

A Comparison of Trichotillomania and Obsessive-Compulsive Disorder¹

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The validity of conceptualizing trichotillomania (TCM) and obsessive-compulsive disorder (OCD) as separate and distinct diagnoses was examined in a study of 20 patients with each disorder. A comparison of demographic, psychometric, and clinical features between the two groups revealed a number of statistically significant differences. Patients meeting the criteria for OCD scored higher on measures of psychiatric symptomatology including ratings of obsessions and compulsions, depression, interpersonal sensitivity, general anxiety, phobic anxiety, and psychoticism. Patients meeting the criteria for TCM reported an earlier age at onset than those with OCD. Stressors associated with onset were also significantly different between groups. These results support the validity of conceptualizing TCM and OCD as differing behavioral disorders.

KEY WORDS: trichotillomania; obsessive-compulsive disorder; diagnosis.

INTRODUCTION

Trichotillomania (TCM) is characterized by repetitive hair plucking. Scalp hair is the most common site for plucking but eyebrows, pubic hair, and other body hair may also be pulled out (Friman, Finney, & Chriso-

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pherson, 1984). The *DSM-III-R* criteria for TCM include the following: (a) recurrent failure to resist impulses to pull out one's own hair, resulting in noticeable hair loss; (b) increasing sense of tension immediately before pulling out the hair; (c) gratification or a sense of relief when pulling out the hair; and (d) no association with a preexisting inflammation of the skin, and not a response to a delusion or hallucination (American Psychiatric Association, 1987, p. 327).

Obsessive-compulsive disorder (OCD) may consist of two distinct problems. Obsessions are recurrent or intrusive ideas, thoughts, or impulses that do not appear to be under the patient's voluntary control. Compulsions are intentional ritualistic behaviors that are performed according to certain rules, or in response to obsessional promptings. Patients perform these behaviors to reduce anxiety and/or in the belief that doing so prevents terrible events from taking place. Patients may be troubled by obsessions alone, compulsions alone, or both concurrently (American Psychiatric Association, 1987, p. 247).

Several investigators have suggested that trichotillomania and obsessive-compulsive disorder are related disorders, beginning with Philippopoulos (1961), who indicated that trichotillomania at any age falls into the group of obsessive-compulsive neurotic reactions. Krishnan and associates (Krishnan, Davidson, & Guajardo, 1985) also suggested that trichotillomania can present as a major symptom of obsessive-compulsive disorder. Swedo *et al.* (1989) compared the effects of clomipramine and desipramine on trichotillomania and found clomipramine effective in reducing hair pulling. They speculate that given the effectiveness of clomipramine in the treatment of OCD (see Insel, Murphy, & Cohen, 1983; Greist, Jefferson, & Rosenfeld, 1990), trichotillomania and OCD may be related. Jenike (1989), in referring to these results, concludes that since trichotillomania responds to serotonergic drugs such as clomipramine but not to adrenergic agents, the two disorders may share similar pathophysiological mechanisms. In addition, three preliminary reports suggest that the serotonergic agent, fluoxetine, which is also effective in the treatment of obsessive-compulsive disorder (Fontaine & Chouinard, 1986), is efficacious in reducing hair pulling among trichotillomania patients (Winchel *et al.*, 1990; Benarroche, 1990; Stanley, Swann, Bowers, Davis, & Taylor, 1992). Benarroche (1990) concludes that the effect of fluoxetine, lithium augmentation, and psychiatric comorbidity support the notion of trichotillomania as an "OCD spectrum" disorder.

The clinical presentation of the two disorders share some obvious similarities. Patients suffering from OCD or TCM both perform repetitive behaviors and often experience a reduction in anxiety associated with performing these behaviors (Christenson, Mackenzie, & Mitchell, 1991). In contrast, other clinical impressions suggest differences between TCM and

OCD. Trichotillomania patients rarely pull their hair according to specific rules, which is often the case with the compulsive rituals characteristic of OCD. Also, many trichotillomania patients report a sense of gratification associated with plucking (American Psychiatric Association, 1987; Christenson *et al.*, 1991), while clinical impressions suggest that pleasure is rarely associated with the performance of compulsive rituals characteristic of OCD. OCD compulsive rituals are often prompted by obsessive thoughts (Turner & Beidel, 1988), whereas clinical impressions and some research suggest that trichotillomania patients frequently pull their hair while not being aware of doing so, and experience few obsessional-like thoughts related to hair pulling (Christenson *et al.*, 1991; Christenson, Ristvedt, & Mackenzie, 1993).

