

Impact of Personality Profile on Patients with Obsessive Compulsive Disorder in an Egyptian Sample

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Abstract

Personality is manifest at all levels of the clinical practice in psychiatry. When discussing the etiology, diagnosis, assessment, management and outcome of any psychiatric disorder; the influence of personality status needs to be considered. Sporadic Egyptian studies estimated the prevalence rates of obsessive compulsive disorder (OCD) patients to be 2.6-3%, so this study was set out to assess personality in OCD, both as categorical personality disorders and as dimensional personality traits, and to explore the impact of personality factors on patients with OCD as regards the severity and expression of obsessive-compulsive symptoms, onset, course, duration, as well as the level of functioning and quality of life. This comparative study has enrolled 60 male and female patients aged over 18 years, with a primary diagnosis of OCD using DSM-IV-TR criteria, by convenient sampling. They were assessed using: 1. Structured Clinical Interview for DSM-IV-TR axis I disorders clinical version (SCID-I-CV) to diagnosis OCD and to exclude comorbid axis I disorders. 2. Medical and neurological history and examination to exclude concomitant medical or neurological illnesses. 3. Detailed history of the OCD condition. 4. Y-BOCS symptom checklist and Y-BOCS severity scale. 5. Structured Clinical Interview for DSM-IV-TR axis II disorders (SCID-II) scale. 6. Temperament and Character Inventory-Revised (TCI-R) scale. 7. Rotter Internal – External control scale. 8. Self-esteem scale. 9. PCASEE Quality of Life scale. 10. Global Assessment of Functioning scale (GAF). 11. Modified Social Score of Egyptian Community. Of the 60 OCD patients, 31 (51.7%) received one or more personality disorder (PD) diagnoses. Obsessive-compulsive personality disorder was the most frequently occurring PD in the OCD sample, however, with no specific relation between the two disorders. Presence of any cluster (B) PD was associated with higher symptoms severity. Presence of any cluster (A) PD suggested the presence of multiple PDs which in turn had a greater negative impact on many OCD features. Personality disorder comorbidity and the Self-Directedness character trait were the most important personality variables affecting almost all OCD features in the form of symptoms severity, expression, course, overall duration of the illness, time passed before initiating treatment, compliance, and most importantly, the functioning and quality of life of OCD patients. Lower scores of self-esteem and higher (external) locus of control scoring were associated with higher total Y-BOCS severity. The personality profile in the form of comorbid personality disorders, pathological temperament and character traits, self-esteem, and locus of control; besides their own pattern of significant clinical distress and impairment in social and occupational functioning; they have, in addition, a significant negative impact on the clinical characteristics of obsessive-compulsive disorder.

Introduction

Personality is manifest at all levels of the clinical practice of psychiatry. When discussing the etiology, diagnosis,

assessment, management and outcome of any psychiatric disorder, the influence of personality status needs to be considered.

This is because a sufferer from mental disorder, whatever its nature, also has a personality, and its influence may be critical to understanding and treatment (Tyrer & Simonsen, 2003). Psychiatrists and other clinicians have often speculated on whether the presence of a personality disorder (PD) would have a specific influence on clinical picture and indicate a poorer course of treatment for an Axis I disorder? (Reich, 2003).

Obsessive-compulsive disorder (OCD) is considered the fourth most common psychiatric diagnosis after phobias, substance-related disorders, and major depressive disorder (Sadock & Sadock, 2003). Sporadic Egyptian studies estimated the prevalence rates of OCD to be 2.6% and 3% (Okasha et al., 1968 and El-Saadani, 1996 respectively). The economic consequences of OCD are wide-ranging, often long-lasting, and sometimes profound. They fall not only to the people with the disorder, but also to their families and to a much lesser degree to their society.

Personality disorders in general are present in approximately 50% of the psychiatric out-patients, and in 10-15% among the general population (Bodlund et al., 1993; Philips & Gunderson, 1999). In the case of OCD, Denys and his colleagues (2004) found that personality disorders are three times more prevalent in OCD patients than in general population. Moreover, OCD more often co-occur with a number of different personality disorders than, for instance, does panic disorder (Sciuto et al., 1991). The prevalence has varied from 33% to 87% depending on whether self-rating inventories or structured interviews have been used (Rasmussen & Tsuang, 1986; Joffe et al., 1988; Mavissakalian et

al., 1990; Pfohl et al., 1991; Black et al., 1993; Thomsen & Mikkelsen, 1993; Baer & Jenike, 1998; Bejerot et al., 1998a; Matsunaga et al., 1998; Denys et al., 2004). Pigott and his colleagues (1994) concluded that over 50 percent of the OCD patients meet the criteria of at least one personality disorder.

Various explanations have been suggested to account for this comorbidity: (i) OCD predisposes to axis II disorders; (ii) axis II disorders predispose to OCD; or (iii) some environmental or biological risk factor, e.g. personality traits, predisposes to both OCD and personality disorders (Bejerot et al., 1998a).

OCD patients, compared to other non-psychotic patients, are more likely to receive a diagnosis from cluster A (the odd and eccentric cluster) (Pfohl et al., 1991). However, paranoid and schizoid as well as histrionic and antisocial personality disorders seem to be less prevalent in OCD patients than in the general population (Denys et al., 2004). Schizotypal features are present in up to 30 percent of the cases, although only approximately eight percent meet the full criteria for schizotypal personality disorder (Stanley et al., 1990).

The personality theory of Cloninger et al., 1993 is based on the biogenetic hypothesis of temperament and character which underlies patterns of human behavior and, thus, deserves an attention in the field of OCD research (Lyo et al., 2003). The character traits are fluid (i.e., influenced by the environment). Therefore, they are the material that mental health professionals deal with and that deserve our attention.

Personality traits are always measured by dimensional approach which could be more useful in understanding such a

relationship as stated by Summerfeldt et al in 1998. Theorists from a variety of perspectives, including psychoanalytic (Salzman, 1980) and cognitive behavioral (McFall & Wollersheim, 1979), have asserted that obsessive-compulsives are highly perfectionistic and risk-averse, and that these characteristics represent core aspects of the disturbance.

Lower scores on manipulateness, mistrust, and disinhibition also distinguish the personality profile of OCD patients from others. Moreover, it is noteworthy that OCD patients show a pattern of very low self-image, as suggested by the combination of low self-esteem and low entitlement scores (Wu et al., 2005).

