

Obsessive Compulsive Personality Disorder and Obsessive Compulsive Disorder: Clinical Characteristics, Diagnostic Difficulties, and Treatment

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Background. The overlap between obsessive compulsive personality disorder (OCPD) and obsessive compulsive disorder (OCD) has received increasing recognition and continues to be a source of much debate. With the advent of new research methodologies, researchers have attempted to distinguish whether OCPD and OCD are two distinct phenomena that can co-occur or whether they are similar, overlapping constructs.

Methods. MEDLINE was used to systematically review the OCPD and OCD literature published between 1991 and 2004.

Results. Using the more stringent DSM-IV criteria, results from OCD clinical samples suggest that the majority of individuals with OCD (75%) do not have OCPD. Similarly, results from personality disorder samples suggest that the majority of individuals with OCPD (80%) do not have OCD.

Conclusions. While there is evidence that OCD and OCPD are linked, the literature does not support either one as a necessary or sufficient component of the other.

Keywords Obsessive compulsive personality disorder, Obsessive compulsive disorder, Phenomenology, Treatment

INTRODUCTION

The overlap between obsessive compulsive personality disorder (OCPD) and obsessive compulsive disorder (OCD) has long been a source of controversy. Early clinical descriptions of the two were often indistinguishable. In some of his early work on OCD, Pierre Janet described personality characteristics of perfectionism, indecisiveness and restricted emotional expression as preceding the onset of OCD (1). Roughly 30 years later, however, Sir Aubrey Lewis (2) concluded that although some patients with OCD had compulsive personality traits, just as many did not (3). This controversy persists as clinicians and researchers use revised methods to examine whether these phenomena should be considered similar, over-

lapping entities or whether they are better characterized as distinct.

There have been three reviews of the literature on the comorbidity of OCD and OCPD. Pollack (4) reviewed studies that examined co-occurrence of obsessional neurosis and obsessional personality and concluded that obsessional traits were not over-represented in individuals with obsessional neurosis. Pollack later updated this review with studies that continued to support the two as independent entities that can co-occur (5). In this review he highlighted the methodological limitations that precluded interpretations of relationships of OCPD and OCD such as lack of control groups, valid measures of the two constructs, and limitations of retrospective data. In a later review of all published and unpublished studies on OCPD between 1980 and 1991, the same conclusion was drawn (6). To our knowledge, there have been no systematic reviews of the literature derived from studies in the last 14 years. In this article, we supplement previous reviews by examining subsequent empirical studies of OCPD and OCD. Specifically, we focus on similarities and

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differences in symptom presentation, etiology, and course of illness, familial relationships and treatment response.

OBSESSIVE COMPULSIVE PERSONALITY DISORDER

Obsessive compulsive personality disorder (OCPD) is a chronic maladaptive pattern of excessive perfectionism and need for control over the environment that affects all domains of an individual's life. OCPD is characterized by eight personality traits: rigidity, miserliness, perfectionism, overattention to detail, excessive devotion to work, inability to discard worn or useless items, hypermorality, and inability to delegate tasks (7). The onset is considered to be early adulthood, but most individuals with this difficulty describe having these traits since childhood.

Categorical Classification

OCPD, along with Dependent and Avoidant Personality Disorder is categorized under the Cluster C personality disorders of DSM-IV. These disorders are characterized by anxiety and fearfulness and are generally viewed as the most treatment responsive and have shown the best results with brief cognitive and psychodynamic treatment protocols (8,9). The DSM criteria for OCPD have undergone substantial changes over the past several decades which has posed obstacles to studying the disorder (10).

Criteria for OCPD have changed considerably over the past several decades. Of Janet's traits of perfectionism, indecisiveness and emotional aloofness, only perfectionism has been retained in our current conceptualization of OCPD as described in DSM-IV (7). OCPD was first included in DSM-II (11) based on Freud's obsessive personality or anal-erotic character style. In response to confusion between OCD and OCPD, the name changed to "Compulsive Personality" in DSM-III (12) and the diagnosis could be assigned if one met 4 out of 5 symptoms. The next set of revisions stemmed from Freud's original notion of the anal character characterized by orderliness, parsimony and obstinacy (13) and expanded by Abraham's description of the anal character (14) which led to 4 new criteria being added (preoccupation with details, overconscientiousness, miserly spending style, and hoarding) in DSM-III-R (15). Finally, DSM-IV (7) dropped 2 criteria (restricted expression of affect and indecisiveness) largely based on reviews of the empirical literature that found these traits lacked internal consistency (6). Baer and Jenike (10) point out that only 3 of the original 5 criteria have persisted since DSM-III: perfectionism, excessive work devotion, and stubbornness.

Dimensional Classification

An alternative to the categorical classification approach of the DSM-IV is characterizing personality based on dimensions

of normal personality traits rather than qualitatively different constructs. According to this model, individuals with personality disorders represent extreme ends of normal personality traits. The five-factor model (FFM) is one of the most widely used dimensional classification systems. Five basic personality dimensions were empirically derived: Neuroticism (N), Extroversion (E), Openness to Experience (O), Agreeableness (A), and Conscientiousness (C) (16). This model has been extensively researched and its use is supported across ages and cultures. It has also demonstrated good temporal stability and psychometric properties (17). Each of the five dimensions can be further differentiated into six underlying facets. For example, high scores on Conscientiousness are associated with being well-organized, having high standards and being goal-oriented. Low scores are associated with being easy-going, disorganized, or careless and spontaneous. It is made up of six facets: competence, order, dutifulness, achievement striving, self-discipline, and deliberation. OCPD is associated with high scores on all facets of conscientiousness (18). It is also associated with low scores on 4 of the 6 facets of openness to experience (O), high scores on anxiousness (N), and low scores on impulsiveness (N) and excitement-seeking (E). In contrast, OCD appears to be associated with high levels of Neuroticism, Extraversion, and Conscientiousness (19,20).

