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ASSESSMENT OF DSM-IV PERSONALITY DISORDERS IN OBSESSIVE-COMPULSIVE DISORDER: COMPARISON OF CLINICAL DIAGNOSIS, SELF-REPORT QUESTIONNAIRE, AND SEMI-STRUCTURED INTERVIEW

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In patients with obsessive-compulsive disorder, personality disorders are not many times assessed according to DSM-IV criteria. The purpose of the present study is to examine the prevalence of personality disorders diagnosed according to the DSM-IV in a severely disordered OCD population (n = 65) with three different methods of assessing personality disorders (structured interview, questionnaire, and clinical diagnoses). Furthermore, correspondence between these different methods was investigated and their construct validity was examined by relating the three methods to external variables. Each method resulted in a predominance of Cluster C personality disorders, and obsessive-compulsive personality disorder had the highest prevalence. However, there was generally low correspondence regarding which patient had which personality disorder. Results concernign the relation of external variables were the most promising for the structured clinical interview.

INTRODUCTION

In clinical samples of patients with obsessive-compulsive disorder (OCD) the prevalence of personality disorders was found to be at least 50%, with a predominance of cluster C personality disorders (e.g., Steketee, 1990; Horesh, Dolberg, Kirschenbaum Aviner, & Kotler, 1997; Bejerot, Ekselius, & von Knorring, 1998). However, which of the specific Cluster C diagnoses obtains the highest prevalence depends, among others, on which version of the DSM is used for the assessment of personality disorders. This is illustrated by the research of Baer et al. (1990), who showed that the prevalence of obsessive-compulsive personality disorder in a sample of OCD patients

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increased when DSM-III-R criteria were applied instead of DSM-III criteria. Assessments of personality disorders in OCD are scarce according to DSM-IV criteria. In one study using the DSM-IV, a predominance of Cluster C personality disorders was found, with the majority of patients fulfilling criteria for obsessive-compulsive personality disorder (Samuels et al., 2000).

In the absence of a gold standard, the most valid assessment method for personality disorders remains under debate (Zimmerman, 1994). Unstandardized clinical diagnoses, self-report inventories, and (semi-) structured interviews are the most commonly used methods. The reliability of clinical Axis II diagnoses is poor, whereas standardized instruments tend to possess higher levels of interrater and short-term test-retest reliability (Zimmerman, 1994). The convergent validity between instruments assessing the DSM Axis II disorders is generally poor, while within-method correspondence is slightly higher than between-method correspondence (Clark, Livesley, & Morey, 1997; Perry, 1992; Schotte, 2000). Because Axis II diagnoses are not significantly comparable across methods beyond chance, results are not interchangeable (e.g., Kennedy et al., 1995; Mann et al., 1999). More insight with regard to the validity of methods could be gained by investigating their relationship with variables like treatment outcome, biological markers, and demographic and/or clinical characteristics, variables supposedly related to the presence of a personality disorder. In OCD, patients with comorbid personality disorders were found to have more depressive and anxious symptoms and more impairment in functioning compared to OCD patients without comorbid personality disorders (e.g. Mavissakalian, Hamann, & Jones, 1990; Matsunaga et al., 1998). On the contrary, comorbid personality disorders appeared not to be related to more severe obsessive-compulsive symptoms (e.g. Steketee, 1990; McKay, Neziroglu, Todaro, & Yaryura-Tobias, 1996; Cavedini, Erzegovesi, Ronchi, & Bellodi, 1997).

The present study aims first to investigate the prevalence of personality disorders in an OCD population diagnosed according to DSM-IV definitions. Three different methods are used to assess personality disorders; semi-structured interview, questionnaire, and clinical diagnosis based on an unstructured interview. Second, the convergence between these three methods for the categorical DSM-IV Axis II diagnoses will be investigated. Third, the construct validity of the three methods will be examined by relating the results of each method to external variables. For each method the relationship with the level of obsessive-compulsive, depressive, and anxious symptoms, and the level of global functioning is examined. Higher levels of construct validity imply that for each method, patients with a comorbid personality disorder are hypothesized to have more anxious and depressive symptoms, and a lower level of functioning, compared to patients without a comorbid personality disorder. We expect no differences in obsessive-compulsive symptoms between patients with and patients without a comorbid personality disorder.