OCD and TCM also differ in that many OCD patients experience significant impairments in daily functioning, whereas the hair plucking behavior of most trichotillomania patients does not profoundly limit their daily life. Obsessive-compulsive patients often experience several different ritualistic symptoms over time, while patients with TCM rarely develop additional compulsive behaviors other than hair plucking. Stanley *et al.* (1992), in comparing patients with TCM ($N = 8$) and OCD ($N = 13$), reported that TCM patients had an earlier age at onset, were less anxious and less depressed, and reported significantly less Axis II pathology and fewer obsessive-compulsive symptoms than patients with OCD. The dependent variables examined by Stanley *et al.* (1992) included the Yale-Brown Obsessive-Compulsive Scale, the Leyton Obsessional Inventory, the Anxiety Disorders Interview Schedule—Revised, the Hamilton Rating Scale for Depression, the Hamilton Anxiety Scale, the State-Trait Anxiety Inventory, the Beck Depression Inventory, and the Personality Disorders Examination.

Stimulated by these clinical impressions and prior research results, we examined a variety of demographic, etiologic, and psychometric variables in patients with either TCM or OCD. Our study follows up on the earlier work of Stanley *et al.* (1992) through using larger samples of clinical patients, and differing measures of psychiatric symptomatology. Given that TCM and OCD are categorized as distinct and separate disorders in the DSM-III-R, it was hypothesized that significant differences between the two syndromes would be apparent on the variables measured.

METHOD AND PROCEDURES

Patients

Forty patients were selected from the clinic files at the University of Michigan Anxiety Disorders Program. Patients were referred from various

sources including local mental health professionals, nonpsychiatric physicians, patient support groups, national anxiety disorder and obsessive-compulsive organizations, and self-referrals. They presented to the Anxiety Disorders Program seeking help for either TCM or OCD. They *were not* recruited through media advertising for research subjects.

TCM patients were selected from a total clinic pool of 43 records of individuals meeting the *DSM-III-R* criteria for TCM, and the OCD patients were selected from a similar pool of 75 patients. The TCM sample consisted of 18 whites, 1 black, and 1 Asian; there were 18 females and 2 males; and the ages ranged from 14 to 42 years, with a mean of 29 years. The distribution of childhood religion was four Catholics, seven Protestants, two Baptists, two Jews, and five reporting no religion. The sample of 20 OCD patients was not randomly selected; rather they were matched on the basis of gender and age with the randomly chosen TCM patients. The OCD group consisted of 16 whites, 1 Hispanic, 1 Asian, and 2 of other ethnic origin. The gender distribution was 18 females and 2 males, with ages ranging from 18 to 55 years (mean, 34 years). Distribution of childhood religion was reported as six Catholics, five Protestants, three Baptists, two Jews, two reporting as "other," and two reporting no religion. These data suggest that the matching procedure successfully obtained two groups of patients who differed diagnostically but were similar demographically.

Diagnosis and Outcome Measures

After a 2-hr evaluation interview each patient had been diagnosed by a faculty clinician who was skilled in the use of the *DSM-III-R* criteria. Before these diagnostic interviews, each patient had completed and returned an evaluation packet containing demographic, personal, family, medical, and psychiatric histories, the Symptom Checklist-90-Revised (SCL-L-R; Derogatis, Lipman, & Covey, 1973), the Fear Survey Schedule (FSS; Wolpe & Lang, 1969), and the CAGE alcoholism survey (Mayfield, Mcleod, & Hall, 1974). This packet of questionnaires was reviewed by the clinician prior to the initial appointment. It should be noted that the clinicians did not follow a structured clinical interview or other diagnostic protocol and that different clinicians (M.D.'s, Ph.D.'s, and M.S.W.'s) arrived at the primary *DSM-III-R* diagnosis. Thus our creation of two presumably distinct patient groupings (OCD and TCM) represents *clinical* diagnostic categories as opposed to *research*-based ones. While we believe that the differential diagnoses of TCM and OCD are relatively easy to discriminate,

the absence of known interrater agreement with respect to diagnosis suggests a cautious approach to the interpretation of our findings.

