITUDINAL COURSE IN CLINICAL SAMPLES

In their review of studies examining the natural course of OCD, Eisen and Steketee (1998) evaluated studies that used both prospective methods and retrospective design. Consistent conclusions emerged from their analyses. If OCD is left untreated, individuals will continue to meet full criteria for the disorder or experience significant symptoms for long periods. They concluded that the empirical literature suggested some waxing and waning of OCD symptoms over time, but complete remission was relatively rare. In a retrospective evaluation of 44 patients, Rasmussen and Tsuang (1986) identified three potential courses for OCD. The majority of patients (84%) presented with a continuous course of OCD, while only 14% presented with a deteriorating course. In this sample of previously untreated patients, a mere 2% presented with an episodic course of OCD.

In the longest longitudinal study to date, Skoog and Skoog (1999) followed 144 patients with OCD over approximately 40 years. These inpatients were evaluated between 1954 and 1956, and then again between 1989 and 1993 by the same psychiatrist. The authors reported that while 83% of their sample demonstrated improvement in OCD symptomatology, only 20% showed complete recovery. Almost half of the sample (48%) continued to have clinically significant symptoms of OCD. Over time, only 12% of their sample exhibited the same symptom (i.e., the same obsessional concerns and compulsions). However, in more recent analyses of symptom stability, obsessional concerns or compulsions were observed to be stable within the same symptom dimension or cluster (e.g., Mataix-Cols et al., 2002; see discussion below), symptom groupings that have emerged from OCD heterogeneity research.

Skoog and Skoog's (1999) findings on low rates of full remission in OCD patients who did not receive extensive treatment were replicated in another prospective study of OCD. Steketee, Eisen, Dyck, Warshaw, and Rasmussen (1999) found that out of 100 patients with OCD, only 20%

demonstrated full remission of symptoms at a follow-up assessment five years later. Marital status and global severity scores were the only significant predictors of outcome. Individuals with OCD who were married, or who had lower initial GAF scores, were more likely to show improvement (Steketee et al., 1999). In a similar prospective study of untreated OCD, Ravissa, Maina, and Bogetta (1997) compared patients with a chronic course of OCD versus those with an episodic course over a 1-year period. A chronic course was associated with earlier onset, male gender, longer duration of symptoms, a family history of psychiatric illness, and more severe compulsions.

SYMPTOM STABILITY

As previously reviewed in this chapter, the symptoms of OCD are heterogeneous, and grouping individuals based on symptom subtypes, or grouping symptoms into dimensions based on how symptoms co-vary, has proved useful. In Skoog and Skoog's (1999) longitudinal study, the majority of their patient sample experienced qualitative changes in their OCD symptomatology. However, Mataix-Cols and colleagues (2002) recently evaluated symptom stability using a prospective design, and found that although symptom severity within one dimension did vary, individuals' symptoms rarely shifted to a completely different symptom dimension. Rufer, Grothusen, Maszling, Peter, and Hand (2005) also reported that significant shifts between symptom dimension types were rare.

Besiroglu, Uguz, Ozbebit, Guler, Cilli, and Aksin (2007) evaluated changes in symptom profile over time by dividing participants into one of three OCD subtypes based on Lee and Kwon's (2003) subtyping work: those with autogenous obsessions, those with reactive obsessions, and those with mixed obsessions. Autogenous obsessions come into consciousness abruptly without an identified stimulus, while reactive obsessions are provoked by environmental stimuli. The authors found that while individuals may experience changes in specific OCD symptoms, none of the participants shifted between autogenous and reactive obsession subtypes.

LIFE STRESSORS AND THE DEVELOPMENT AND COURSE OF OCD

While the etiology of OCD is not known, researchers frequently report a link between onset and significant life stressors. In an early study of case histories, Pollitt (1960) reported that 62% of patients with OCD believed that the onset of their

symptoms was associated with a specific stressor. More recent investigations have corroborated this early observation. Studies of individuals who have experienced a traumatic event reveal that comorbid OCD can occur in addition to post-traumatic stress disorder (e.g., de Silva & Marks, 1999). In an evaluation of children with OCD, significantly more stressful life events occurred the year prior to the onset of symptoms than was reported by healthy controls (Gothelf, Aharonovsky, & Horesh, 2004). In one of the most comprehensive investigations to date, Cromer, Schmidt, and Murphy (2007) assessed 265 individuals with OCD to determine if traumatic life events were related to OCD symptom severity. They found a significant positive relationship, even after controlling for other factors such as symptoms of depression and other comorbidities (Cromer et al., 2007). Moreover, traumatic life events were most strongly correlated with the OCD symptoms dimensions of “obsessions/checking” and “symmetry/ordering” (Cromer et al., 2007).

