PREVALENCE OF PERSONALITY DISORDERS IN PATIENTS WITH OCD AND RELATIONSHIP TO TREATMENT OUTCOME

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Abstract

Objective: As a rule of thumb 30-40% of patients with OCD do not experience clinically relevant change from exposure and response prevention (ERP), and 50% can expect to be classified as recovered post treatment. The evidence is unclear as to whether comorbid personality disorders (PD) might be a factor negatively influencing treatment outcome. The aims of the current study were to investigate if PDs and magnitude of Axis-I diagnoses are related to poorer treatment outcome.

Method: 47 OCD patients (15 male) received concentrated exposure therapy (cET) which consists of individually tailored and therapist assisted exposure therapy during 4 consecutive days. The treatment was delivered in a group format with a patient-therapist ration of 1:1. OCD-symptoms were assessed with Yale-Brown Obsessive Compulsive Scale (Y-BOCS) before treatment, at 1-week post-treatment, and at 3- and 6-months follow-up. Post treatment interviews were conducted by an independent rater. Patients were screened for PDs with Standardized Assessment of Personality, Abbreviated Scale (SAPAS).

Results: Pre-treatment the PD group did not have more severe OCD-symptoms as compared to the group without. Post treatment 79% of the patients were classified as recovered, and there were no differences between patients with or without PD. These results were maintained for the patients without PD at three and six months, whereas the comparable results for the PD-group were 38% and 54%.

Conclusions: It is concluded that the 4-day treatment format is feasible also for patients with PD.

Key words: obsessive-compulsive disorder, personality disorder, SAPAS, exposure and response prevention, concentrated exposure treatment (cET)

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Introduction

Obsessive-compulsive disorder (OCD) is characterized by intrusive, frequently occurring unwanted thoughts, or images (obsessions) that the patient unsuccessfully tries to get rid of by repetitively performing overt or mental rituals (compulsions), or engaging in avoidance behavior (American Psychiatric Association, 2013). Life time prevalence of OCD is estimated to be approximately 2 % (Ruscio et al. 2008) and due to its tendency to become chronic without adequate treatment, OCD has been ranked among the 10 most debilitating disorders by the World Health Organization (Koran et al. 1996). Exposure-based cognitive-behavioral treatments alone, or in combination with selective serotonin reuptake inhibitors (SSRIs) yield clinically significant results in 50-60% of the cases (Abramowitz 1998, Öst et al. 2015a, Rosa-Alcázar and Sánchez-Meca 2008, Skapinakis et al. 2016).

It has been suggested that treatment-outcome might be related to the magnitude and severity of comorbid disorders, and while some studies have reported a poorer treatment response in patients with comorbid Axis-I disorders, where depression is the most common (Abramowitz 2004), a comprehensive meta-analysis by Olatunji and colleagues (2010) indicates that pre-treatment comorbidity is related to better treatment outcome (Olatunji et al. 2013).

As for comorbid personality disorders (PD), the information is limited (Bulli et al. 2015) and the influence of a PD on treatment-outcome unclear (Thiel et al. 2013).While some have reported that the presence of personality disorders might predict a poorer outcome (Dreessen 1998), others have not found this association (Olatunji et al. 2010). One of the reasons for the scarce information about the prevalence of comorbid PD in treatment-seeking OCD-patients might be related to the time- and resource-demanding procedures needed for a full pre-treatment PD-screening interview(Thiel et al. 2013). In the current paper we have employed a brief screening PD-interview, and the aims of the study were

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to firstly relate the presence of a PD to OCD symptom severity pre-treatment as well as to explore possible relationships between comorbid PD and treatment outcome. Also, we want to explore whether co-morbid Axis-I disorders are related to treatment outcome.

Exposure-based CBTs can be delivered in a number of different formats (Öst et al. 2015b), and all patients in the current study received Concentrated Exposure Treatment (cET) delivered during four consecutive days. One of the hallmarks of this approach is the combination of individually tailored and therapist assisted exposures combined with a group format where the ratio between therapists and patients are 1:1 (Havnen 2016; Havnen et al. 2013; Havnen et al. 2014). The cET format has been evaluated in a pilot study (Havnen et al. 2013), in an effectiveness study (Havnen et al. 2014) and in a replication of the effectiveness study (Havnen et al. submitted) with very promising results. The format is highly accepted by the patients, and there are basically no drop-outs. Also, since the cET is delivered during a very short time-span, the approach yields a unique possibility to study treatment effects, since influence of external confounding factors is dramatically reduced.

