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Personality disorders in a Dutch forensic psychiatric sample: changes with treatment

PETER G.J. GREEVEN[1] and CORINE DE RUITER[2], [1]Expertise Centre for Forensic Psychiatry, Utrecht, The Netherlands; [2]Trimbos Institute, Utrecht, The Netherlands & Department of Psychology, University of Amsterdam, The Netherlands

ABSTRACT

Background *Evidence on the effectiveness of treatment for personality disorder (PD) is mixed, and there are very few data at all on outcomes for offender patients with PD. In the Netherlands there is nevertheless commitment to treating such people in specialized forensic psychiatric hospitals.*

Aims/hypotheses *The main aim was to determine the extent to which, if at all, patients detained under the Dutch TBS provision in the Dr Henri Van der Hoeven Hospital changed during inpatient treatment.*

Methods *The study followed a naturalistic design. On admission, the Structured Interview for DSM Personality Disorders (SIDP-R) and the Personality Diagnostic Questionnaire-Revised (PDQ-R) were used to assess DSM axis-II personality disorder pathology. After two years of intensive treatment they were reassessed using self-report questionnaires.*

Results *Fifty-nine patients (54 men and five women) completed both ratings. At follow-up, group mean indicated a significant reduction in personality disorder pathology as measured by the PDQ-R. Analysis of changes in individual subjects according to a method described by Jacobson and Truax (1991) showed that almost 40% improved reliably (by more than two standard deviations) and more than one quarter of the sample improved to a reliable* and *clinically significant extent in personality disorder features.*

Conclusions and clinical implications *The findings of the study are encouraging in terms of reduction of personality disorder psychopathology. Limitations to the study design are acknowledged. Further, it is not known whether this change constitutes substantial reorganization of personality, or whether it reflects a change at a more superficial level. Further follow-up of the patients is necessary to investigate whether the positive changes remain after release from hospital.*

Introduction

Personality disorder is a chronic disturbance in one's relations with self, others and the environment that results in distress or failure to fulfil social roles and obligations (American Psychiatric Association, 1994). Patients with a personality disorder constitute one of the most difficult groups for psychiatric treatment. It is clear that such patients present a formidable treatment challenge to most therapists: they tend to drop out of treatment prematurely and, according to the few empirical studies conducted, generally have poor clinical and psychosocial outcomes. This has a certain logic, considering the notion of personality disorders as stable and enduring. Follow-up studies after more than 20 years report remarkable stability of diagnosis and poor psychosocial outcome (Stone, 1993). Recent research, however, suggests that there is some evidence for the effectiveness of psychotherapeutic treatment of personality disorder (Bateman and Fonagy, 2000). Also, according to Sanislow and McGlashan (1998), it appears that borderline personality especially and antisocial personality disorders show some degree of remission over the long haul. It is less clear, however, whether there is real change in the sense of a substantial reorganization of personality, or whether change is 'only' at a more superficial level.

The available data indicate that those with personality disorders constitute a substantial proportion not only of patients with psychiatric difficulties but also of mentally disordered offenders (Burke and Hart, 2000). Especially in the case of personality-disordered offenders a prevailing mood of therapeutic pessimism regarding their treatability is present, and the evidence for effective treatment is still rather meagre. Steels et al. (1998), for example, showed that personality-disordered offenders, in comparison with mentally ill offenders, are more likely to reoffend after discharge from a forensic psychiatric hospital. In any case, it is clear from available research findings and literature reviews that knowledge of effective treatment methods is rudimentary and that this is especially the case for personality-disordered forensic psychiatric patients (Warren et al., 2003). To date, no studies have been directed at change in personality-disordered forensic psychiatric patients during inpatient treatment. This report is of a naturalistic study of changes in personality-disorder features after two years of treatment among people still resident in a forensic psychiatric hospital.

Our hypothesis was that the inpatient treatment offered to the personality-disordered offenders would lead to positive changes in personality-disorder pathology.

Method

Setting

The Dutch penal code contains a special measure to protect society against mentally disordered offenders. This is called a TBS sentence, which can be

translated as 'disposal on behalf of the state'. The court may invoke this measure when an offender has committed a serious and violent criminal act, which is estimated to have a high risk of recurrence. It is only applied in cases where, because of a mental disturbance, the court has not held the offender fully responsible for the serious criminal act committed. A TBS sentence is semi-indeterminate, initially for two years but subsequently renewable by the Court. Most such offenders suffer from a mental illness, a personality disorder or both. In the Netherlands, at any one time, about 1400 patients are being treated under a TBS sentence in a forensic psychiatric hospital.