Functional Impairment

OCD is the 10th leading cause of disability in the industrialized world (Murray & Lopez, 1996). In the British National Psychiatric Morbidity Survey of 2000, individuals with OCD were significantly more likely than those with other anxiety disorders to be unemployed, unmarried, have a lower income, and lower socioeconomic status (A. Torres et al., 2006).

It was once thought that individuals with OCD had higher intelligence levels and attained better levels of education than average (e.g., Black, 1974; Kringlen, 1965). More recent investigations indicate that this is not the case. No significant differences were found on intelligence tests in several studies (Coryell, 1981; Rasmussen & Eisen, 1992). Similarly, although there are reports that individuals with OCD are more likely to drop out of college (Henderson & Pollard, 1988), more recent surveys find that educational attainment among those with OCD is similar to individuals with other psychiatric disorders, and even nonclinical comparison groups (Karno et al., 1988; Kringlen, Torgersen, & Cramer, 2001).

A survey of members of the Obsessive Compulsive Foundation found that 41% of respondents indicated that they could not work because of their symptoms and had lost, on average, two years of wages (Hollander, Kwon, Stein, & Broatch, 1996). Similarly, approximately one-third of a large OCD clinical sample reported that they were unable to

work due to the disorder (Eisen et al., 2006). At this time, it is unclear whether the poor occupational functioning seen in OCD is worse than the dysfunction seen in other psychiatric disorders. Both higher rates of unemployment and lower income levels have been reported for OCD patients in several studies (Henderson & Pollard, 1988; Steketee, Grayson, & Foa, 1987; A. R. Torres et al., 2006), while others have found that employment status and income level was no worse than what is seen with other anxiety disorders (Antony et al., 1998; Karno et al., 1988). Huppert, Simpson, Nissenson, Liebowitz and Foa (2009) reported that OCD was associated with significantly decreased quality of life and increased functional impairment compared to healthy controls in areas of work, social life, and family life. Individuals with OCD and other comorbid psychiatric diagnoses, particularly comorbid depression, exhibited the lowest quality of life and functioning.

Grabe et al. (2000) found statistically significant differences in unemployment rates between individuals with a diagnosis of OCD and those with subclinical OCD symptoms. Interestingly, Eisen et al. (2006) found that overall quality of life was most negatively impacted by the severity of obsessions, but not compulsions. In contrast, Stengler-Wenzke and colleagues (Stengler-Wenzke, Kroll, Matschinger, & Angermeyer, 2006) reported that compulsion severity reduced patients' quality of life in the specific areas of physical well-being, psychological well-being, and environment. In line with Eisen and colleagues' findings regarding the specific impact of obsessions, Abbey, Clopton, and Humphreys (2007) reported that the severity of obsessions in particular was negatively correlated with intimacy, relationship satisfaction, and self-disclosure. Overall, rates of marital dysfunction, including separation and divorce, are high among individuals with OCD (Coryell, 1981; Emmelkamp & Gerlsma, 1994; Karno et al., 1988; Rasmussen & Eisen, 1992). Additionally, rates of late marriage and nonmarriage are higher among individuals with OCD than the U.S. population average (Steketee, 1997).

Almost two-thirds of relatives of individuals with OCD report some type of life disruption due to OCD, including family problems, deterioration or loss of relationships, and financial problems (Cooper, 1996). The causes of these familial disruptions are diverse. Relatives report distress due to both extensive participation in rituals or accommodations made for the patients' rituals (Rachman &

Hodgson, 1980). Families who refused to participate in rituals were also distressed (Amir, Freshman, & Foa, 2000). Involvement in caregiving was associated with lower quality of life among family members (Stengler-Wenzke et al., 2006). For a more complete discussion of the special issues related to family and social functioning in relation to OCD, see Chapter 9 of this volume.