METHOD

SUBJECTS

Sixty-five patients with a primary diagnosis of obsessive-compulsive disorder according the DSM-IV (American Psychiatric Association, 1994) entered this study. These 65 subjects were part of a larger sample participating in a drug trial in which they received a standardized, 12-week treatment with either paroxetine (after 6 weeks a fixed dose of 60 mg/day) or venlafaxine (after 6 weeks a fixed dose of 300 mg/day) (Denys, van der Wee, van Megen, & Westenberg, 2002).The MINI International Neuropsychiatric Interview (Sheehan et al., 1998) was used to establish the diagnosis. The study was carried out at the outpatient Clinic for Anxiety Disorders at the University Medical Center Utrecht. This unit offers specialized treatment for anxiety disorders.

The sample was predominantly female (60%) and had a mean age of 35.2 years (*SD* = 10.9). Regarding marital status, 48% were single, 51% were married or living together, and 2% were widowed. Fifty percent of the patients were employed, 37% were unemployed, and 12.5% were students. The mean age of onset of obsessive-compulsive symptoms was 18.7 years (*SD* = 9.9), with an illness duration of 16.1 years (*SD* = 11.4). The mean Yale-Brown Obsessive-Compulsive Scale (Y-BOCS; Goodman et al., 1989) total score was 25.9 (*SD* = 5.5); this mean score reflects a severe level of obsessive-compulsive symptomatology (Goodman & Price, 1992). Most patients (82%) were treated previously for OCD.

Exclusion criteria were: comorbid Axis I conditions (major depression, bipolar disorder, schizophrenia or any other psychotic disorder, tic disorder, substance-related disorder during the past 6 months), a Hamilton Depression Rating Scale (Hamilton, 1967) score higher than 16, treatment with antidepressants or neuroleptics for 2 weeks and cognitive-behavior therapy for 3 months before the screening visit, intake of psychotropic drugs, with the exception of 30 mg of oxazepam or equivalent dose of any other benzodiazepine, during the trial.

INSTRUMENTS: ASSESSMENT OF PERSONALITY DISORDERS

Clinical Diagnosis of Personality Disorders. Two trained and experienced psychiatric residents conducted an unstructured interview to assess the presence of Axis II disorders.

Semi-structured interview. The Dutch version of the Structured Clinical Interview for DSM-IV Axis II Personality Disorders (SCID-II; First, Spitzer, Gibbon, Williams, & Benjamin, 1994; Weertman, Arntz, & Kerkhofs, 1997) was used for the assessment of DSM-IV personality disorders. The SCID-II is a semi-structured interview of 140 items, organized by diagnosis, covering the ten personality disorders included in the DSM-IV Axis II and the two personality disorders (passive-aggressive and depressive personality disorder) proposed for further study. Most studies on the reliability and validity of the SCID-II relate to the DSM-III-R version of the interview (e.g., Arntz et al., 1992; Dreessen & Arntz, 1998) and mention an adequate interrater reliability and a reasonable level of test-retest reliability. Maffei et al. (1997) re-

ported adequate levels of interrater and internal consistency reliability for the DSM-IV version of the SCID-II.

Two interviewers, who were blind to the clinical diagnosis and questionnaire outcomes, conducted the SCID-II interviews. One of the two interviewers, a qualified psychologist, received training in the administration and scoring of the SCID-II by the authors of the Dutch translation. In order to assess interrater reliability between the two interviewers, they conducted ten joint interviews, in which they took turns being the first, then second, raters. Good interrater reliability was shown; a median kappa of .89 for the categorical diagnoses was found.

Questionnaire. The Assessment of DSM-IV Personality Disorder (ADP-IV; Schotte, de Doncker, Vankerckhoven, Vertommen & Cosyns, 1998) was administered as a questionnaire to assess DSM-IV personality disorders. The ADP-IV consists of 94 items that represent the 80 criteria of the 10 DSM-IV personality disorders and the 14 research criteria of the depressive and passive-aggressive personality disorders in a randomized order. Each DSM-IV item is scored on a 7-point trait scale, ranging from 1 (totally disagree) to 7 (totally agree). Furthermore, when a person acknowledges the presence of the trait by a score of 5 (rather agree) or higher on a trait question, he/she has to fill in a distress question as well. This distress question is: "Has this characteristic ever caused you or others distress or problems?" The answer to this question is rated on a 3-point scale: 1 (totally not), 2 (somewhat), 3 (most certainly). In summary, the ADP-IV assesses for each personality disorder criterion the self-judged typicality of the criterion by means of a 7-point trait question; the distress, maladaptivity, and suffering of the subject or of the people around him or her as a consequence of the presence of the trait criterion is subsequently assessed with the 3-point distress question.