Methods

Referral procedures and description of the sample

The current study is part of a standard assessment- and quality control procedure in a specialized OCD outpatient clinic, Haukeland University Hospital, Norway[1]. All adult OCD-patients in a catchment area of 400.000 are entitled to free health care at this clinic if the disorder is considered severe enough to require treatment. Patients with OCD, or suspected OCD, are referred from their general practitioners to the local district outpatient psychiatric facility, and then referred to the OCD clinic where they are screened with the Norwegian version of Mini-International Neuropsychiatric Interview (M.I.N.I.) (Leiknes et al. 2005) and Yale-Brown Obsessive-Compulsive scale (Y-BOCS) (Goodman et al. 1989). Patients who are diagnosed with OCD according to the DSM-IV-TR (American Psychiatric Association 1994) are offered cET delivered in a group setting. The cET groups are arranged approximately 10 times per year, with a maximum of six participants, which means that patients are offered participation when slots are available. Patients with a primary diagnosis of psychosis, or suicidal thoughts are offered individual treatment. Personality disorder was assessed using the Standardized Assessment of Personality – Abbreviated Scale (SAPAS). Between November 2014 and November 2015 48 of the 59 patients who were offered cET also had the SAPAS data available. Among these, one patient did not complete treatment, which left a sample of 47 (15 male), with a mean age of 32 (range 20-63). 81% of the patients reported previous treatment, and 32% (15 patients) reported ongoing SSRI medication.

Measures

Obsessive and compulsive symptoms was measured with the clinician-administered Yale-Brown Obsessive-Compulsive Scale (Y-BOCS, (Goodman et al. 1989)) The Y-BOCS severity scale consists of 10 items, 5 cover the severity of obsessions and 5 cover the severity of compulsions. Each item is rated from 0-4, and the total score ranges between 0-40. A score between 0-7 is considered subclinical, between 8-15 mild, 16-23 moderate, 24-31 severe, and 32-40 is considered indicative of extreme OCD (Marques et al. 2009).

The Y-BOCS has good psychometric properties with reported Cronbach's α ranging from 0.88 to 0.91(Goodman et al. 1989).

The Standardized Assessment of Personality - Abbreviated Scale (SAPAS) is an eight-item screening interview for personality disorder (Moran et al. 2003) (see **table 2** for overview of items). Each item is a question to be answered with "yes" or "no". When the answer is "yes", the interviewer asks whether this is generally the case (Moran et al. 2003). Previous studies have found a score of 4 or above to be indicative if a personality disorder (Germans et al. 2008, Gonzalez 2014). The SAPAS is comprised of indicators covering multiple areas, and it is not designed to differentiate between the different PDs (Hesse and Moran 2010).

The cET format[2]

Prior to the 4-day treatment, the patient receives psychoeducation about exposure and response-prevention, and about the specific treatment format. It is ensured that they have made an active decision to participate. Each treatment group consists of 3-6 patients, and the same number of therapists. Day one of the treatment (approximately 3h) the patients meet together for psychoeducation and detailed planning of exposure tasks for each patient (Havnen 2016, Havnen et al. 2013). The patients are encouraged to choose tasks that will enable the most useful changes, and that include the most challenging OCD symptoms. The aim is to fully approach all triggers without "holding back" but rather "lean into" the anxiety by actively and willingly trying to increase the levels of anxiety and uncertainty. Day two and three (each approximately 8h) are reserved for therapist-assisted exposure training. Before individual exposures are initiated, an example of how to do exposures without holding back is demonstrated, and each patient starts the treatment by practicing the "leaning in technique" (LET-technique[3]). When exposures are conducted, the focus is on whether they are "leaning into" the anxiety and discomfort elicited by the triggers. Therapist assisted exposures are conducted in the most relevant contexts (at home, work, etc.). The group has short meetings in the morning, at lunch, and in the afternoon, where the patients share experiences. In the afternoon and evening the patients usually practice on their own, but texts/ call their therapist to give brief feedback focused on whether they are "leaning in" or not. During the afternoon day three a 2h psychoeducative meeting is held for the patient´s family and friends, with general information about the treatment, with special focus on issues related to family accommodation. Day four consists of a summary of the treatment experiences gained and the patients make a detailed plan for the following three weeks, to ensure that they implement the treatment principles in their daily life and continue to practice the principles of ERP.

[1] The study is approved by the local Data Protection Official, 2012/3663

[2] The Norwegian manual for the cET format is under translation to English.