HEALTH CARE UTILIZATION

Individuals affected by OCD delay seeking treatment from anywhere between 2 and 7 years following symptom onset (Eisen et al., 2006; Rasmussen & Tsuang, 1986). Investigations of both adults and adolescents demonstrate that 35% or less of those with OCD have received specialized mental health treatment (Shapiro, Skinner, & Kessler, 1984; Whitaker, Johnson, & Shaffer, 1990). In a systematic investigation of the factors that may predict help-seeking behavior, Goodwin, Koenen, Hellman, Guardino, and Struening (2002) found that gender, age, and race were all strong predictors of health-seeking behaviors. That is, older, Caucasian females were most likely to seek help. Comorbidity with panic disorder was also a strong predictor of help-seeking behavior. Finally, Goodwin and colleagues (2002) reported that lack of knowledge regarding the availability of treatment was a more robust barrier to seeking help than lack of funds or insurance coverage.

ASSOCIATION WITH SUICIDE

OCD's association with suicidal behavior is not well understood. Among the anxiety disorders, suicide in panic disorder has been better evaluated (Beck, Steer, Sanderson, & Skeie, 1991; Schmidt, Woolaway-Bickel, & Bates, 2001). One of the challenges in determining the specific risk for suicide in OCD is the frequent comorbidity with other conditions. Sareen et al. (2005) found that the presence of an anxiety disorder, including OCD, was a risk factor for subsequent suicidal ideation and attempts. The results of Sareen et al.'s study are congruent with the findings of the ECA study, where uncomplicated OCD was associated with suicide attempts (Weissman et al., 1994).

Crosscultural Differences in Obsessive Compulsive Disorder

There has been limited study of the phenomenology and epidemiology of OCD crossculturally, and most information about the disorder has come from Western industrial nations (Horwath & Weissman,

2000; Weissman et al., 1994). The limited crosscultural information suggests both similarities and potentially important differences between the obsessional problems seen in the West and the manifestations of the syndrome found in other parts of the world.

The prevalence and age at onset of OCD is generally the same internationally. Compared to prevalence estimates, more often reported for the United States, a slightly higher incidence of OCD of approximately 1.9%–2.5% is reported in non-Western countries (Horwath & Weissman, 2000; Weissman et al., 1994). Age-at-onset estimates of OCD are more variable crossculturally. In epidemiologic studies carried out in the West, age-at-onset estimates are often mid- to late-twenties to mid-thirties (although, see the discussion of disorder onset variability in an earlier section of this chapter). The disorder onset reported in some cultures was later than the onset reported in epidemiologic studies in the mainland United States: Puerto Rico, mean age 35.5 (SD = 13.6); Taiwan, 34.6 (14.4); Germany, 30.6 (13.8); and Korea, 29.8 (11.5) (Horwath & Weissman, 2000; Weissman et al., 1994). Reported age-at-onset differences might result from methodology differences or limited study of OCD in youth. In the West, there are data to suggest early- and later-onset subtypes of OCD. Similar analyses have not been conducted with non-Western samples. Additionally, in some age-at-onset research, disorder onset is defined as the time symptoms were first noticed (Rosario-Campos et al., 2001), but in other studies age at onset is considered to have occurred when diagnostic criteria were first met (Fontanelle, Mendlowicz, Marques, & Versiani, 2003). Without a consistent definition of age at onset, different conclusions may be reached even when using the same data set.

Although study has been limited, the core features of OCD (i.e., intrusive, ego-dystonic thoughts one resists, and the performance of rituals) are seen crossculturally (Okasha, Saad, Khalil, El-Dawla, & Yehia, 1994; Weissman et al., 1994). Symptom content, however, may be more culturally influenced (Fontanelle, Mendlowicz, Marques, & Versiani, 2004; Karadag, Oguzhanoglu, Ozdel, Atesci, & Amuk, 2006; Lemelson, 2003; Sica, Taylor, Arrindel, & Sanavio, 2006; Yourlmaz, Yilmaz, & Gencoz, 2004). In the United States and other Western countries, obsessions often focus on themes of contamination and doubt, and compulsions frequently involve washing and checking (Fontanelle et al., 2004), though these symptoms have also been