Some evidence suggests that OCPD affects approximately 1% of community and 3–10% of clinical samples (7). Data from the two large epidemiological samples suggest that 1–2% of individuals may meet DSM-IV criteria for OCPD (21,27). More recently, a study using DSM-IV criteria for personality disorders in a large representative community sample (N = 43,093), found OCPD rates of 7.8%, making it the most common personality disorder among adults in the United States (22). These rates were remarkably high and may have been an artifact of the instrument used. This study used the NIAAA Alcohol Use Disorder and Associated Disabilities Interview Schedule-DSM-IV version, a structured diagnostic interview specifically designed for lay interviewers. Compulsive traits are often difficult to distinguish from personality disorder symptoms and thus self-report or lay-person administered instruments tend to overestimate the presence of a personality disorder (23,24).

Ethnic minorities in the United States seem to be underrepresented in clinical settings but similar prevalence rates have been found in the general population and cross-culturally (25). The Longitudinal Study of Personality Disorders (CLPS) has reported distribution of ethnicity across four personality disorders including OCPD. In this clinical sample, approximately half met criteria for OCPD and this was evenly distributed among Caucasian, African-American and Hispanic participants (26). However, the prevalence rates for OCPD in the general U.S. population were significantly lower for Asians and Hispanics relative to Caucasians and African-Americans (22).

Epidemiological studies of OCPD have reported mixed results in terms of gender representation. Although there is yet no evidence of gender differences in community samples using

DSM-IV criteria (22), some studies have found OCPD to be twice as common in men in clinical populations (7), while other have found no gender differences (26,28,29).

Few researchers have examined the prevalence of OCPD in children. Using a structured interview developed specifically for this study, researchers found 13.5% of children ages 9–19 ($n = 733$) met criteria for OCPD, making it the most frequent disorder in this large community sample of children (30). In this same study, OCPD (as well as other personality disorders), was associated with greater risk of Axis I psychopathology, depressive symptoms, and social impairment (30). However, unlike other personality disorders, children with OCPD were not at risk for academic impairment. Another study using the Personality Disorder Examination (PDE) in an adolescent community sample ($n = 299$), found that no adolescent met full DSM-III-R criteria for OCPD and only 8% had elevated OCPD dimensional scores (31). In a follow-up study of adolescents with personality disorders, 32% of adolescents initially diagnosed with OCPD met criteria for OCPD at a follow-up interview two years later (30). Odds ratios indicated that children were four times as likely to receive an OCPD diagnosis at the 2-year follow-up if they had been initially diagnosed with moderate levels of OCPD and 15 times more likely to continue to have an OCPD diagnosis if they initially had severe symptoms (27% persisted).

Compared to other personality disorders, OCPD is associated with the least overall functional impairment (32). However, this same study found that almost 90% had at least moderate impairment in at least one area of functioning (16). OCPD is not viewed as one of the “severe” personality disorders but can cause substantial impact on quality of life and has been associated with the development of secondary psychiatric and physical disorders.

OBSESSIVE COMPULSIVE DISORDER

Obsessive Compulsive Disorder (OCD) is a psychiatric illness characterized by obsessions (recurring distressing ideas or images) and compulsions (recurring behaviors designed to decrease anxiety caused by obsessions). Although OCD occurs fairly frequently and is often quite disabling, it is still an under-recognized disorder in many settings including primary care clinics.

Studies have shown that the most common obsession is fear of contamination, followed by pathologic doubt, somatic obsessions, and need for symmetry. The most common compulsion is checking, followed by washing, counting, and a need to ask or confess (33). Children with OCD present most commonly with washing compulsions, followed by repeating rituals (34,35).

Most people have multiple obsessions and compulsions over time, with a particular fear or concern dominating the clinical picture at any one time. The presence of pure obsessions without compulsions is unusual. Patients who appear

to have obsessions alone frequently have reassurance rituals or unrecognized mental compulsions—such as repetitive, ritualized praying—in addition to their obsessions. Pure compulsions are extremely rare. In addition, OCD frequently co-occurs with other psychiatric disorders, such as depression, anxiety disorders, tic disorders, and attention deficit disorder (36).

Although recently regarded as a rare disorder, results of the National Epidemiology Catchment Area (ECA) Survey found that OCD was the fourth most common psychiatric disorder (following the phobias, substance use disorders, and major depression) with a lifetime prevalence of 2–3% (25). OCD is now considered a common psychiatric illness not only in this country but worldwide based on epidemiologic studies of psychiatric illness conducted in other countries (37). Lifetime prevalence rates for OCD in children are estimated to be about 1.9% (38).

In addition to its prevalence being higher than many other psychiatric disorders including panic disorder and schizophrenia, OCD frequently causes significant morbidity. Recently, OCD was found to be the tenth leading cause of morbidity worldwide according to the most recent World Health Organization study survey (39) and has been shown to have a detrimental impact on social functioning and employment (40,41).