So, this study was set out to assess personality in patients with obsessive-compulsive disorder, both as categorical personality disorders and as dimensional personality traits, as well as to explore the impact of personality factors on patients with OCD as regards the severity and expression of obsessive-compulsive symptoms, onset, course, duration, as well as the level of functioning and quality of life.

Methods

Hypothesis:

The hypothesis of this study was that obsessive-compulsive disorder subjects would display differences in between them in specific personality constructs particularly, personality disorders; temperament and character traits; self-esteem; and locus of control. Moreover, this particular personality profile would have a negative impact on OCD features such as the severity and the expression of obsessive-compulsive symptoms, onset,

course, duration, as well as the level of functioning and quality of life.

Subjects:

This comparative study has enrolled 60 OCD patients. The method of selecting subjects was done by convenient sampling. The study was conducted at outpatient clinics and inpatient departments of three centers in an attempt to cover different social classes. So, patients presented with obsessive-compulsive symptoms attending the Institute of Psychiatry, Ain Shams University on Sundays, Mondays and Thursdays were assessed; those attending the Nile Sanatorium were assessed on Saturdays and Tuesdays; and Psychological Medicine Hospital on Wednesdays.

Subjects meeting all criteria listed below were included in the study:

1. Male and female subjects aged over 18.
2. With a primary diagnosis of OCD, using DSM-IV-TR criteria.
3. Oral informed consent obtained.

Subjects presenting with any of the following were not included in the study:

1. Comorbid axis I DSM-IV-TR disorder during the past six months including alcohol or any other drug abuse.
2. Specific medical or neurological conditions that would interfere with the evaluation with the results of the study including: organic mental disease; mental retardation; history of psychosurgery; and history of epilepsy.
3. Unable to understand or implement the study procedures.

Tools:

All patients were assessed using the following tools:

1. Structured Clinical Interview for DSM-IV-TR Axis I Disorders (SCID-I) Clinical Version (SCID-CV): (First et al., 1997)

SCID-I is a semi-structured interview for making the major DSM-IV Axis I diagnosis. It produces an efficient and user friendly instrument so that the advantages of structured interviewing could be applied in clinical settings. It is administered in a single sitting and takes 1 to 3 hours depending on the complexity of the psychiatric history and the skill and experience of the clinician. It is divided into seven diagnostic modules: Mood, Psychotic, Substance abuse, Anxiety, Somatoform, Eating and Adjustment disorders. The Arabic version used in this research was translated and used in previous Egyptian study (Shaker et al., 2003).

2. Yale-Brown Obsessive-compulsive Scale (Y-BOCS): (Goodman et al., 1989)

The Y-BOCS is a clinician administered semi-structured interview. It is considered the gold standard for assessing obsessive-compulsive symptoms. It is the best available measure of OCD severity. The interview is preceded by an optional 64 item checklist that is used to identify the content of obsessive-compulsive symptoms. Both obsessions and compulsions are rated in terms of time spent, interference with functioning, distress, resistance, and control. Rating of each aspect ranges from no symptoms (0) to extreme symptoms (4). Scores of Y-BOCS interview are summed to yield one total score and two subscales (obsessions and compulsions). Total score range from

0-40; higher scores indicate greater severity. Scoring of 10-20 indicates mild symptoms; 20-30 indicates moderate and 30-40 indicates severe symptoms. Administration time of the scale requires approximately 30 minutes. The Arabic version used in this research was translated and validated in many previous studies applied in the Institute of Psychiatry, Ain Shams University (Okasha et al., 1994).

3. Structured Clinical Interview for DSM-IV Axis II Disorders (SCID-II): (First et al., 1997)

SCID-II is a semi-structured interview that was developed to categorically and/or dimensionally assess the DSM-IV personality disorders. It could be used in both clinical as well as research settings. Items are organized by personality disorder. A 119-item yes/no screening questionnaire is available to reduce interview time by identifying personality disorders that are unlikely to be present. Each criterion is scored as 1=absent or false, 2=sub-threshold, 3=threshold or true, or? =inadequate information. Specific guidelines for a score of 3 (threshold) are provided. The average administration time is 20 minutes for the SCID-II screening questionnaire and just less than an hour for the SCID-II interview, when used in conjunction with the screen. The Arabic version used in this research was translated and used in a previous Egyptian study (Hatata et al., 2003).

4. Temperament and Character Inventory-Revised (TCI-R): (Cloninger et al., 1994)

The Temperament and Character Inventory-Revised is a self-report questionnaire that was used to measure biogenetic temperament and acquired character. It is suitable for administration

for adults (18 years and older); the mean administration time is 90-120 minutes. It consists of 240 items measuring the four basic dimensions of *Temperament* namely Novelty Seeking (*NS*), Harm Avoidance (*HA*), Reward Dependence (*RD*), and Persistence (*PS*) and the three primary dimensions of *Character* namely Self-Directedness (*SD*), Cooperativeness (*C*), and Self-Transcendence (*ST*). In this study, the responses were entered into a computer using the Statistical Package for Social Sciences-Version 13 (SPSS-13) program to score the test. The Arabic version used in this study was translated, validated and proved to be reliable in a previous Egyptian research work (El-Sheikh et al., 2003).

5. Self-esteem Scale: (El Dereni et al., 1982)

The self-esteem scale is an Arabic self-reported questionnaire designed to assess the overall self esteem of the reporter. It measures the self view of the reporter to his capabilities in different situations. It is composed of 30 items rated as follows: frequently=2, sometimes=1 and never=0. Items indicating low self esteem are inversely scored.

6. Rotter Internal – External Control Scale: (Rotter, 1966)

This self-administered instrument was designed to assess an important dimension of personality that is the locus of control. It evaluates the orientation of the person regarding external and internal reinforcements influencing his behavior. It indirectly explores the understanding of the person to his/her responses in different situations according to his/her belief in how far external forces affect his/her acts. Scoring of the scale is as follows: phrases

pointing to the external locus of control score 1 point each, while those pointing to the internal locus of control score zero. The Arabic version used in this study was translated and validated by Kafafi (1982).

7. Global Assessment of Functioning (GAF) Scale: (Patterson and Lee, 1995)

GAF is a clinician-rated scale that was developed to rate axis-V of DSM-IV. It provides a measure of psychological, social and occupational functioning related to psychiatric symptoms.