[3] A standardized procedure for conducting the LET intervention is part of the cET manual

Post-treatment: The patients continue to work with exposures in their daily life, and complete self-report questionnaires to monitor their progress. One week after treatment an independent rater conducts a Y-BOCS interview, by phone, to assess change in OCD-symptoms.

Follow-up: The patients are invited for an individual follow-up session three months after the treatment. This session does not contain any exposures but is focused on how to maintain and develop the change. Three and six months after treatment, the independent rater conducts a Y-BOCS interview by phone, as part of the regular assessment of clinical effectiveness.

Therapist competency[4]

The treatment was delivered at the OCD-team at Haukeland University Hospital. All therapists were highly experienced psychologists or psychiatrists with extensive experience with OCD-patients. All therapists had received hands-on training by the developers of the cET (Bjarne Hansen and Gerd Kvale). All had been certified as experts in the cET format, indicating that they are also considered competent to be a group leader. All therapists have in addition completed a comprehensive national OCD-training program focused on ERP.

Clinically significant change

To determine the proportion of patients that obtained clinically significant improvement on OCD-symptoms, the criteria of Jacobson and Truax (1991) were applied. Here, we computed significant clinical change in Y-BOCS scores and categorized patients into 4 groups; *no change, improved*, *remission* and *recovered*. First, the change from pre- to post-assessment had to be large enough to be statistically reliable at the 5%-level (Reliable Change Index; RCI). Second, a cut-off score was used: the patient's post-treatment score had to be within the distribution of the normal population defined as M+2SD, or outside the distribution of the patient population defined as M-2SD. In the present study the RCI used was ≥10 points reduction (Fisher and Wells, 2005) and the cut-off score ≤14, in accordance with a previous study by the same research group (Havnen et al., 2014). *No change* was defined as not fulfilling the RCI and scoring above the cut-off on the Y-BOCS (i.e. a reduction of less than 10 Y-BOCS points, and a total score on the Y-BOCS >14), *improved* was defined as fulfilling the RCI but not the cut-off score (i.e. a reduction of ≥10 Y-BOCS points from pre-treatment and a total Y-BOCS score >14 points). *Remission* was defined as fulfilling the cut-off score (≤14), but less than 10 points reduction in Y-BOCS score, and *recovered* was defined as fulfilling both the RCI and being below the cut off score (i.e. a reduction of ≥10 Y-BOCS points and a cut-off of ≤14).

Statistical analysis

A mixed design ANOVA with repeated measures (pre, post, 3-months and 6-months follow-up) was conducted to investigate the treatment effect, and potential differences between the PD and the nPD groups. Analogous analyses with the magnitude of comorbid Axis-I diagnoses as covariate were conducted. Missing data at post treatment (8,5%) 3-months (14,9%) and 6-months (21,3%) were imputed by the aims of an expectation maximization algorithm (Dempster et.al 1977). Results are reported by using the Greenhouse-Geisser correction.

All statistical analyses were conducted using IBM SPSS Statistics, version 23.0.

[4] Specifications for the training of therapists have been developed and are under translation to English.

Results

Pre-treatment symptom severity

Y-BOCS mean pre-treatment score for the full sample was 24.15 (SD =3.8). 49% (23) patients had a Y-BOCS score between 17 and 23, indicating moderate OCD; 45% (21) patients had scores between 24 and 30, indicating severe OCD; 6% (3) patients had a score of 32 or above, indicating extreme OCD.

77% of the patients had comorbid disorders. Among these, 11 had one, 13 had two, 8 had three, and 4 had four comorbid disorders. Please refer to **table 1** for overview of distribution

Table 1. *Distribution of comorbid Axis-I diagnoses as measured by* M.I.N.I.

Diagnoses	Total		PD group		Non-PD group	
	%	n	%	n	%	n
Depression	72.3%	34	61.5%	8	76.5%	26
Ongoing	29.8%	14	23.1%	3	2.4%	11
Recurrent	19.1%	9	30.1%	4	14.7%	5
Previous	23.4%	11	7.7%	1	29.4%	10
Panic disorder	23.4%	11	30.1%	4	20.6%	7
GAD	21.3%	10	23.1%	3	20.6%	7
Social phobia	21.3%	10	15.4%	2	23.5%	8
PTSD	6.4%	3	7.7%	1	5.9%	2
Substance abuse disorder	4.3%	2	7.7%	1	2,9%	1
ADHD	2.1%	1	-	0	2.9%	1
Hypomania	4.3%	2	7.7%	1	2,9%	1
Anorexia nervosa	2.1%	1	-	0	2.9%	1

The sample was divided into two groups (PD and nPD) based on SAPAS scores. 28% (n=13) of the patients had a SAPAS score equal or above the cut-off of 4, and was classified as PD. For distribution on each item, please refer to **table 2**.