Examining the development of OCD retrospectively in 90 adults, one study found that a substantial proportion of the OCD patients endorsed having perfectionism, hypermorality, ambivalence, and excessive devotion to work prior to the onset of their OCD (33). This constellation of traits, similar to those described by Janet, may be the precursor of the adult OCPD. This finding also suggests that there may be a subtype or phenotype of OCD characterized by OCPD traits as well as compulsions related to perfectionism, e.g., symmetry compulsions, the need to do things “just right,” or compulsions driven by a sense of incompleteness.

CO-OCCURRENCE OF OCPD AND OCD

Co-occurrence of OCPD and OCD has been reported in numerous studies. In Table 1 we summarize the studies that have used semi-structured diagnostic interviews with established psychometric properties. We did not include studies that used self-report questionnaires as their only method of diagnosing OCPD because this methodology tends to yield high false-positive rates of disorders (23,24). Studies using DSM-III and DSM-III-R criteria for OCPD have shown some variability in prevalence rates. Three studies using the stringent DSM-III criteria found rates of OCPD among patients with OCD to range from 0–28% (42–44). Of the four studies that reported other Axis II disorders, Cluster C disorders were seen more frequently in patients with OCD. A total of 12 studies used the more

Table 1 Co-Occurrence of OCPD in OCD Clinical Samples¹

Criteria	Measure ²	OCD Sample Size (N)	OCPD (%)
DSM-III (42)	SIDP	96	6
DSM-III (43)	SIDP	32	28
DSM-III (44)	SIDP	114	19
DSM-III-R (83)	SIDP-R	55	16
DSM-III-R (82)	SIDP-R	29	31
DSM-III-R (47)	PDE	80	08
DSM-III-R (46)	SIDP-R	88	31
DSM-III-R (85)	SCID-II	51	18
DSM-III-R (86)	SCID-II	75	12
DSM-III-R (87)	SCID-II	16	11
DSM-III-R (88)	SCID-II	94	16
DSM-III-R (89)	SCID-II	21	05
DSM-III-R (45)	SIDP-R	30	03
DSM-III-R (90)	SCID-II	25	28
DSM-III-R (91)	SIDP-R	40	18
DSM-IV (29)	SCID-II	109	23
DSM-IV (20)	SIDP-R	72	32
DSM-IV (28)	SCID-II	197	25

¹Only studies using standardized, semi-structured diagnostic interviews are listed.

²SIDP = Structured Interview for DSM Personality Disorders, PDE = Personality Disorder Examination, SCID-II = Structured Clinical Interview for DSM-IV Axis II Personality Disorders.

lenient DSM-III-R criteria which required 5 out of 9 criteria to be present. Prevalence rates ranged from 3% (45) to 31% (46).

More recently, studies utilizing the current DSM-IV criteria have consistently found similar rates of OCPD ranging from 23% to 32% (20,28,29). There is a lack of evidence supporting OCPD to be the most frequent personality disorder in OCD samples. However, these results suggest that individuals with OCD who have a personality disorder, are likely to have a Cluster C disorder (OCPD, Avoidant, Dependent).

To test the specificity of OCPD to OCD, some studies have used comparison groups of patients with other anxiety disorders or healthy controls. OCPD rates are consistently higher in individuals with OCD than in healthy community controls using DSM-III-R criteria (20) as well as DSM-IV criteria (29). However, rates of OCPD in individuals with other anxiety disorders have been found to be equivocal in some studies (29) and significantly less in other studies (46,47).

Two follow-up studies of individuals treated for OCD in childhood assessed the presence of OCD and OCPD in adulthood (34,35). The first study used a controlled follow-up design to reassess children that had been hospitalized for OCD and those that had been hospitalized for other psychiatric problems (35). They found that both groups had similar rates of personality disorders (68% vs. 61%), and specifically OCPD (17% vs. 10%, $p > 0.05$). The second study consisted of a sample of 55 out of 116 patients who had treatment for pediatric OCD at a child psychiatry clinic (34). Of these 55 participants, 36% met criteria for a personality disorder, and 25% met criteria for OCPD. Both these studies reported that about half of individuals

treated for OCD in childhood continued to have OCD symptoms at follow-up. Those with persistent OCD were just as likely to have OCPD as those whose OCD symptoms had remitted.

More recently, reports from the Collaborative Longitudinal Personality Disorders Study (CLPS) have investigated the link between the two disorders in a large sample of individuals with personality disorders (50). The study found that 20.9% of their subjects with DSM-IV OCPD met criteria for OCD, although this was not significantly higher than the rates of OCD in the other CLPS personality disorders (51).

FAMILY HISTORY

Examining a family link between the disorders, one study found a significantly greater frequency of OCPD in first degree relatives of OCD probands compared to relatives of control probands (11.6% vs. 5.8%, $p = 0.02$) (20). Many parents of children with OCD have OCPD (52–54). However, probands with OCPD do not appear to be more likely to have relatives with OCD (55).

POSSIBLE ETIOLOGICAL SIMILARITIES

Early psychoanalysts were the first to give significant attention to factors that contribute to the development of OCPD (13,14). Developmental factors stemming from fixation at the anal stage due to inappropriate toilet training were viewed as precursor (56). Both OCD and OCPD were viewed as stemming from defense mechanisms warding off feelings of unconscious guilt, shame, insecurity. In addition, dynamics within the family (anger, hostility, and inconsistent parenting) have also been hypothesized as a causal link in the development of OCPD (55,56). However, there is very little empirical support for these models.