8. The PCASEE Quality of Life Scale: (Beck et al., 1993)

The PCASEE quality of life scale (QoL) is a clinical instrument designed for interview administration, it provides information on symptoms and functioning over the last month. The 30-items are rated from 0-5. High scores reflect less impaired or unimpaired functioning and six domains are covered: (P) Physical component, (C) Cognitive component, (A) Affective component, (S) Social component, (E) Economic component, and (E) Ego functioning. The Arabic version used in this work was translated and validated in a previous Egyptian research study (Youssef et al., 2002).

9. Modified Social Score of Egyptian Community: (Fahmy and El- Sherbini, 1983)

This Arabic scale was proved to be a useful epidemiological tool as it reflects education, income values, health behavior and life style variables, all influencing the health status. It includes 5 items: education and occupation of the father, of the mother; monthly income; crowding index; and sanitation.

Procedures:

The research study was carried out through the period from September 2003 to December 2005 in which it passed through these stages:

A. Pilot Study:

A pilot study was conducted in the Institute of Psychiatry, Ain Shams University for four months (September–December 2003) prior to the start of the study proper.

Objectives of the Pilot Study:

1. To determine the size of the sample.
2. To assess the reliability of the diagnosis and ascertainment procedures.
3. To test the applicability and feasibility regarding time of administration and linguistic simplicity of the tools.

Results of the Pilot Study:

1. *Regarding determination of the sample size:* During the 4-months period of the pilot study, 38 patients were assessed. Only 10 patients were fulfilling the inclusion criteria. Accordingly it was decided to perform the study on a sample of 60 OCD patients during a period of 2 years.
2. *Regarding the reliability of the diagnosis and ascertainment procedures:* There was good conformity regarding the diagnosis between the psychiatrists in the outpatient clinics, a 3-year lecturer in psychiatry at the Institute of Psychiatry, Ain Shams University, and the clinical interviews done to the selected patients by the researchers of this work.
3. *Regarding the applicability and feasibility of the assessment tools:* The

researchers had to give clear instructions and to clarify the questionnaires to patients participating in the research.

B. Study Proper:

The study proper was performed through the period from January 2004 to December 2005. After being informed of the purpose of the study, an informed verbal consent was obtained from all participants. They also provided verbal consent to the collection and release of data, and then the following procedures were performed:

1. Detailed psychiatric interviewing including full history and mental state examination, using Structured Clinical Interview for DSM-IV-TR axis I disorders (SCID-I) clinical version (SCID-CV).
2. Medical and neurological history and examination to exclude concomitant medical or neurological illnesses.
3. Detailed history of the OCD condition was taken including: age of onset, duration of illness, course, presence of stressor, time delay for seeking psychiatric help, and treatment compliance.
4. The profile of symptoms of OCD was clarified by Y-BOCS symptom checklist.
5. Assessment of OCD symptom severity was done by Y-BOCS for severity.
6. The profile of personality disorder comorbidity was clarified using the Structured Clinical Interview for DSM-IV-TR axis II disorders (SCID-II) scale.
7. Personality structure of participating patients was outlined using the Temperament and Character Inventory-Revised (TCI-R) scale.
8. The locus of control dimension was measured by Rotter Internal – External control scale.

9. Self-esteem of patients was evaluated using the Self-esteem scale.

10. Quality of life of patients was assessed by PCASEE QoL scale.

11. Functioning was assessed by the Global Assessment of Functioning scale (GAF).

12. Determination of social class was done according to the Modified Social Score of Egyptian Community.

The assessment of each patient was done through 2 to 3 settings. Each setting consumed around 1-2 hours according to the degree of cooperation of the patient and the complexity of findings obtained from the assessment.

During this period, 120 patients were assessed. Thirty-five were excluded because of the presence of comorbid axis I diagnosis (major depressive disorder, other anxiety disorders, psychotic disorders, and substance use disorders), 5 patients were excluded because of the presence of epilepsy. A total of 80 OCD patients were recruited. However, 20 of them (25% drop-out rate) dropped out from the study mostly because the assessment procedures were too long for them to fulfill (incomplete data were excluded). The remaining 60 subjects were enrolled in the study.

Statistical methods

All data were recorded and entered in a statistical package on a compatible computer. Analysis was done using an Epi Info ver.5 (2005).

Results

This study was carried out on 60 obsessive-compulsive disorder (OCD) patients recruited from outpatient clinics

and inpatient departments of the Institute of Psychiatry, Ain Shams University; Psychological Medicine Hospital, Heliopolis; and the Nile Sanatorium, El-Maadi. Initially the study was carried on 80 patients, 20 (25%) subjects dropped out and the remaining 60 were enrolled in the study. Only 3 (5%) patients were hospitalized and 57 (95%) were collected from outpatient clinics.

I. Demographic Data of Patients:

The mean age of the sample was 30.4 (SD $\pm$ 8.8) years, whereas their age ranged from 18-51 years.

II. Impact of Comorbid Personality Disorder(s) on OCD:

To assess the impact of comorbid PD(s) on OCD, patients were divided into two groups: A group with comorbid PD(s) (N=31) and another group without comorbid PD (N=29). The two groups were compared to each other regarding the total Y-BOCS severity scoring, age of onset, duration of illness and time delay for seeking psychiatric treatment of OCD, Global Assessment of Functioning (GAF), the PCASEE Quality of Life scoring (QoL), and course of OCD, in addition to compliance on treatment.

1. Impact of Specific Types of Personality Disorder on Total Y-BOCS Severity:

Stepwise multiple regression analysis showed that dependent PD was significantly the most important PD affecting the total Y-BOCS severity (F= 18.58, P<0.001), followed by depressive PD (F=7.49, P=0.01), avoidant PD (F= 7.03, P<0.05) and borderline PD (F= 7.01, P<0.05).

2. Correlation between Specific Types of Personality Disorder and Type of Obsessions or Compulsions:

Ordering compulsions were positively correlated to passive aggressive PD ($F=8.42$, $P<0.01$). There were significant positive correlations between sexual obsessions and schizotypal PD ($F=4.16$, $P=0.05$), histrionic PD ($F=4.16$, $P=0.05$) and antisocial PD ($F=4.16$, $P=0.05$). Sexual obsessions were also positively correlated to narcissistic PD but not up to a statistically significant level ($F=3.25$, $P>0.05$).