This structure allows dimensional and categorical scoring formats. The categorical diagnostic evaluation joins the DSM-IV personality disorder definition by combining the trait and distress scores in scoring algorithms. In the algorithm that we used for the present study, an item scores positive/pathological and represents a DSM-IV criterion only when a trait score of 5 (rather agree), 6 (agree), or 7 (totally agree), and a distress score of 2 (somewhat) or 3 (most certainly) are obtained simultaneously. Subsequently, categorical personality disorder diagnoses are obtained according to the DSM-IV thresholds.

INSTRUMENTS: SYMPTOMS AND FUNCTIONING

The Global Assessment of Functioning Scale (GAF) was used as an overall measure of functional impairment. The Y-BOCS (Goodman et al., 1989) was administered to rate the severity of obsessive-compulsive symptoms. Depression was assessed with the Hamilton Depression Rating Scale (HDRS; Hamilton, 1967), and anxiety symptoms with the Hamilton Anxiety Scale (HAS; Hamilton, 1959).

PROCEDURE

Following the unstructured clinical interview and the confirmation of the primary OCD DSM-IV diagnosis with the administration of the MINI, written informed consent was obtained for participation. During this unstructured clinical interview by one of two psychiatric residents, Axis II disorders were assessed, and the Y-BOCS, GAF, HAS, and HDRS, were administered. The next week, the SCID-II interview was administered by one of two interviewers, who were unaware of the clinical Axis II diagnoses, and patients received the ADP-IV questionnaire to complete at home within 2 weeks.

Not all assessments were available—one patient's HDRS was missing, three patients' HASs were missing, and no GAF scores were available for 12 patients.

STATISTICAL ANALYSIS

Cohen's kappa (Cohen, 1960) was used to estimated agreement on categorical personality disorder diagnosis made using the three methods. The categorical variables were (1) presence of one or more full-blown personality disorders, regardless of type; (2) presence of one or more cluster A, B, or C personality disorders; (3) presence of specific personality disorders.

The reliability of the κ coefficient is influenced by the illness base rate: a few diagnostic disagreements have a more pronounced effect on reliability when the base rate is low (Zimmerman, 1994). Therefore, the following illness base rate requirements were made. Kappa was calculated only if at least five subjects were diagnosed with a personality disorder by every method. Generally, kappa values larger than 0.75 indicate excellent agreement, values below 0.40 indicate poor agreement, and values in between indicate fair to good agreement (Fleiss, 1986).

For to every method, the OCD patient group was divided into a group with and a group without comorbid personality disorders. Consequently, these groups were compared with regard to obsessive-compulsive symptoms, anxiety symptoms, depressive symptoms, and GAF score with student T-tests.

RESULTS

The percentages of patients with personality disorder diagnoses according the SCID-II, ADP-IV, and clinical assessment are presented in Table 1. According to the clinical diagnosis, 29.2% of the patients were diagnosed with at least one Axis II diagnosis; most of those diagnoses occured in Cluster C, with the dependent and obsessive-compulsive personality disorders obtaining the highest prevalence. With the SCID-II and ADP-IV instruments, respectively, 50.8% and 55.4% of the patients received at least one personality disorder diagnosis. However, with the ADP-IV, compared to the SCID-II, almost twice the number of patients received two or more comorbid personality disorder diagnoses instead of just one, namely 26.1% versus 13.8%. Comparable to the clinical diagnosis, with the ADP-IV and the SCID-II, obsessive-compulsive personality disorder obtained the highest prevalence,

TABLE 1. Prevalence of Personality Disorder Diagnoses (%) in a Sample of 65 OCD Patients According to Clinical Diagnosis, SCID–II, and ADP–IV

	Clinical diagnosis	SCID–II	ADP–IV
PD present	**29.2**	**50.8**	**55.4**
Paranoid PD	0	3.1	6.2
Schizotypal	0	3.1	3.1
Schizoid	0	0	3.1
Cluster A	**0**	**6.2**	**10.7**
Antisocial PD	0	1.5	6.2
Borderline	6.2	9.2	24.6
Histrionic	0	0	1.5
Narcissistic	0	0	0
Cluster B	**6.2**	**9.2**	**27.7**
Avoidant	3.1	23.1	23.1
Dependent	7.7	4.6	10.8
Obsessive–Compulsive	10.8	24.6	29.2
Cluster C	**21.5**	**46.2**	**46.2**
PD NAO	1.5	—	—

but in contrast with it, dependent personality disorder did not; however the avoidant personality disorder was found to be the second most prevalent Cluster C personality disorder diagnosis. The major difference between the ADP-IV and the two other methods concerns the prevalence of cluster B personality disorders and in particular borderline personality disorder. The percentages found with the ADP-IV are, respectively, between two and four times higher than with the SCID-II and the clinical diagnosis.