Genetic models have investigated a link between OCPD, personality factors and comorbid disorders such as OCD and Tourette's (57). OCPD may be related to the adult personality trait of conscientiousness constraint and the childhood temperament of attentional self-regulation, both of which have demonstrated substantial heritability. Others have described a diathesis-stress model of OCPD. Individuals who are genetically predisposed to OCPD are likely to develop Axis I symptoms when they experience psychosocial stressors (58).

DIAGNOSTIC DIFFICULTIES

Similarities in phenomenology often make it difficult to differentiate between OCPD and OCD. For example, excessive list-making may be viewed as a compulsion if it is repetitive, time-consuming and distressing. Excessive list-making is also mentioned as an example of preoccupation with details in DSM-IV's description of OCPD. Similarly, perfectionism is

an OCPD criterion and a symptom of OCD if it involves need for order, symmetry and arranging. A third symptom, hoarding, is also considered both a compulsion (found in OCD) and as an OCPD criterion in DSM-IV. In fact, the DSM-IV states that if hoarding is extreme, an additional diagnosis of OCD should be given. Although OCPD and OCD are conceptualized as separate disorders, there is clearly redundancy between the two disorders regarding several symptoms. Given that you only need four criteria for the diagnosis of OCPD, an individual with OCD hoarding and ordering/arranging compulsions would only need to endorse one more criterion (e.g., stubborn/rigidity) to establish the diagnosis of OCPD.

The frequency of several OCPD traits in patients with OCD further complicates diagnosis. Although perfectionism is a relatively common trait in OCD patients, the distinction between OCD and OCPD is important, and several guidelines may be useful in distinguishing between them. Both individuals with OCD and OCPD may be excessively involved in tasks that require an inordinate attention to details, such as time occupying extensive list-making. However, unlike OCPD, OCD is characterized by distressing, time-consuming ego-dystonic obsessions and repetitive rituals aimed at diminishing the distress engendered by obsessional thinking. One of the hallmarks that has traditionally been used to distinguish OCD from OCPD is that OCPD features are considered ego-syntonic. In the example of excessive list-making, a patient with OCD makes lists because they are afraid they will be responsible for something terrible happening if they do not follow their list exactly. In contrast, a person with OCPD will justify excessive list-making with the rationale that it is a reasonable use of their time and prevents them from forgetting important tasks.

Typically, individuals with OCPD seek treatment because of family turmoil caused by the patient's need to have others conform to his or her way of doing household tasks (59). While the patient believes that they are doing these tasks "correctly" their insistence that others also do so frequently leads to family or marital discord leading to treatment seeking. For example, a young married professional insisted that his wife go to bed every night before he did so that he could "straighten up the house" and know that it would be exactly as he left it when he awoke the next morning. In contrast, individuals with OCD who are preoccupied with orderliness, exactness and symmetry feel compelled to spend hours daily making sure their book shelves are exactly lined up but feel trapped by having to do this, experience considerable distress about this need and seek treatment to decrease their distress and anxiety. While useful, these guidelines are not absolute, and some patients defy easy categorization. Some patients, for example, spend hours each day engaged in ego-syntonic behaviors such as excessive cleaning; such patients may seek treatment not because they are disturbed by their behaviors, but because of problems in functioning or family friction caused by the behaviors. It may be helpful with such patients

to determine if they have other obsessions and compulsions in addition to their excessive cleaning which would support a diagnosis of OCD.

TREATMENT

Treatment studies of OCPD are rare. In one study, 14 patients were treated with one year of supportive-expressive psychodynamic therapy (60). Most patients failed to meet diagnostic criteria for OCPD after 4 months of treatment, and at the end of one year, only 15% continued to meet criteria for OCPD (46). Cognitive therapy may also be useful for OCPD by addressing the irrationality of thoughts stemming from excessive conscientiousness, moralism, perfectionism, devotion to work, and stubbornness. There is no empirical evidence for pharmacological interventions for OCPD (61).

The ego-syntonic nature of symptoms and a lack of occupational impairment will contribute to a lack of motivation to seek treatment in many individuals with OCPD. However, many will often seek treatment for disorders and problems that are secondary to OCPD, including anxiety disorders, health problems (e.g., cardiovascular disorders), and relational problems (marital, familial, occupational). Treatment may be complicated by their inability to appreciate the contribution of their personality to these problems and disorders (62). The use of psychotherapy techniques that directly target interpersonal distress may, therefore, be a promising avenue of treatment.

In contrast, a wealth of data support the use of both pharmacologic and behavioral therapies in the treatment of OCD. The principal pharmacologic agents used to treat OCD are the serotonin-reuptake inhibitor (SRI) clomipramine, and the selective serotonin reuptake inhibitors (SSRIs), fluoxetine, fluvoxamine, sertraline, and paroxetine, all of which have U.S. Food and Drug Administration approval for treating OCD. Double blind placebo controlled trials with these SSRIs have established their efficacy in OCD (63–67). Three of these SRIs, clomipramine, fluvoxamine and sertraline, have been approved for use in children and adolescents with this disorder. There is accumulating evidence regarding the efficacy of citalopram and venlafaxine although they do not currently have an FDA indication for OCD (68,69).

Behavioral therapy, specifically exposure and ritual prevention, is considered the treatment of choice for individuals with mild to moderate symptoms of OCD. Sixty-five to 85% of patients who complete a trial of exposure and ritual improve immediately after treatment and maintain gains at follow-up assessments from 3 months to 6 years (70,71).