Contamination obsessions were positively correlated to paranoid PD ($F=2.19$), aggressive obsessions were negatively correlated to borderline PD ($F=2.61$), and positively correlated to OCPD ($F=2.61$), hoarding was positively correlated to avoidant PD ($F=3.45$), however, these correlations were not reaching the point of statistical significance ($P>0.05$).

III. Impact of Personality Traits on OCD

1. Correlation between Personality Traits and Total Y-BOCS Severity:

There were highly significant negative correlations between SD and C and total Y-BOCS severity ($P<0.01$), i.e., lower SD and C scores were associated with higher total Y-BOCS severity scoring. There was an only significant positive correlation between HA and total Y-BOCS severity ($P=0.05$), i.e., higher HA scoring was associated with higher total Y-BOCS severity scoring.

A negative correlation was found between RD and total Y-BOCS severity. On the other hand, positive correlations were found between NS, PS, ST and total Y-

BOCS severity. However, these correlations were not reaching the point of statistical significance ($P>0.05$). On the contrary, there was negative correlation between NS1 subscale and total YBOCS severity scoring, low scores on the NS1 (exploratory excitability vs. stoic rigidity) subscale, suggest that these subjects prefer familiar situations and tend to resist new ideas, also this correlation was not reaching the point of statistical significance ($P>0.05$).

Stepwise multiple regression analysis showed that SD was significantly the most important personality trait affecting total Y-BOCS severity ($F=5.22$, $P<0.05$) followed by C ($F=2.89$) and PS ($F=1.23$), but both were without statistical significance ($P>0.05$).

2. Correlation between Personality Traits and Symptom Expression of OCD:

A significant negative correlation was found between C ($F=8.25$, $P<0.01$), SD ($F=5.54$, $P<0.05$) and obsessions severity, i.e., lower SD and C scoring were associated with higher obsessions severity. No other correlations were found between other personality traits and obsessions or compulsions severity.

3. Impact of Personality Traits on Course of OCD:

To assess the impact of personality traits on course of OCD, patients with continuous and progressive course (poor prognosis) were compared to patients with episodic and improving course (good prognosis) regarding the mean scores of TCI personality traits. Patients with remissions and exacerbations course (natural course of the illness) were excluded from the comparison.

Patients with continuous and progressive course had significantly lower mean scores of SD ($P<0.001$), RD ($P<0.01$) and C ($P<0.05$) than those with episodic and improving course. On the other hand, the former group of patients had higher mean scores of NS, HA and ST and lower mean score of PS, however without statistically significant difference than the latter group of patients ($P>0.05$).

Stepwise regression analysis revealed that C was significantly the most important personality trait affecting the course of OCD ($F=4.38$, $P<0.05$) followed by SD ($F=1.28$, $P>0.05$).

4. Correlation between Personality Traits and Duration of OCD:

SD and NS were negatively correlated to the overall duration of OCD ($F=8.06$, $P<0.01$; $F=2.78$, $P>0.05$ respectively), while HA and ST were positively correlated to the overall duration of OCD ($F=3.89$, $P=0.05$; $F=3.46$, $P>0.05$ respectively). Other personality traits had no correlation with the overall duration of OCD. Stepwise multiple regression analysis revealed that SD was significantly the most important personality trait affecting the overall duration of OCD ($F=4.09$, $P<0.05$) followed by NS and ST ($F=2.88$, $P>0.05$; and $F=0.89$, $P>0.05$ respectively).

5. Correlation between Personality Traits and Time Delay for Seeking Treatment of OCD:

SD was negatively correlated to time delay for seeking treatment of OCD ($P<0.05$). So, lower SD scores were significantly associated with longer time delay for seeking treatment of OCD. Also, NS was negatively correlated to time delay for seeking treatment of OCD without reaching the point of statistical

significance ($P>0.05$). There were positive correlations between HA, RD, ST and time delay for seeking treatment of OCD without reaching the point of statistical significance ($P>0.05$). Stepwise multiple regression analysis showed that SD was significantly the most important personality trait affecting the time delay for seeking treatment of OCD ($F=5.31$, $P<0.05$) followed by RD ($F=1.94$, $P>0.05$) and NS ($F=1.01$, $P>0.05$).

6. Impact of Personality Traits on Compliance on Treatment of OCD:

Non-compliant patients had significantly lower mean scores of SD ($t=2.9$, $P<0.01$) and RD ($t=2.1$, $P<0.05$) than compliant patients. Also, non-compliant patients had higher NS ($t=0.3$), HA ($t=1.3$) and ST ($t=1.6$), lower C ($t=0.7$) and PS ($t=0.9$) mean scores, however, without statistically significant difference from compliant patients ($P>0.05$). Stepwise multiple regression analysis revealed that SD was significantly the most important personality trait affecting compliance ($F=8.4$, $P=0.01$) followed by RD ($F=1.99$, $P>0.05$).

7. Correlation between Personality Traits and Global Assessment of Functioning:

There were significant positive correlations between SD ($P<0.001$), C ($P<0.01$) and GAF (i.e., low SD and C scores were significantly associated with low GAF scoring). On the contrary, there were significant negative correlations between HA ($P=0.01$), ST ($P<0.01$) and GAF. i.e. higher HA and ST scoring were significantly associated with low GAF scoring. RD was positively correlated to GAF, however not reaching the point of statistical significance ($P>0.05$). Stepwise

multiple regression analysis showed that SD is significantly the most important personality trait affecting GAF ($F=9.57$, $P<0.01$) followed by C ($F=2.86$, $P>0.05$).

8. Correlation between Personality Traits and Quality of Life:

SD, PS and C were positively correlated to QoL scoring with variable statistical significance ($P<0.001$, $P=0.01$, $P<0.05$ respectively). On the other hand, there was a highly significant negative correlation between HA and QoL scoring ($P<0.001$). RD was positively correlated to QoL scoring, ST was negatively correlated to QoL scoring, however, not reaching the point of statistical significance ($P>0.05$). Stepwise multiple regression analysis revealed that SD was significantly the most important personality trait affecting QoL ($F=61.76$, $P<0.001$) followed by PS ($F=2.76$, $P>0.05$).