Table 2. *Frequency Distribution of SAPAS Scores* (N=47)

SAPAS items	Score 0	Score 1
1: In general, do you have difficulty making and keeping friends?	35	12
2: Would you normally describe yourself as a loner?	39	8
3: In general, do you trust other people?	38	9
4: Do you normally lose your temper easily?	42	5
5: Are you normally an impulsive sort of person?		16
6: Are you normally a worrier?	8	39
7: In general, do you depend on others a lot?	29	18
8: In general, are you a perfectionist?	21	26

Clinical changes in OCD-symptoms

An ANOVA with repeated measures (pre, post, 3 m, 6 m) for the whole sample, showed that the treatment was highly effective $F(2.04,93.71) = 108.17$, $p = .000$, also when the magnitude of Axis I diagnoses was entered as co-variate.

A mixed design analysis of variance showed the same large main effect of treatment $F(2.15, 96.88) = 79.72$, $p = .000$, and a significant interaction effect between treatment and PD $F(2.15, 96.88) = 4.72$, $p = .009$ was found (see **figure 1**). The significant interaction effect between time x PD was due to significant differences in Y-BOCS scores between patients with/ without PD at both 3 and 6-months follow-up. At 3-months, independent samples t-test showed the difference between the PD group ($M = 14.92$, $SD = 8.20$), and nPD group ($M = 9.62$, $SD = 5.31$); $t(16.00) = -2.17$, $p = .046$ (two tailed), indicating that the patients with PD had poorer treatment outcome at 3-months follow-up as compared to the patients without PD. The difference between the groups was still present at 6-months follow-up, showing a slightly less favorable treatment outcome for the PD group: PD ($M = 14.29$, $SD = 7.84$), nPD ($M = 10.03$, $SD = 5.85$); $t(45) = -2.03$, $p = .049$) (see **table 3**).

Despite significantly lower treatment outcome for patients with PD at 3-months as well as 6-months, 69% (n=9) of the patients with PD was classified as recovered at post treatment, 38% (n=5) was classified as recovered at 3-months follow-up, and 54% (n=7) at 6-months follow-up, using the criteria for clinically significant change(Jacobson and Truax 1991). Please refer to **table 4** for distribution.

Discussion

The aim of the present study was to explore the relationship between comorbid personality disorder and treatment outcome in a treatment-seeking sample of OCD-patients that underwent a 4-day concentrated exposure treatment (cET). Also, we wanted to explore if comorbid Axis-I disorders were related to treatment outcome. Since all patients with OCD, or suspected OCD, in the given catchment area are referred to this OCD clinic, the current unselected sample represent an opportunity to conduct research with high ecological validity and clinical relevance. Furthermore, since the intervention is delivered during 4 consecutive days, the design is highly relevant to study changes in symptoms from pre- to post treatment.

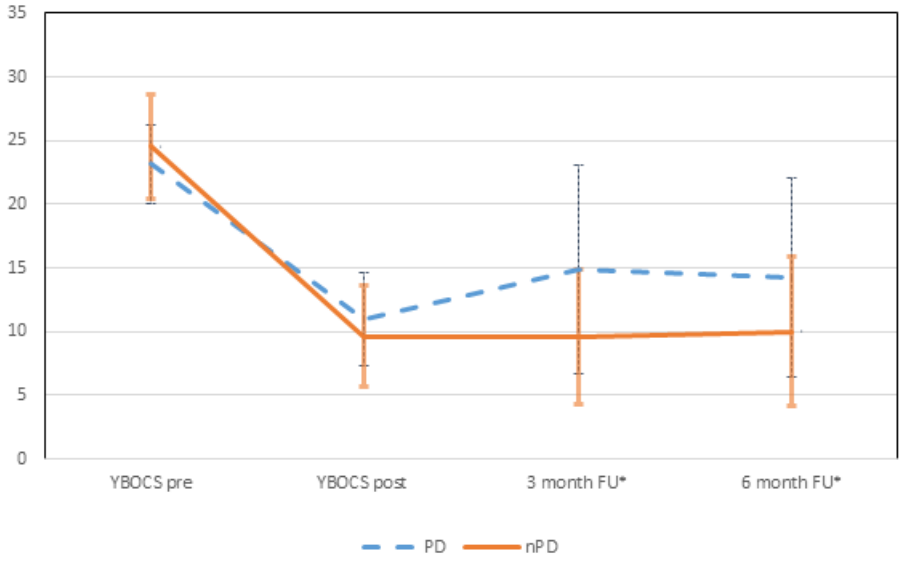
The results showed clearly that the cET was highly effective. 79% of the total sample was classified as recovered post treatment, 68% as recovered at 3-months follow-up, and 72% as recovered at six months. This is comparable to our previous studies(Havnen et al. 2013, 2014). These results are better than typical ERP-