Cognitive therapy has also been shown to be effective in reducing OCD symptoms (72). Cognitive therapy is based on the premise that an individual's appraisal or interpretation of intrusive thoughts is what causes the anxiety (73,74). For example, most individuals experience fleeting thoughts of harming others, but individuals with OCD assign importance to that thought (e.g., "If I had this thought, it must mean that I

can act on it"). During cognitive therapy, the patient learns to identify maladaptive thoughts that maintain their OCD symptoms and how to use various techniques to realistically evaluate these thoughts in order to generate more adaptive patterns of thinking (75).

The presence of personality disorders is associated with decreased treatment gains in treatments of anxiety and depressive disorders (76–78). In the OCD literature, presence of schizotypal personality disorder or multiple personality disorders is associated with a poor prognosis for behavior therapy (79) and medication treatment of OCD (80,81). The impact of OCPD on treatment response for OCD is less clear. Some studies have found a negative impact on pharmacological treatment (82) but others have not found significant differences (83).

CONCLUSIONS

While the precise estimates of OCPD in subjects with OCD have varied considerably, recent studies suggest that 25% of individuals with OCD also have OCPD. The majority of individuals with OCD do not have OCPD which does not support theories of OCPD as a developmental precondition for OCD. However, individuals with OCD and other anxiety disorders are much more likely to have OCPD than individuals who do not have psychiatric disorders. Results from personality disorder samples show that individuals with OCPD are not more likely to develop OCD than to develop other Axis I disorders. Future research focusing on prospective studies of individuals with OCPD personality traits could help shed light on whether these traits represent psychological vulnerabilities to anxiety disorders.

Categorical classifications of OCD and OCPD encompass heterogeneous groups of individuals. Studying more homogeneous groups such as OCD symptom subtypes and/or specific personality traits may be a more fruitful way to explore the relationship between these two constructs.

Finally, there is a paucity of research on treatment interventions for OCPD. There is also very little known on the impact of OCPD on the course of OCD. Identifying subtypes of OCD or OCPD that have differential responses to treatment will lead to improved interventions at ameliorating the overall prognosis of the disorders.

REFERENCES

1. Janet P: *Les Obsessions et al Psychasthenie*. Paris: Bailliere, 1904
2. Lewis AJ: Problems of obsessional illness. *Proc R Soc Med* 1936; 29:325–336
3. Steketee G, Barlow DH: Obsessive compulsive disorder. In: DH, Barlow ed. *Anxiety and Its Disorders*. New York: Guilford Press, 2002:516–550
4. Pollack JM: Obsessive-compulsive personality: A review. *Psychol Bull* 1979; 86:225–241
5. Pollack JM: Relationship of obsessive-compulsive personality to obsessive-compulsive disorder: A review of the literature. *J Psychol* 1987; 121(2):137–148
6. Pfohl B: Obsessive-compulsive personality disorder. In: TA, Widiger, HA, Pincus, R, Ross, M, First, W, Wakefield eds. *DSM-IV Sourcebook*, vol. 2. Washington, D.C.: American Psychiatric Association, 1996:777–789
7. American Psychiatric Association: *Diagnostic and Statistical Manual of Mental Disorders*. Washington, D.C.: American Psychiatric Association, 2000
8. Beck AT, Freeman A: *Cognitive Therapy for Personality Disorders*. New York: Guilford Press, 1990
9. Winston A, Laikin M, Pollack J, Samstag LW, McCullough L, Muran JC: Short-term psychotherapy of personality disorders. *Am J Psychiatry* 1994; 151(2):190–194
10. Baer L, Jenike MA: Personality disorders in obsessive-compulsive disorder. In: Jenike MA, Baer L, Minichiello WE, eds. *Obsessive Compulsive Disorders: Practical Management*. Boston: Mosby, Inc., 1998: 65–83
11. American Psychiatric Association: *Diagnostic and Statistical Manual of Mental Disorders*. Washington, D.C.: American Psychiatric Association, 1968
12. American Psychiatric Association: *Diagnostic and Statistical Manual of Mental Disorders*. Washington, D.C.: American Psychiatric Association, 1980
13. Freud S: Character and anal eroticism. In: P, Reiff ed. *Collected Papers of Sigmund Freud*. vol. 1 New York: Collier, 1908/1963
14. Abraham K: Contributions to the theory of the anal character. In: D, Bryan, AT, Strachers eds. *Selected Papers of Karl Abraham*. London: Hogarth Press, 1921/1953
15. American Psychiatric Association: *Diagnostic and Statistical Manual of Mental Disorders*. Washington, D.C.: American Psychiatric Association, 1987
16. Costa PT Jr., McCrae RR: *Revised NEO Personality Inventory (NEO-PI-R) and NEO Five-Factor Inventory (NEO-FFI) Professional Manual*. Odessa, FL: Psychological Assessment Resources, 1992
17. Costa PT Jr., McCrae RR: The five-factor model of personality and its relevance to personality disorders. *J Person Disord* 1992; 6:343–359
18. Lynam DR, Widiger TA: Using the five-factor model to represent the DSM-IV personality disorders: an expert consensus approach. *J Abn Psychol* 2001; 110(3):401–412
19. Rector NA, Hood K, Richter MA, Bagby RM: Obsessive-compulsive disorder and the five-factor model of personality: Distinction and overlap with major depressive disorder. *Behav Res Ther* 2002; 40(10):1205–1219
20. Samuels J, Nestadt G, Bienvenu OJ, Costa PT Jr., Riddle MA, Liang KY, Hoehn-Saric R, Grados MA, Cullen BA: Personality disorders and normal personality dimensions in obsessive-compulsive disorder. *Br J Psychiatry* 2000; 177:457–462
21. Samuels J, Eaton WM, Bienvenu OJ, Brown CH, Costa PT, Nestadt G: Prevalence and correlates of personality disorders in a community sample. *Br J Psychiatry* 2002; 180:536–542
22. Grant BF, Hasin DS, Stinson FS, Dawson DA, Chou SP, Ruan WJ, Pickering RP: Prevalence, correlates, and disability of personality disorders in the United States: Results from the national epidemiologic survey on alcohol and related conditions. *J Clin Psychiatry* 2004; 65(7):948–958