IV. Impact of Self-esteem on OCD

There was a highly significant negative correlation between self-esteem and total Y-BOCS severity ($P<0.001$). Lower scores of self-esteem were associated with higher total Y-BOCS severity. There was a highly significant negative correlation between self-esteem and obsessions severity ($P<0.001$). i.e. lower scores of self-esteem were associated with higher scores of obsessions severity. However, there was no correlation between self-esteem and compulsions severity.

Series of correlation tests were done to assess the self-esteem and age of onset, duration of illness, and time delay for seeking treatment of OCD, Global Assessment of Functioning, and PCASEE quality of life scoring:

- There were highly significant positive correlations between self-esteem, GAF and QoL scoring ($P<0.001$) (i.e., higher self-esteem is associated with higher GAF and QoL scoring).
- On the other hand, self-esteem was negatively correlated to the duration of illness and time delay for seeking treatment of OCD (i.e., lower self-esteem was associated with longer duration of illness and longer time delay for seeking treatment of OCD), without reaching the point of statistical significance ($P>0.05$).
- There was positive correlation between self-esteem and age of onset of OCD, however, not up to statistically significant level ($P>0.05$).

Comparative study between mean self-esteem scores of patients with continuous and progressive course (poor prognosis) and patients with episodic and improving course (good prognosis) of OCD revealed that the former had significantly lower self-esteem scoring than the later ($P<0.001$). Moreover, non-compliant OCD patients on treatment had significantly lower self-esteem than compliant patients ($P<0.001$).

V. Impact of Locus of Control on OCD

There was a highly significant positive correlation between locus of control and total Y-BOCS severity ($P<0.001$) [i.e., higher locus of control scoring (more towards external locus of control) was significantly associated with higher Y-BOCS severity].

Locus of control was positively correlated to compulsions severity ($P<0.001$) [i.e., higher locus of control (more towards external locus of control) was associated with higher compulsions severity]. There

was no correlation between locus of control and obsessions severity.

There was a highly significant negative correlations between locus of control and GAF as well as QoL scoring ($P=0.001$) [i.e., higher locus of control scoring (more towards external locus of control) was significantly associated with lower GAF and QoL scorings]. Locus of control was positively correlated to age of onset, duration of illness and time delay for seeking treatment of OCD [i.e., higher locus of control scores (more towards external locus of control) was associated with older age of onset, longer duration of illness and longer time delay for seeking treatment of OCD], however, it did not

reach the point of statistical significance ($P>0.05$).

On comparing the mean locus of control scoring of patients with continuous and progressive course (poor prognosis) to those with episodic and improving course (good prognosis) of OCD, the former group of patients had significantly higher mean locus of control scoring (more towards external locus of control) ($P<0.001$) than the latter group. Moreover, non-compliant OCD patients had significantly higher locus of control (more towards external locus of control) mean scores ($P<0.001$) than compliant patients.

Table (1): Frequency of Different Types of Personality Disorder among OCD Patients

Type of Personality Disorders	N=60	%
Any Cluster A	6	10%
Paranoid	5	8.3%
Schizotypal	2	3.3%
Schizoid	1	1.7%
Any Cluster B	8	13.3%
Histrionic	2	3.3%
Narcissistic	4	6.7%
Borderline	7	11.7%
Antisocial	2	3.3%
Any Cluster C	28	46.7%
Avoidant	11	18.3%
Dependent	6	10%
Obsessive-Compulsive	24	40%
Not Otherwise Specified (NOS)	12	20%
Passive-aggressive*	6	10%
Depressive	8	13.3%
Any Personality Disorder	31	51.7%
No Personality Disorder	29	48.3%

- N indicates number; * also called negativistic personality disorder in DSM-IV-TR.

Table (2): Impact of Comorbid Personality Disorder on Clinical Features of OCD Patients

Clinical Features of OCD	Patients with PD (31)		Patients with no PD (29)		<i>t</i>	P
	Mean	± SD	Mean	± SD		
Y-BOCS Severity	30.13	± 6.5	20.76	±5.7	5.9	0.000***
Age of Onset	21.1	±8.4	22.24	±5.9	0.6	0.5
Duration (years)	9.73	±7.6	6.8	±6.3	1.6	0.1
Time Delay for Treatment (years)	6.09	±6.1	4.81	±9.9	0.8	0.3
GAF Scoring	47.1	± 7.6	60.66	±4.8	8.2	0.000***
QoL Scoring	41.74	±20.5	59.97	±18.2	3.6	0.001***

*** indicates very highly significant data ($P \leq 0.001$); ($P > 0.05$) non significant; OCD, obsessive-compulsive disorder; PD, personality disorder; Y-BOCS, Yale-Brown obsessive-compulsive scale; GAF, global assessment of functioning scale; QoL, quality of life scale.

Table (3): Impact of Number of Personality Disorder on Clinical Features of OCD

Clinical Features of OCD	Single PD (14)		Multiple PDs (17)		<i>t</i>	P
	Mean	±SD	Mean	±SD		
Y-BOCS Severity	26.5	±8.4	33.1	±5.9	3.2	0.003**
Age of Onset	19.86	±5.9	22.12	±10.1	0.7	0.5
Duration (year)	9.46	±8.2	9.94	±7.25	1.5	0.4
Time Delay for Treatment (year)	6.36	±7.8	5.89	±4.25	0.8	0.2
GAF Scoring	52.07	± 6.3	43.0	±6.01	4.1	0.000***
QoL Scoring	55.14	±17.6	30.71	±15.8	4.1	0.000***

** indicates highly significant data ($P \leq 0.01$); *** very highly significant ($P \leq 0.001$); ($P > 0.05$) non significant; OCD, obsessive-compulsive disorder; PD, personality disorder; Y-BOCS, Yale-Brown obsessive-compulsive scale; GAF, global assessment of functioning scale; QoL, quality of life scale.