Table 2 shows the correspondence between the clinical diagnosis and the SCID-II and ADP-IV diagnosis, respectively. Except for the correspondence of dependent personality disorder between the ADP-IV and the clinical diagnosis, the kappa values are all below 0.40. Hence, correspondence between the clinical diagnosis and the two other methods can be considered poor. In Table 3, the correspondences between the SCID-II and the ADP-IV are shown. The range of kappa values for the presence of any personality disorder, avoidant personality disorder, and presence of any Cluster C personality disorder lies between 0.44 and 0.54, suggesting a fair to good agreement. Regarding the presence of any Cluster B personality disorder, borderline personality disorder, and obsessive-compulsive disorder, kappa values were below 0.40, indicating a level of poor agreement.

In Table 4, the mean scores of the Y-BOCS, HAS, HDRS, and GAF for patients with and without comorbid personality disorders, according the three methods are shown. When patients were categorized as personality disorder absent or present according the clinical diagnosis, and according the ADP-IV, no differences were observed in the HAS, HDRS, and GAF scores. In contrast, the categorization with the SCID-II resulted in differences on these three measures in the predicted direction (i.e., higher depressive and anxiety symptoms and a lower GAF score for patients with a personality disorder diagnosis compared to patients with no personality disorder). With regard to the scores of the Y-BOCS, only categorization with the ADP-IV resulted in a

TABLE 2. Correspondence between Clinical Diagnosis and ADP–IV and SCID–II Expressed in Kappa Coefficients and in Percentage Agreement (Po)

	SCID–II		ADP–IV	
	Kappa	**Po (%)**	**Kappa**	**Po (%)**
PD present	.14	57%	.15	55%
Dependent PD	—	—	.45	91%
Obsessive–compulsive PD	.23	77%	.27	74%
Cluster C	.13	58%	.13	58%

Note. Kappa values >.22 are significant at a $p < .05$ level.

difference between patients with and without a personality disorder diagnosis (patients with a personality disorder diagnosis according the ADP-IV scored higher on the Y-BOCS compared to patients without a comorbid personality disorder).

DISCUSSION

The first goal of the present study was to examine the prevalence of personality disorders in an OCD population according to DSM-IV definitions. We found that each method for assessing personality disorders (the clinical diagnosis, the semi-structured interview, and the self-report questionnaire) resulted in a predominance of Cluster C DSM-IV personality disorders in a severely disordered OCD population. Of the Cluster C personality disorders, it was the obsessive-compulsive personality disorder that had the highest prevalence according every method. With the ADP-IV and the SCID-II, the second most prevalent cluster C personality disorder was avoidant personality disorder, in contrast to dependent personality disorder found with the clinical diagnosis. These findings are in line with most of the other studies that used previous formats of the DSM. In these studies, the prevalence of personality disorders in OCD shows a predominance of obsessive-compulsive personality disorder, and Cluster C personality disorders in general, as well (e.g. Bogetto, Barzega, Bellino, Maina, & Ravizza, 1997; Cavedini et al., 1997; Dreessen, Hoekstra, & Arntz, 1997; Horesh, Dolberg et al., 1997; Bejerot et al., 1998; Samuels et al., 2000). Except for the last study, where DSM-IV criteria were applied, DSM-III-R criteria were used. The present study reveals that when applying DSM-IV criteria, obsessive-compulsive personality disorder is also the most prevalent personality disorder in clinical samples of OCD patients. This finding poses the question of whether the relationship between OCD and obsessive-compulsive personality disorder is true or a consequence of conceptual confusion between the criteria of both disorders.

We found that a clinical diagnosis resulted in a lower frequency of personality disorders compared to the structured interview and the self-report questionnaire. This is in accordance with Zimmerman and Mattia (1999), who have shown that a clinical diagnosis resulted in a lower frequency of borderline personality disorder than a structured interview.