23. Hyler SE, Skodol AE, Kellman HD, Oldham JM, Rosnick L: Validity of the Personality Diagnostic Questionnaire-revised: Comparison with two structured interviews. *Am J Psychiatry* 1990; 147(8):1043-1048
24. Hyler SE, Skodol AE, Oldham JM, Kellman HD, Doidge N: Validity of the Personality Diagnostic Questionnaire-revised: A replication in an outpatient sample. *Compr Psychiatry* 1992; 33(2):73-77
25. Karno M, Golding I, Sorenson S, Burnam M: The epidemiology of obsessive-compulsive disorder in five US communities. *Arch Gen Psychiatry* 1988; 45:1094-1099
26. Chavira DA, Grilo CM, Shea MT, Yen S, Gunderson JG, Morey LC, Skodol AE, Stout RL, Zanarini MC, McGlashan TH: Ethnicity and four personality disorders. *Compr Psychiatry* 2003; 44:483-491
27. Torgersen S, Kringlen E, Cramer V: The prevalence of personality disorders in a community sample. *Arch Gen Psychiatry* 2001; 58:590-596
28. Mancebo, MC Eisen, JL Rasmussen, SA Axis I comorbidity in obsessive compulsive disorder: Preliminary results from a naturalistic follow-up study of OCD, in Association for Advancement of Behavior Therapy (AABT). New Orleans, LA, 2004
29. Albert U, Maina G, Forner F, Bogetto F: DSM-IV obsessive-compulsive personality disorder: Prevalence in patients with anxiety disorders and in healthy comparison subjects. *Compr Psychiatry* 2004; 45(5):325-332
30. Bernstein DP, Cohen P, Velez CN, Schwab-Stone M, Siever LJ, Shinsato L: Prevalence and stability of the DSM-III-R personality disorders in a community-based survey of adolescents. *Am J Psychiatry* 1993; 150(8):1237-1243
31. Lewinsohn PM, Rohde P, Seeley JR, Klein DN: Axis II psychopathology as a function of Axis I disorders in childhood and adolescence. *J Am Acad Child Adolesc Psychiatry* 1997; 36:1752-1759
32. Skodol AE, Gunderson JG, McGlashan TH, Dyck IR, Stout RL, Bender DS, Grilo CM, Shea MT, Zanarini MC, Morey LC, Sanislow CA, Oldham JM: Functional impairment in patients with schizotypal, borderline, avoidant, or obsessive-compulsive personality disorder. *Am J Psychiatry* 2002; 159:276-283
33. Rasmussen S, Eisen J: The epidemiology and clinical features of obsessive compulsive disorder. In: MA, Jenike, L, Baer, WE, Minichiello eds. *Obsessive Compulsive Disorders: Practical Management*. Mosby, Inc., 1998:12-43
34. Swedo SE, Rapoport JL, Leonard HL, Lenane MC, Cheslow D: Obsessive compulsive disorder in children and adolescents: Clinical and phenomenology of 70 consecutive cases. *Arch Gen Psychiatry* 1989; 46:335-341
35. Thomsen PH, Mikkelsen HU: Development of personality disorders in children and adolescents with obsessive compulsive disorder. *Acta Psychiatr Scand* 1993;87:456-462
36. Rasmussen S, Eisen J: Phenomenology of obsessive compulsive disorder. In: J., Insel, S., Rasmussen eds. *Psychobiology of Obsessive Compulsive Disorder*. New York: Springer-Verlag, 1991:743-758
37. Bebbington PE: Epidemiology of obsessive-compulsive disorder. *British Journal of Psychiatry* 1988; 35:2-6
38. Flament MF, Whitaker A, Rapoport JL, Davies M, Berg CZ, Kalikow K, Sceery W, Shaffer D: Obsessive compulsive disorder in adolescence: An epidemiologic study. *J Am Acad Child Adolesc Psychiatry* 1988; 27:764-771