Table (4): Impact of Personality Traits on Course of OCD

Personality Trait	Continuous, Progressive Course		Episodic, Improving Course		<i>t</i>	P
	Mean	±SD	Mean	± SD		
NS	99.32	±9.97	94.65	±12.07	1.5	0.2
HA	114.0	±15.6	111.2	±17.8	1.5	0.2
RD	101.14	±13.8	108.2	±12.7	2.1	0.005**
PS	115.1	±18.5	119.6	±21.9	1.6	0.3
SD	117.96	±19.5	136.1	±25.4	2.5	0.000***
C	124.05	±10.6	130.2	±4.1	2.0	0.03*
ST	78.14	±18.2	72.12	±13.48	1.5	0.2

* indicates significant data ($P \leq 0.05$), ** highly significant ($P \leq 0.01$); *** very highly significant ($P \leq 0.001$); ($P > 0.05$) non significant; NS, novelty seeking; HA, harm avoidance; RD, reward dependence; PS, persistence; SD, self-directedness; C, cooperativeness; ST, self-transcendence

Discussion

Obsessive-compulsive disorder (OCD) is a common and disabling psychiatric condition that affects both children and adults (Cruz-Fuentes et al., 2004). Over the years, clinicians have described a number of abnormal personality traits in the affected individuals. The coexistence of axis II personality disorder (PD) is frequently reported. Only in the past decade have the personality features of OCD patients been systematically evaluated from the perspective of different theoretical models (Lyoo et al., 2001). The research literature on categorically defined personality disorders (PDs) in OCD has been relatively fruitless so far and several investigators have posited that a dimensional approach could be more useful in understanding such a relationship (Summerfeldt et al., 1998).

However, little is known about differences in clinical characteristics between OCD

patients with and without comorbid symptoms suggesting PD(s) or personality traits. Accordingly, the aim of the present study was to assess personality in patients with a primary diagnosis of OCD, both as categorical PDs, and as dimensional personality traits, and to explore the impact of personality factors on the clinical characteristics of OCD patients.

Patients suffering from OCD in this study were compared among themselves, regarding their personality profile (PDs, personality traits as measured by the temperament and character dimensions, the self-esteem, and the locus of control). Personality profile of OCD patients was assessed as an independent variable in different ways, corresponding to the research questions: (1) the presence of any PD vs. no PD, (2) presence of individual PD, (3) presence of any cluster PD(s), (4) the total number of PDs, (5) impact of PD(s), temperament and character traits, self-esteem, and locus of control on OCD

patients regarding the following: Y-BOCS severity, symptom expression, age of onset, course, overall duration, time delay for seeking treatment and compliance on treatment, as well as overall functioning and quality of life of OCD patients.

In our study, mean time delay for seeking psychiatric help was 5.5 years. Jenike in 2001 reported a 5-10 years delay before OCD patients come to psychiatric attention. He attributed this to the fact that those patients tend to keep their symptoms secret. The mean overall duration of illness in subjects of the current study was found to be 8.4 years.

Only half of the subjects of this work presented with combined obsessions and compulsions. The remaining half showed that the predominantly obsessive type was slightly more than double the number of that of the predominantly compulsive type (n=21:10).

Impact of Comorbid Personality Disorder(s) on OCD:

There was a high frequency of comorbidity with PDs as 51.7% of the subjects with OCD had at least one PD according to the self-report SCID-II questionnaire. This finding is consistent with previous investigators' results over the past two decades who have reported prevalence rates of clinically significant PDs in the OCD population. Baer et al., 1992 found that 60% of their OCD patients received one or more PD diagnoses. Bejerot and her colleagues, 1998a concluded that 75% of their OCD patients received at least one diagnosis of a PD, while Denys and his team in 2004 found that only 36% of their OCD sample received one or more PD diagnoses. Generally, in many other studies, the reported prevalence rate was

significant (33%-87%) irrespective of whether self-rating inventories or structured interviews were used (Joffe et al., 1988; Mavissakalian et al., 1990; Black et al., 1993).

It was found that 23.3% of the subjects in this work had a single PD, while 28.3% had 2 or more PDs up to a maximum of 8. The most prevalent PDs were obsessive-compulsive PD (OCPD) (40%), and avoidant PD (18.3%). Cluster (C) PD occurred most frequently (46.7%). On the other hand, the least frequent PDs were antisocial PD, histrionic PD, schizotypal PD (3.3% for each), and schizoid PD (1.7%). Paranoid PD occurred as a modest of (8.3%) of this sample.

Baer et al., 1992 and Steketee in 1999 found that the avoidant, dependent, and passive-aggressive PDs were the most commonly present in OCD patients. They also found that most PD diagnoses were in the cluster (C) group. Bejerot et al., 1998a largely concluded the same results as the present study regarding OCPD which occurred in (36%) of their sample. Again cluster (C) PD was the most prevalent cluster (55%). Also, the most infrequent PDs in their study were histrionic PD (6%), followed by schizotypal and schizoid PDs (3%). However, avoidant and paranoid PDs were found in (31%). Recently, Denys et al., 2004 found that the most prevalent PD in their sample was also the OCPD, followed by dependent PD and then PD not otherwise specified. The most infrequent PDs were antisocial, paranoid, and schizoid PDs. Cluster (C) PD was also the most frequent occurring cluster in their study.

Compared to these studies examining PDs, the prevalence rates in the present sample were by and large equivalent to the

reported prevalence rates; except for paranoid PD in this sample which was found in sharp contrast with Bejerot et al., 1998a report; 8.3% compared to 31% respectively. An Egyptian study conducted by Okasha and coworkers in 1996 suggested that OCD and OCPD seem to be related. However, among the cases with OCPD in our study, the majority appeared together with other PDs, a finding which seems to argue against such a specific relationship.

Consistent with prediction, OCD patients primarily displaying comorbidity with any PD versus those with no PD differed significantly in many OCD-related domains. The results of this study revealed the following: patients with comorbid any PD had significantly higher total Y-BOCS severity scoring than those without comorbid PD. In addition, patients with comorbid PD were significantly less functioning with significantly worse QoL than those without PD. The inflexible pattern of thoughts and actions found in personality disordered OCD patients may account for the higher severity of symptoms compared to those without PDs. Moreover, the impaired social and occupational functioning of a personality disordered persons may add to the lower levels of functioning seen among them compared to those with no axis II disorders.

The analysis also revealed that 70% of patients with PD(s) had continuous or progressive (poor prognosis) course while only 30% had episodic or improving course and this difference was statistically significant ($P<0.05$). Among the non compliant patients, there was significantly ($P<0.05$) higher percentage of patients with comorbid PD (76.5%) than those without

PD (23.5%). OCD patients with comorbid PD were found to have longer overall duration and longer mean time delay for seeking psychiatric treatment than those without PDs, yet without statistical significance. It was stated by Sadock and Sadock in 2003 that persons with PD(s) are far more likely to refuse psychiatric help and deny their problems than persons with OCD alone. Thus, those with comorbid PD(s) are more prone to present with longer time before seeking psychiatric help, show less favorable course and are non-compliant on treatment.