found in non-Western countries (Juang & Liu, 2001). Egyptians, living in a predominantly Muslim society, more often report a high degree of repetition and cleaning compulsions, which are often more ego-syntonic. The connection of these symptoms to strong religious beliefs may be responsible for the limited insight into the excessive nature of the concern (Karadag et al., 2006; Okasha et al., 1994). Sexual obsessions were also more frequent in Egyptian culture, and this might result from cultural differences where religious practices emphasize cleanliness and purity (Karadag et al., 2006; Okasha et al., 1994). This association between obsessional symptoms and religiosity was also noted by Yourlmaz and colleagues (2004). They found that in Turkey, individuals with OCD were more disposed to have thought-action fusion regarding morality (i.e., thought is understood to be a moral act independent of behavior) than in other nations. In the West, thought-action fusion was more likely to take the likelihood form (e.g., thought about an outcome somehow increases the probability of the event; Rassin, Diepstraten, Merckelbach, & Muris, 2001; Rassin, Merckelbach, Muris, & Schmidt, 2001). In another evaluation of cultural differences, individuals with OCD from Bali experienced more frequent “need to know” obsessions than was found in Western cultures (Lemelson, 2003). This difference was hypothesized to result from the high value that is placed on the social network in that culture, where being aware of and being able to react to the identity and status of others is of primary importance (Lemelson, 2003).

Initial studies suggest that culture might influence the dysfunctional beliefs posited to be etiologic in cognitive models of OCD. Personal responsibility, the extent to which one believes that he or she is personally responsible for preventing harm, was identified as a core OCD-related dysfunctional belief in studies with Western samples, and has been associated with the severity of compulsions that serve to prevent harm (see Frost & Steketee, 2002, for a review). Sica (2006) demonstrated that cultural factors that promote a sense of being powerless attenuated the relationship between OCD symptom severity and responsibility beliefs.

Cultural differences also influence help-seeking behavior, including the pursuit of mental health treatment (Sica et al., 2006). Specifically, after obsessive compulsive symptoms manifest, individuals in more conservative or more religious cultures tend to wait to get help until symptoms become more severe, or they attempt to deal with their

symptoms through other social support mechanisms. Additionally, in some cultures, core OCD symptoms, obsessing or doubting, are seen in a positive light—indicative of carefulness, orderliness, and faithfulness—further affecting help-seeking behavior (Karadag et al., 2006; Okasha et al., 1994). Weissman et al. (1994), Horwath and Weissman (2000), and Fontenelle et al. (2004) found a predominance of women with OCD, and a higher lifetime prevalence of OCD for women in non-Western cultures. It is unclear whether these differences are the result of gender differences in OCD prevalence, or result from the greater tendency of women to present for assessment and treatment in these cultures.

Chapter Summary and Future Directions

OCD is a very complex psychiatric disorder that is heterogeneous at multiple levels (e.g., patterns of comorbidity, symptom presentation, cognitive processing). Significant advances have been made in understanding the phenomenology of OCD, although much work remains. Some clinical researchers argue that more work on elucidating the phenomenology of OCD is needed before significant changes can be considered for OCD’s placement in the psychiatric disorders taxonomy. Others suggest that the increased information realized during the past several decades is sufficient for consideration of OCD and importantly related conditions as components of a new syndromal grouping, OCD Spectrum Conditions.

Two major issues that must be addressed to advance understanding of OCD are disorder heterogeneity, and the commonalities and differences between clinical and nonclinical obsessions. OCD heterogeneity investigations burgeoned over the last two decades and significant gains were made, with important disorder subtypes identified (e.g., predominant clinical hoarding). Nonetheless, additional work is needed including further evaluations of overt symptom differences, and investigations of differences in the core motivations underlying obsessional patient concerns (e.g., harm avoidance and incompleteness; Summerfeldt, 2007). We agree with McKay and Neziroglu (2009) that multiple methodologies will be needed to better understand OCD heterogeneity. The extensive experimental work on nonclinical and clinical obsessions and compulsions has been very important to understanding OCD, and is the foundation for cognitive models of the disorder (e.g., Salkovskis, 1985). Additional work in this area is also critical to

understanding how a common experience becomes a debilitating disorder for some.

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