39. Murray CJ, Lopez AD: *Global Health Statistics: A Compendium of Incidence, Prevalence, and Mortality Estimates for Over 200 Conditions*. Cambridge, MA: Harvard University Press, 1996
40. Koran LM: Quality of life in obsessive-compulsive disorder. *Psychiatr Clin N Am* 2000; 23:509-617
41. Koran LM, Thienemann ML, Davenport R: Quality of life for patients with obsessive-compulsive disorder. *Am J Psychiatry* 1996; 153:783-788
42. Baer L, Jenike MA, Ricciardi JN, Holland AD, Seymour RJ, Buttolph ML: Standardized assessment of personality disorders in obsessive-compulsive disorder. *Arch Gen Psychiatry* 1990; 47:826-830
43. Black DW, Noyes R Jr., Pfohl B, Goldstein RB, Blum N: Personality disorder in obsessive-compulsive volunteers, well comparison subjects, and their first-degree relatives. *Am J Psychiatry* 1993; 150(8):1226-1232
44. Eisen JL, Rasmussen SA *OCD and compulsive traits: Phenomenology and outcome*American Psychiatric Association 144th Annual Meeting, New Orleans, L.A.: American Psychiatric Association, 1991
45. Sciuto G, Diaferia G, Battaglia M, Perna G, Gabriele A, Bellodi L: DSM-III-R personality disorders in panic and obsessive-compulsive disorder: A comparison study. *Compr Psychiatry* 1991; 32:450-457
46. Diaferia G, Bianchi I, Bianchi ML, Cavedini P, Erzegovesi S, Bellodi L: Relationship between obsessive-compulsive personality disorder and obsessive-compulsive disorder. *Compr Psychiatry* 1997; 38:38-42
47. Crino RD, Andrews G: Personality disorder in obsessive compulsive disorder: A controlled study. *J Psychiatr Res* 1996; 30:29-38
48. Gunderson JG, Shea MT, Skodol AE, McGlashan TH, Morey LC, Stout RL, Zanarini MC, Grilo CM, Oldham JM, Keller MB: The Collaborative Longitudinal Personality Disorders Study: Development, aims, design, and sample characteristics. *J Person Disord* 2000; 14:300-315
49. McGlashan TH, Grilo CM, Skodol AE, Gunderson JG, Shea MT, Morey LC, Zanarini MC, Stout RL: The Collaborative Longitudinal Personality Disorders Study: Baseline Axis I/II and II/II diagnostic co-occurrence. *Acta Psychiatr Scand* 2000; 102:256-264
50. Riddle MA, Scahill L, King R, Hardin MT, Towbin KE, Ort SI, Leckman JF, Cohen DJ: Obsessive compulsive disorder in children and adolescents: Phenomenology and family history. *J Am Acad Child Adolesc Psychiatry* 1990; 29:766-772
51. Rasmussen SA, Tsuang MT: Clinical characteristics and family history in DSM-III obsessive-compulsive disorder. *Am J Psychiatry* 1986; 143:317-322
52. Lenane M, Swedo SE, Leonard HL, Pauls DL, Sceery W, Rapoport JL: Psychiatric disorders in first degree relatives of children and adolescents with obsessive-compulsive disorder. *J Am Acad Child Adolescent Psychiatry* 1990; 29:407-412
53. Nestadt G, Samuels J, Riddle M, Bienvenu OJ 3rd, Liang KY, LaBuda M, Walkup J, Grados M, Hoehn-Saric R: A family study of obsessive-compulsive disorder. *Arch Gen Psychiatry* 2000; 57:358-363
54. Kline P: Obsessional traits, obsessional symptoms and anal eroticism. *Br J Med Psychol* 1968; 41:299-305
55. Angyal A: *Neurosis and Treatment: A Holistic Theory*. New York: Viking Press, 1965
56. Sullivan HS: *Clinical Studies in Psychiatry*. New York: Norton, 1956