The concluded clinical observations from some studies (Hoffart, 1994; Hofmann et al., 1998) suggest that the negative effect of personality on short-term outcome may have resulted from some patients' slower and more cautious engagement in therapy (i.e. longer time delay for seeking treatment). Personality disordered patients were quite ambivalent about changing avoidant and ritualistic behaviors that had maintained their anxiety problems.

Denys et al., 2004 found that patients with comorbid PDs were to a higher extent impaired in overall functioning. Other studies, however, suggest that early onset of OCD, long overall duration of illness or high scores on the Y-BOCS showed no association with the frequency or number of PDs (Steketee et al., 2001). Presence of a PD per se was unrelated to the outcome on OCD scales; this was concluded by Baer et al in 1992.

Cluster (B) PDs (antisocial, borderline, histrionic, narcissistic) was significantly the most important cluster affecting the total Y-BOCS severity ($P=0.01$) in this sample, followed by PDs NOS (passive-aggressive and depressive) ($P=0.03$). Cluster (A) PDs (paranoid, schizoid,

schizotypal) also had an effect on Y-BOCS severity, however, without reaching a statistical significance. Cluster (C) PDs (avoidant, dependent, obsessive-compulsive) although they were represented as the most prevalent cluster in this sample, yet they were not significant regarding their impact on total Y-BOCS severity of the OCD patients.

Patients with any cluster (B) PD are considered to be dramatizing most of their reactions; this may be manifested in giving higher scores on the Y-BOCS severity scale (i.e. dramatizing severity). Moreover, their impulsive nature may drive them to yield easily to compulsions which also may account for the greater severity seen in those patients with cluster (B).

In the current study, presence of any cluster (A) PD was always associated with at least another PD. Patients with more than one PD had more severe form of OCD, poorer course, less overall functioning, and worse QoL. Thereby, the presence of any cluster (A) PD could be an indirect cause of less favorable characteristics of OCD.

Baer et al., 1992 found that there was a strong relation between the presence of at least one cluster (A) PD and the total number of PDs diagnosed. Also, number of PDs and the presence of a cluster (A) (or cluster B) disorder were related to OCD severity. Results of many researchers were almost similar in this issue and lend further support to the claim that schizotypal symptoms dispose to a negative treatment outcome (Minichiello et al., 1987; de Haan et al., 1997; Moritz et al., 2004).

Regarding the impact of specific types of PDs on OCD severity, stepwise multiple regression analysis showed that dependent

PD was significantly the most important PD affecting the total Y-BOCS severity in this sample, followed by depressive, avoidant, and borderline PDs.

Interestingly, dependent personalities show poor compliance on behavioral therapies (as exposure response prevention) but not on pharmacotherapy. People with dependent personality features tend to believe that medications would improve everything regarding their illness, and they completely *depend* on them. They do not want to do any extra effort in behavioral therapy as long as there is a medication that would do the whole job.

Impact of Personality Traits on OCD

Personality traits may play a role in treatment seeking behaviors for mental health problems over and above the presence of psychiatric disorder alone. The assessment of relevant personality constructs has the potential to inform and improve treatment outreach efforts (McWilliams et al, 2006):

1) Novelty Seeking (NS)

There were positive correlations between the temperament trait of total (NS) and total Y-BOCS severity scorings, however, without reaching the point of statistical significance. Interestingly, (NS1) subscale was found to be negatively associated with the severity, however, without reaching the point of statistical significance. Low scores on the (NS1) (exploratory excitability vs. stoic rigidity) subscale, suggest that these subjects prefer familiar situations and tend to resist new ideas. Low (NS1) traits are characterized by stable unwillingness to consider new or unconventional ideas and closed-mindedness, may be specifically associated with obsessions. Also, stable unwillingness to try different activities and

preference for routine and familiarity, may be specifically associated with compulsions (Cloninger et al., 1994).

2) Harm Avoidance (HA)

There was a significant positive correlation between (HA) temperament trait and total Y-BOCS severity in the present results. Higher scores of (HA) were also significantly correlated to longer overall duration of illness, less functioning and worse QoL compared to those with lower scores of (HA). Lyoo and colleagues, 2001 reports were in agreement with the current study's results, they indicated that high (HA) scores had a significant relationship with the severity of OCD symptoms. No significant correlations were found between (HA) and the OC symptoms expression, age of onset, course, and time delay for seeking treatment of OCD or the compliance on treatment.

3) Reward Dependence (RD)

Patients with continuous and progressive course had significantly lower (RD) mean scores than those with episodic and improving course. Non-compliant patients had significantly lower scores of (RD) than compliant patients. Low (RD); together with low (NS), and high (HA); were described as being an *obsessional* temperamental type as concluded by Cloninger and colleagues in 1994.

4) Persistence (PS)

Lower mean scores on the (PS) temperament trait was significantly correlated to worse QoL in OCD patients. Less compliant patients had lower mean scores of (PS), however, without reaching the level of statistical significance. Cloninger and colleagues in 1994 described those with low scores of (PS) as

individuals with poor achievements; they tend to give up easily when expectations are not quickly satisfied or when faced with criticism, obstacles, fatigue, or frustrations. They typically have problems in starting or finishing work and rarely exhibit their best efforts even in response to anticipated reward. Thus, their resistance to obsessional thoughts, carried out compulsions, as well as their compliance on treatment regimen will be lowered. These traits may contribute to the worse QoL seen in patients with lower (PS) scores.

5) Self-Directedness (SD)

The character trait of *Self-Directedness* was the most significant personality trait that was found to have an impact on almost all OCD features. Results indicate that low (SD) scores have a significant relationship with the severity of OCD symptoms i.e. greater severity of obsessive-compulsive symptoms is, in part, explained by the low (SD) of the biogenetic character of subjects with OCD. This particular finding is in agreement with previous reports in Korea by Lyoo and colleagues in 2001 and in Mexico by Cruz-Fuentes and colleagues in 2004. They identified a similar inverse effect for this particular character dimension on the Y-BOCS total scores.