Table 3. *Comparison on Y-BOCS scores between PD group and non-PD group*

	PD			nPD			
	M	SD	n	M	SD	*n*	*t*-value
Y-BOCS Pre	23.15	3.08	13	24.53	4.07	34	ns
Y-BOCS Post	11.00	3.63	13	9.65	3.99	34	ns
Y-BOCS 3-months	14.92	8.20	13	9.62	5.31	34	-2.17*
Y-BOCS 6-months	14.29	7.84	13	10.03	5.85	34	-2.03*

*$p < .05$.

Figure 1. *Y-BOCS scores for the PD and non-PD group at pre- and post-treatment, and at 3- and 6-month follow-up*



*$p < .05$

Table 4. *Clinical improvement rates at post-treatment and 3- and 6-month follow-up*

	Total			PD group			Non-PD Group		
	Post	3months	6months	Post	3months	6months	Post	3months	6months
Recovered	79%(37)	68%(32)	72%(34)	69%(9)	38% (5)	54%(7)	82%(28)	79%(27)	76%(26)
Improved	4%(2)	4%(2)	4%(2)	8%(1)	0%(0)	0%(0)	3%(1)	6%(2)	6%(2)
Remission	11%(5)	6%(3)	2%(1)	15%(2)	8%(1)	8%(1)	9%(3)	6%(2)	0%(0)
No Change	6%(3)	21%(10)	23%(11)	8%(1)	54%(7)	38%(5)	6%(2)	9%(3)	18%(6)
Total	47	47	47	13	13	13	34	34	34

treatment studies where 50% are recovered at post-treatment (Öst et al. 2015). The prevalence of a comorbid Axis-I diagnose was 77%%, which is comparable to what is reported in other studies (Olatunji et al. 2010). It is interesting to note that the magnitude of Axis-I disorders did not affect the treatment outcome, which is in line with previous findings by e.g. Olatunji and colleagues (2010).

The presence of a personality disorders is rarely investigated in unselected clinical samples, which makes it difficult to determine whether a prevalence of 28% as was found in the current sample can be considered typical (Bulli et al. 2015)

It is however highly interesting to note that also among the patients with PD, 69% of the sample was classified as recovered post the 4-day treatment. However, at three and six months follow-up, the patients without PD maintained the effect, whereas more of the patients with PD drifted towards clinical levels of OCD. Closer inspection did interestingly reveal that the PD group at six months nearly was divided in two, as 54% still was classified as recovered, while 38% are classified in the category "no change". The rate of recovered patients at six months in the PD-group is comparable to what is reported as typical over-all effects (Öst et al. 2015). In the patients without PD, 76% was classified as recovered six months after the 4-day treatment.

It might be noted that since there is basically no drop-out, and more than 90% show clinical change post treatment, the concentrated approach can be useful as a model for studying change. Also, as the treatment is restricted to 4 days, it yields nearly experimental control over the intervention and over external factors which might influence the treatment course. It can be argued that the approach represents a useful opportunity to temporally disentangle initial change from maintenance and relapse, which in turn might enable refined analyses for relapse prevention and long-term treatment outcome predictors (Steketee et al. 2011).

The main conclusion in the current study is that the 4-day treatment format seems feasible also for patients with PD since more than 50% are classified as recovered six months after treatment.

The current study is performed on a non-selected sample of treatment seeking patients. Obviously, before a firm conclusion is possible, it has to be replicated on a larger sample. It might also be interesting to see if standard 16 session ERP treatment (Foa, et al. 2012) will yield comparable results. Recently, the concept of personality disorders has been debated (American Psychiatric Association 2013) and in light of this, it would also be interesting to see if SAPAS scores are changed after treatment.

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