57. Pauls DL, Towbin KE, Leckman JF, Zahner GE, Cohen DJ: Gilles de la Tourette's syndrome and obsessive-compulsive disorder. Evidence supporting a genetic relationship. *Arch Gen Psychiatry* 1986; 43:1180-1182
58. Magnavita JJ: Classification, prevalence, and etiology of personality disorders: Related issues and controversy. In: JJ, Magnavita ed. *Handbook of Personality Disorders*. Hoboken, NJ: John Wiley & Sons, Inc., 2004
59. Millon T, Davis RD: *Disorders of Personality: DSM-IV and Beyond*. New York: Wiley, 1996
60. Barber JP, Morse JQ, Krakauer I, Chittams J, Crits-Christoph K: Change in obsessive-compulsive and avoidant personality disorders following time-limited supportive-expressive therapy. *Psychother* 1997; 34:133-143
61. Koenigsberg HW, Woo-Ming AM, Siever LJ: Pharmacological treatments for personality disorders. In: PE, Nathan, JM, Gorman eds. *A Guide to Treatments That Work*. New York: Oxford University Press, 2002:625-641
62. Stone MH: Long-term outcome in personality disorders. *Br J Psychiatry* 1993; 162:299-313
63. Tollefson G, Birkett M, Koran L, Genduso L: Continuation treatment of OCD: Double blind and open-label experience with fluoxetine. *J Clin Psychiatry* 1994; 55:69-78
64. Greist J, Jefferson J, Kobak K, Katzelnick D, Serlin R: Efficacy and tolerability of serotonin transport inhibitors in obsessive-compulsive disorder: A meta-analysis. *Arch Gen Psychiatry* 1995; 52:53-60
65. Goodman WK, Price LH, Rasmussen SA, Delgado PL, Heninger GR: Efficacy of fluvoxamine in obsessive compulsive disorder: A double-blind comparison of fluvoxamine and placebo. *Arch Gen Psychiatry* 1989; 46:36-40
66. Wheadon DE, Bushnell WD, Steiner M: *A fixed-dose comparison of 20, 40, or 60 mg paroxetine to placebo in the treatment of OCD*. Annual Meeting of the American College of Neuropsychopharmacology. Honolulu, HI, 1993
67. The Clomipramine Collaborative Study Group:: Clomipramine in the treatment of patients with obsessive-compulsive disorder. *Arch Gen Psychiatry* 1991; 48:730-738
68. Denys D, Van Megen HJ, Van Der Wee N, Westenberg HG: A double-blind switch study of paroxetine and venlafaxine in obsessive-compulsive disorder. *J Clin Psychiatry* 2004; 65:37-43
69. Montgomery SA, Kasper S, Stein DJ, Hedegaard KB, Lemming OM: Citalopram 20 mg, 40 mg, and 60 mg are all effective and well tolerated compared with placebo in obsessive-compulsive disorder. *Int Clin Psychopharmacol* 2001; 16:75-86
70. Franklin ME, Abramowitz JS, Kozak MJ, Levitt JT, Foa EB: Effectiveness of exposure and ritual prevention for obsessive-compulsive disorder: Randomized compared with nonrandomized samples. *J Consult Clin Psychol* 2000; 68:594-602
71. Van Balkom AM, Van Oppen P, Vermulen AWA, Van Dyck R, Naute MCE, Vorst HCM: A meta-analysis on the treatment of OCD. *Clin Psychol Rev* 1994; 14:359-381
72. Freeston MH, Ladouceur R, Gagnon F, Thibodeau N, Rheume J, Letarte L, Bujould A: Cognitive-behavioral treatment of obsessive thoughts: A controlled study. *J Consult Clin Psychol* 1997; 65:405-413
73. Salkovskis PM: Obsessional-compulsive problems: A cognitive-behavioral analysis. *Behav Res Ther* 1985; 23:571-583
74. Rachman SJ, Hodgson RJ: *Obsessions and Compulsions*. Englewood Cliffs, NJ: Prentice Hall, 1980
75. Salkovskis P, Westbrook D: Behaviour therapy and obsessional ruminations: Can failure be turned into success? *Behav Res Ther* 1989; 27(2):149-160
76. Reich J, Green AI: Effect of personality disorders on outcome of treatment. *J Nerv Ment Dis* 1991; 179:74-82
77. Reich J: The effect of Axis II disorders on the outcome of treatment of anxiety and unipolar depressive disorders: A review. *J Person Disord* 2003; 17:387-405
78. Shea MT, Pilkonis PA, Beckham E, Collins JF, Elkin I, Sotsky SM, Docherty JP: Personality disorders and treatment outcome in the NIMH Treatment of Depression Collaborative Research Program. *Am J Psychiatry* 1990; 147:711-718
79. AuBuchon PG, Malatesta VJ: Obsessive compulsive patients with comorbid personality disorder: Associated problems and response to a comprehensive behavior therapy. *J Clin Psychiatry* 1994; 55:448-453
80. Minichiello WE, Baer L, Jenike MA: Schizotypal personality disorder: A poor prognostic indicator for behavior therapy in the treatment of obsessive compulsive disorder. *J Anxiety Disord* 1987; 1:273-276
81. Jenike MA, Baer L, Minichiello WE, Schwartz CE, Carey RJ: Concomitant obsessive-compulsive disorder and schizotypal personality disorder. *Am J Psychiatry* 1986; 143:530-532
82. Cavedini P, Erzegovesi S, Ronchi P, Bellodi L: Predictive value of obsessive-compulsive personality disorder in antiobsessional pharmacological treatment. *Eur Neuropsychopharmacol* 1997; 7:45-49
83. Baer L, Jenike MA, Black DW, Treece C, Rosenfield I, Greist J: Effect of Axis II diagnoses on treatment outcome with clomipramine in 54 patients with obsessive compulsive disorder. *Arch Gen Psychiatry* 1992; 49:862-866
84. Diaferia G, Bianchi I, Bianchi ML, Cavedini P, Erzegovesi S, Bellodi L: Relationship between obsessive-compulsive personality disorder and obsessive-compulsive disorder. *Compr Psychiatry* 1997; 38:38-42
85. Horeish N, Dolberg OT, Kirschenbaum-Aviner N, Kotler M: Personality differences between obsessive-compulsive disorder subtypes: Washers versus checkers. *Psychiatry Res* 1997; 71:197-200
86. Mataix-Cols D, Baer L, Rauch SL, Jenike MA: Relation of factor-analyzed symptom dimensions of obsessive-compulsive disorder to personality disorders. *Acta Psychiatr Scand* 2000; 102:199-202
87. Matsunaga H, Kiriike N, Iwasaki Y, Miyata A, Yamagami S, Kaye WH: Clinical characteristics in patients with anorexia nervosa and obsessive-compulsive disorder. *Psychol Med* 1999; 29:407-414
88. Matsunaga H, Kiriike N, Matsui T, Miyata A, Iwasaki Y, Fujimoto K, Kasai S, Kojima M: Gender differences in social and interpersonal features and personality disorders among Japanese patients with obsessive-compulsive disorder. *Compr Psychiatry* 2000; 41:266-272
89. Sanderson WC, Wetzler S, Beck AT, Betz F: Prevalence of personality disorders among patients with anxiety disorders. *Psychiatry Res* 1994; 51:167-174
90. Stanley MA, Turner SM, Borden JW: Schizotypal features in obsessive-compulsive disorder. *Compr Psychiatry* 1990; 31:511-518
91. Torres AR, Del Porto JA: Comorbidity of obsessive-compulsive disorder and personality disorders. *Psychopath* 1995; 28:322-329