Our second goal was to examine correspondence between the three methods. These results call into question the conclusion mentioned above con-

TABLE 3. Correspondence between SCID–II and ADP–IV Diagnoses Expressed in Kappa Coefficients and in Percentage Agreement (Po)

	Kappa	Po (%)
PD present	.54	77%
Borderline PP	.27	78%
Cluster B	.32	78%
Avoidant	.48	82%
Obsessive Compulsive	.34	74%
Cluster C	.44	72%

Note. All reported kappa values are significant at a $p < .05$ level.

cerning the predominance of obsessive-compulsive personality disorder. Although the predominance of obsessive-compulsive personality disorder was found with every method, methods did not correspond concerning which patients had an obsessive-compulsive personality disorder. Overall, correspondence between the clinical diagnosis on the one hand and the ADP-IV and the SCID-II diagnoses on the other was low. The low correspondence of the clinical diagnosis with both standardized methods, and the somewhat higher correspondence between the standardized methods, is not surprising and is consistent with earlier reports (Perry, 1992; Schotte, 2000). Both standardized methods employ inquiry into each criterion of each personality disorder diagnosis, in contrast to the clinical diagnosis, where assessments are made through more general descriptions given by the patient. Correspondence between the ADP-IV and the SCID-II diagnoses reached a fair to good agreement for some diagnostic categories. Correspondence was never, however, excellent (i.e., a kappa value above 0.75). This is in line with the research of Schotte, de Doncker, Dmitruk, de Valck and van Mulders (2002), who found only moderate correspondence between the SCID-II and ADP-IV in a mixed psychiatric population.

As already mentioned in the Introduction, there is no consensus about which of the methods to assess personality disorders is more valid. We wanted to address the question of validity by examining the relationship of these three methods with variables found to be related to the presence of a personality disorder diagnosis in OCD, namely higher levels of depressive and anxious symptoms and more functional impairment in OCD patients with a comorbid personality disorder as compared to OCD patients without a comorbid personality disorder (e.g. Mavissakalian et al., 1990; AuBuchon & Malatesta, 1994; Matsunaga et al., 1998). We found that patients with a SCID-II diagnosis of a personality disorder indeed had more depressive symptoms (even while in the present study patients with a HDRS score of 16 and higher were excluded), more anxiety symptoms, and a lower GAF score than patients without a comorbid personality disorder. Patients with and without a comorbid personality disorder diagnosis, according the clinical diagnosis and the ADP-IV, showed no difference on any of the three variables. With the ADP-IV, a difference in obsessive-compulsive symptoms was found between patients with and without a personality disorder. However, other studies have shown that the severity of obsessive-compulsive symptoms is

TABLE 4. Results of the T–tests with Y–BOCS, HDRS, HAS and GAF Scores as Dependent Variables and the Diagnostic Axis II Disorder Present/Absent Subgrouping as Independent Variable

	Clinical diagnosis			SCID–II			ADP–IV		
	PD	**No PD**	***p***	**PD**	**No PD**	***p***	**PD**	**No PD**	***p***
Y–BOCS (SD)	27.8 (4.7)	25.2 (5.7)	.08	26.9 (5.5)	24.9 (5.4)	.14	27.4 (5.5)	24.1 (5.1)	.02
HAS (SD)	10.1 (6.2)	9.8 (5.0)	.82	11.3 (6.1)	8.5 (4.1)	**.04**	10.7 (6.1)	8.9 (4.1)	.21
HDRS (SD)	7.7 (4.6)	7.3 (4.5)	.78	8.7 (5.0)	6.1 (3.5)	**.02**	8.3 (4.8)	6.4 (3.9)	.09
GAF (SD)	56.4 (7.2)	58.7 (7.9)	.31	55.8 (7.7)	60.0 (7.3)	**.05**	56.3 (6.9)	60.0 (8.4)	.09

not related to the presence or absence of personality disorders (Steketee, 1990; McKay et al., 1996; Ricciardi et al., 1992). Hence, this finding suggests that answers received via a questionnaire might be more susceptible to interference from OCD symptoms compared to those elicited by an interview. This may imply a greater value for a semi-structured interview compared to the questionnaire method for the assessment of personality disorders in OCD patients. Therefore, when these results are taken into consideration, assessment of personality disorders with SCID-II seems the most valid. However, we are aware that there are other variables that could be used as external criteria to validate the different methods as well, which should be examined first. Furthermore, the SCID-II and the HAS, HDRS, and GAF share the same method of assessing, namely an interview. In contrast, the ADP-IV is a self-report questionnaire. This shared method could be another explanation for the findings with regard to the SCID-II in contrast to the ADP-IV.

To summarize, although all three methods used for assessing DSM-IV personality disorders in a OCD population obtained the highest prevalence for Cluster C personality disorders and more particularly for obsessive-compulsive personality disorder, the convergence between the three methods was rather low. Our attempt to examine which method was most valid by using external measures is most promising with regard to the SCID-II.

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