Stressors at onset were obtained from written responses to the question, "Please describe any particular stresses (or life changes) that you were experiencing when your problem began," which is part of the routine battery of items included in each patient's evaluation packet. Responses were then coded according to the following six categories: Separation—which included parental divorce, parent leaving home, going away to camp, etc.; Loss—including death of a significant person; Sexual abuse; Physical illnesses; and Social—including modeling of compulsive behavior, interpersonal conflicts, dating, etc. Two of the authors (J.A.H. and P.S.B.) independently rated 20 randomly selected patient responses and interrater agreement regarding the category of stressors associated with the onset of the disorder was found to be 95%, indicating that the rating of stressors was a reliable one.

RESULTS

Several significant differences were found between the two patient groups. Table I summarizes results of analyses of variance on several psychometric and demographic variables. The two groups were found to differ in age at onset, with the OCD group reporting a statistically significantly (using a two-sample *t* test) older mean age at onset than those with TCM. The two groups differed on 8 of the 11 subscales of the SCL-90-R: obsessive-compulsive symptoms, depression, interpersonal sensitivity, anxiety, phobic anxiety, psychotic symptoms, global symptom index, and positive symptom distress index. On each of these scales, the obsessive-compulsive group scored statistically significantly higher, indicating greater psychiatric symptomatology. The OCD group also scored higher on the FSS total score, reflective of overall anxiousness.

Life stressors associated with the onset of each disorder were compared and significant differences were found between the two diagnostic groups (see Table II). The OCD group often reported stressors related to separation or loss, whereas trichotillomania patients more often reported stressors centered around school/social situations (i.e., dating, academic performance), physical symptoms or illnesses (i.e., rash, eye irritations, allergies), and sexual abuse. Overall, no significant differences in DSM-III-R concurrent Axis-I diagnoses were found between TCM and OCD patients [$\chi^2(7) = 10.5, p = .16$] (see Table III). However, 25% of the OCD patients versus 5% of the TCM patients experienced comorbid Axis I major depression [$\chi^2(1) = 2.92, p = .08$], which is nearly statistically significant.

Table I. Clinical and Psychometric Measures of Patients with Trichotillomania (TCM; $n = 20$) or Obsessive-Compulsive Disorder (OCD; $n = 20$)

Measure	Mean (SD)	
	TCM	OCD
Age at intake	29.2 (7.2)	34.0 (9.7)
Age at onset	12.8 (4.9)	17.6 (9.4)*
Total FSS score	71.1 (46)	128.4 (93)*
SCL-90-R subscale		
Somatization	.39 (.61)	.60 (.54)
Obsessive-Compulsive	.74 (.78)	1.98 (.87)***
Interpersonal Sensitivity	.80 (.68)	1.49 (1.0)*
Depression	.72 (.63)	1.82 (1.0)***
Anxiety	.55 (.58)	1.43 (1.0)**
Hostility	.59 (.65)	.89 (.83)
Phobic Anxiety	.30 (.54)	.82 (.72)**
Paranoid Ideation	.50 (.59)	.94 (.94)
Psychoticism	.38 (.50)	.98 (.84)**
Global Symptoms	.56 (.59)	1.26 (.78)**
Positive Symptoms	1.53 (.43)	2.23 (.54)****

* $p < .05$, using two-sample t tests.

** $p < .01$, using two-sample t tests.

*** $p < .001$, using two-sample t tests.

**** $p < .0001$, using two-sample t tests.

Table II. Reported Psychosocial Stressors at Onset of Trichotillomania (TCM; $n = 19$) and Obsessive-Compulsive Disorder (OCD; $n = 20$)*

Stressor	% reporting stessor	
	OCD patients	TCM patients
Separation	16	5
Loss	11	0
Sexual abuse	0	10
Physical abuse	0	15
Social	16	30
Other	42	10

* $\chi^2 = 13.58$; $p < .05$.

Several other categorical comparisons were examined, including religion, marital status, race, Axis-II diagnoses, periods of remission, and the CAGE alcoholism survey. None yielded statistically significant differences.

Table III. Concurrent DSM-III-R Axis-I Diagnoses (*n*)

Diagnosis	TCM (<i>n</i> = 20)	OCD (<i>n</i> = 20)
Major depression	1 (5%)	5 (25%)
Panic disorder with agoraphobia	0	1 (5%)
Generalized anxiety	2 (10%)	0
Simple phobia	3 (15%)	0
Social phobia	1 (5%)	1 (5%)
Other	1 (5%)	3 (15%)
None	12 (60%)	10 (50%)

DISCUSSION

The results of this study support the current diagnostic nomenclature, which defines OCD and TCM as distinct and separate syndromes. Patients meeting the DSM-III-R criteria for OCD were found to experience substantially greater psychopathology than trichotillomania patients as measured by the SCL-90-R. Our results corroborate those of Stanley *et al.* (1992), with the present study employing larger sample sizes and differing measures of psychopathology, compared to the earlier report. Such replicated findings are essential towards supporting diagnostic systems such as the *DSM* approach.