Stepwise multiple regression analyses showed that (SD) generally is the most important personality trait affecting OCD variables including the following: total Y-BOCS severity; obsessional severity; overall duration of illness; time delay for seeking treatment; compliance on treatment; GAF; and QoL.

6) Cooperativeness (C)

There was a significant negative correlation between (C) character

dimension and the total Y-BOCS and obsessional severity. Low Cooperativeness is characteristic of many people who prefer to be solitary, which may explain the high obsessions severity in them. Low (C) and (SD) character dimensions were reported in Svrakic and his colleagues' works in 1993 to be core features of all personality disorders. This relation between low (C) and (SD) and the presence of PDs may explain the poorer level of functioning and the worse QoL seen in those OCD patients who exhibit lower scores of (SD).

7) Self-Transcendence (ST)

Higher (ST) scores were significantly correlated to lower GAF. The (ST) character trait had no significant correlations to the following variables: total Y-BOCS severity, OC symptoms expression, age of onset, course, overall duration, time delay for seeking treatment of OCD, compliance on treatment, and QOL. Interestingly, a very recent study done in Japan by Matsudaira and Kitamura in 2006 revealed that specific anxiety was predicted by higher (NS), (HA), and (ST), and lower (SD). These findings are very much in agreement with the findings of the current study that showed similar parameters on the same personality traits in the anxiety-related OCD.

It is worth mentioning that the particular finding of patterns of (HA) and (SD) in an Egyptian sample of OCD patients are in complete accord with the findings of Bejerot et al., 1998b in a Swedish population, and with those of Lyoo et al., 2001 in Korean people and the Cruz-Fuentes and coworkers, 2004 results for a Latin American population. These findings might support that the patterns of temperament and character for OCD subjects are quite similar across different

cultures and ethnicities.

Impact of Self-esteem on OCD:

Correlational analyses indicate that low self-esteem is significantly correlated to higher total Y-BOCS severity as well as to higher obsessions severity with no relation to compulsions severity. Comparative study between mean self-esteem scores of patients with continuous and progressive course (poor prognosis) and patients with episodic and improving course (good prognosis) of OCD subjects revealed that the former group of patients had significantly lower self-esteem scoring than the latter group. Non compliant OCD patients on treatment had significantly lower self-esteem than compliant patients. Lower self-esteem also was significantly correlated to poorer functioning and worse QoL. Low self-esteem was correlated to the overall duration of illness, and time delay for seeking treatment of OCD.

The cognitive disturbance found in OCD patients may explain this. OCD subjects always place greater emphasis on relationships or the opinion of others. They also reported fears that others would see them in a completely negative manner, suggesting sensitivity to blame and criticism which lower the self-esteem scores in patients with greater obsessional severity. This finding is also consistent with the notion that generalized low self-esteem may occur as a consequence of having an OCD, or as an aspect of that specific disorder, or possibly as a general vulnerability factor as stated by Fennell in 1997.

Impact of Locus of Control on OCD:

Higher locus of control scoring (more towards external locus of control) was significantly correlated to higher Y-BOCS

severity and higher compulsions severity. There was no correlation between locus of control and obsessions severity. Comparative study between mean locus of control scores of patients with continuous and progressive course (poor prognosis) and patients with episodic and improving course (good prognosis) of OCD subjects revealed that the former group of patients had significantly higher (external) locus of control scoring than the latter group. Non-compliant OCD patients had significantly higher (external) locus of control scoring than compliant patients. Higher (external) locus of control also was significantly correlated to poorer functioning and worse QoL.

The significant positive association between the higher locus of control scoring and the compulsion severity may be explained partly by the fact that subjects with external locus of control have a tendency to blame others for their actions, and in turn, others should take control for their actions. This would reduce their initiation to resist or to change particular acts (compulsions) which may give a greater compulsion severity in those with more external pattern of locus of control.

In contrast to our findings McWilliams et al. (2006) found that those with high external locus of control typically believe that experts, such as mental health care providers, had a great deal of influence and as such would be likely to cope with psychiatric disorder by seeking the assistance of such individuals. This finding could also indicate that seeking treatment from others is generally perceived as a passive coping method that relies on the efforts of others.

The limitations of this study need to be acknowledged: 1) The current results could

not be easily generalized to individuals with OCD in the community, since the OCD subjects in this study were mostly recruited from the psychiatric outpatient clinic; 2) The fact that OCD is known to be a heterogeneous disorder with several hypothesized subtypes. Because of the relatively small sample of the study, this may limit the generalization of these findings. So, the results can be regarded only as suggestive; 3) No follow-up data have been presented; and 4) Personality features might not be accurately elicited in part because their assessment might have been influenced by their current axis I current symptoms. Moreover, informants were not available for many cases to be questioned in order to get more accurate personality profiles.

Despite the limitations of the current study, yet this is the first report of its kind for Egyptian patients with OCD. The information of the current study may enable the therapeutic team to subgroup OCD subjects, according to their personality profile, and possibly contribute to developing a more effective and specific treatment strategy for every OCD-personality subtype. It is important to examine personality not only on a scale-by-scale basis, but rather within the context of an overall profile. Understanding the impact of personality components on the OCD patients' quality of life may allow the design of more broadly effective clinical interventions and a more judicious allocation of treatment resources.

Conducting the same study but on a longitudinal basis studying patients at baseline and follow them up after a certain period while they are taking a fixed dose of a certain well-studied pharmacological

treatment for OCD to evaluate the impact of the same personality profile on treatment outcome. This can be done using behavioral therapy or using combined therapies. It also should be replicated to demonstrate the impact of personality profile on all other axis I disorders.

The term "personality disorder" is used in such a disparaging manner in many clinical practices that labeling a patient with an axis II diagnosis is tantamount to calling the patient irreparable. Yet, personality disorders may be the most important variable in predicting outcome (Shea et al., 1990). The biological underpinnings suggest that many of these behaviors are not learned but preordained. The vast number of afflicted individuals with personality disorders – who are in psychiatric hospitals or in jails or simply with worse clinical picture and quality of life of their illnesses – indicates a need to find ways to help these individuals. The aforementioned studies in addition to this one provide a starting point for treating these individuals and for future research efforts. Successful work in this area will reduce what is currently an economic burden on society and a terrible illness for those afflicted patients.

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