It is not surprising that OCD patients scored higher on the SCL-90-R obsessive-compulsive subscale since it measures behavior central to the diagnosis of OCD. Stanley *et al.* (1992), also found OCD patients spent more time than those with TCM obsessing and ritualizing. The higher depression ratings among OCD patients found in the present study are consistent with other studies reporting greater levels of depression among OCD patients (Barlow, 1988; Stanley *et al.*, 1992). The lower depression scores of trichotillomania patients may result either from the lesser impact of the symptoms on their overall functioning or from differing pathophysiology. Higher scores of OCD patients on the anxiety and phobic anxiety subscales of the SCL-90, coupled with higher total FSS scores, indicate a greater amount of comorbid anxiety symptoms among OCD patients. Stanley *et al.* (1992) similarly found higher anxiety ratings among OCD patients.

Somewhat puzzling is the lack of greater comorbid Axis I anxiety disorder diagnoses among OCD subjects in this study. This finding could indicate that a higher level of comorbid anxiety is present but does not result in additional formal anxiety disorder diagnoses. Higher ratings of psychoticism among OCD patients are consistent with other reports postulating an

association between certain symptoms of OCD (e.g., overvalued ideas) and psychotic features (Insel & Akiskal, 1986). Higher interpersonal sensitivity scores among obsessive-compulsives is somewhat surprising given possible hair/eyelash/eyebrow loss and its potential negative social consequences for persons with TCM.

The psychometric data and accompanying speculation presented here should be viewed with some caution given the post hoc nature of this study. The significant differences in age at onset and stressors associated with the onset of the disorder also serve as evidence in favor of classifying the disorders separately. The early onset of trichotillomania is consistent with other reports indicating childhood onset (Swedo *et al.*, 1989; Christenson *et al.*, 1991). Onset of OCD in the late teens is also consistent with prior studies (e.g., Rasmussen & Eisen, 1988). The differences in stressors associated with the onset of the disorders is likely indicative of differing stressors present during the time of life when the disorder began. Of particular interest is the incidence of sexual abuse and physical illnesses associated with the onset of trichotillomania. These difficulties have been previously reported as associated with the onset of trichotillomania (Singh & Maguire, 1989). Rashes and eye irritation (physical stressors) reported at the time of onset by some trichotillomania patients suggest that repetitive plucking may be a complication of initial efforts to soothe irritation. These onset findings must be viewed with some caution given the retrospective nature of the age at onset and stressors associated with onset data. Future prospective studies are needed to further confirm these findings.

Given attempts to match the two samples of patients used in this study for gender, any inferences regarding the "true" gender distribution for persons with OCD is not possible. Our matching procedure involved randomly selecting trichotillomania patients initially, followed by selection of the OCD group designed to be roughly equivalent to the trichotillomania group according to gender. The TCM group contained a preponderance of women (80%), similar to that reported in earlier work (Swedo *et al.*, 1989; Christenson *et al.*, 1991). When considering all of the patients with a primary diagnosis of trichotillomania in our clinic to date ($n = 68$), an even greater preponderance of women is found (91% female). Among all obsessive-compulsive patients in our clinic ($n = 319$), the gender distribution is more equal (57% female), which corroborates earlier reports (e.g., Thyer, Parrish, Curtis, Nesse, & Cameron, 1985; Rasmussen & Tsuang, 1986). It appears from these data that the gender distributions for TCM and OCD are dissimilar, with comparatively more women reporting TCM relative to men.

Our overall impression from this study is that OCD patients are significantly more impaired than patients with TCM. In addition, age at onset

and gender distribution are also substantially different between the two groups. Our clinical impressions also suggest important differences between TCM and OCD including the lower frequency of controlling thoughts associated with TCM, less of an impulsive/compulsive feature with TCM, less rigid rules associated with hair plucking, and the stability of hairpulling compulsions. In agreement with Stanley *et al.* (1992), we contend that the preponderance of the clinical and research evidence supports the practice of diagnostically separating TCM and OCD.

Further research is needed to address the question of a shared pathophysiology between OCD and trichotillomania. In addition, future research investigating family history, comorbidity, etiology, and symptom presentation is needed to resolve satisfactorily the issues involving classification of trichotillomania and OCD.

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