The present study was conducted as part of a prospective study into treatment outcome at the Dr Henri Van der Hoeven Hospital in the Netherlands. This is a forensic psychiatric hospital for the residential treatment of criminal offenders who have been sentenced to TBS. At present the hospital accommodates about 130 patients. The average length of inpatient treatment is about four years. Originally the thrust of treatment was a therapeutic community model, in which the patients accept responsibility for decision-making (Jones, 1952). Since 1980 the hospital has combined a therapeutic community approach with cognitive behavioural therapy and skills training. A central concept in the treatment ideology is (still) the stimulation of the patient's awareness that he is responsible for his own life, including offence behaviour and progress in treatment. The general treatment aim is a reduction in future violence risk by means of a positive change in those factors that are associated with (sexual) violence for the individual patient (De Ruiter and Hildebrand, 2002). Group therapy programmes include social skills training, aggression and impulsivity management. During inpatient treatment the patients live in group units which are supervised by sociotherapists who provide a therapeutic milieu. Almost all patients receive individual psychotherapy, which focuses on their individual risk factors for reoffending by means of the so-called offence scripts and relapse prevention. The clinical approach and therapy programme are described in greater detail elsewhere (Van der Laan and Janssen, 1996).

Design

The study sample was limited to the patients admitted to the hospital from 1 January 1992 to 31 December 1996. The research design was naturalistic, employing pre- and post-test measures, with no control group. Patients with a personality disorder (in DSM-III-R terms) according to both a self-report questionnaire and a semi-structured interview were included and tested twice with an interval of two years. Patients who also had schizophrenia, other psychotic disorders and mental retardation were excluded.

Measures

At the start of the study, all subjects completed a battery of self-report questionnaires, including the Personality Diagnostic Questionnaire-Revised (PDQ-R:

Hyler and Rieder, 1987). The PDQ-R is a 133-item self-report questionnaire assessing the presence of criteria for the 11 DSM-III-R personality disorders. Each subject was also administered the Dutch version of the Structured Interview for DSM-III-R Personality Disorders (SIDP-R: Pfohl et al., 1989; Van den Brink and De Jong, 1992). In a prior study the diagnostic agreement between the SIDP-R and PDQ-R was calculated (De Ruiter and Greeven, 2000). The mean kappa value for diagnostic agreement in our study was 0.34 on a categorical level, whereas other authors found mean kappa values of 0.15 (Hyler et al., 1989) and 0.19 (Trull and Larson, 1994). A dimensional approach led to a somewhat higher diagnostic agreement between the two instruments, though still at a moderate level.

Statistical analysis

The pre-test and post-test scores were compared with group mean calculations (McNemar and Cohen's *d*). Following the opinion of Dolan and Coid (1993) that analyses of data at the level of the individual should be at the centre of investigations, individual changes were examined for reliability and clinical significance of the change using the methods of Jacobson and Truax (1991). Reliable change is that which exceeds 1.96 x the standard error of measurement, which would be expected in only 5% of subjects if change is due to unreliability of measurement alone. Even where change is reliable, it may not mean that the patient is functioning as well as a non-patient. For change to be considered clinically significant, the patient must have a pre-test score which makes it more likely that he is a member of a patient population and a post-test score which demonstrates that it is likely that he belongs to a normal population. This was determined applying the Jacobson and Truax (1991) method *c* to pre- and post-test PDQ-R scores.

Results

Subjects

Our original intention was to compare the scores of about 80 patients (Greeven, 1997). A problem with longitudinal studies however, is dropout. Of the original sample of 79, 17 patients (21%) dropped out of the study for various reasons (probationary leave, reoffending, transfer) and another five patients refused to participate at pre-test. This left a final total sample of 59 personality-disordered offenders (54 men and five women) from whom pre- and post-test scores were obtained. Ages ranged from 17 to 47 years, with a mean of 26 years. Eighteen patients had committed homicide, 11 patients had committed arson and nine had committed rape. The other patients were convicted of extortion, child molestation, indecent assault and aggravated assault. Analysis showed that there were no significant differences between (socio)demographic characteristics of the research sample and the original sample at pre-test.

Categorical diagnosis

On average, subjects met cut-off points for 3.8 DSM personality-disorder categories at pre-test. The number of diagnoses declined over the course of two years of inpatient treatment. As can be seen in Table 1, pre- and post-test prevalence rates of personality disorders according to the PDQ-R decreased substantially.

Table 1: Prevalence of categorical personality disorder diagnosis (and percentages) based on the PDQ-R at pre-test and post-test (n = 59)

Personality disorder	T1 (pre-test)	T2 (post-test)	McNemar test $p <$
Schizoid	12 (20.3)	3 (5.0)	0.05
Schizotypical	15 (25.4)	10 (16.9)	NS
Paranoid	31 (52.5)	18 (30.5)	0.05
Antisocial	32 (54.2)	24 (40.7)	0.05
Borderline	30 (50.8)	16 (27.1)	0.001
Histrionic	10 (16.9)	10 (16.9)	NS
Narcissistic	13 (22.0)	2 (3.4)	0.01
Avoidant	14 (23.7)	8 (13.6)	NS
Dependent	12 (20.3)	4 (6.8)	0.05
Obsessive–compulsive	13 (22.0)	7 (11.9)	NS
Passive–aggressive	16 (27.1)	5 (8.5)	0.05
Self-defeating	17 28.8)	7 (11.9)	0.05
Sadistic	10 (16.9)	6 (10.2)	NS
Mean PD scores	3.8	2.0	0.001
At least one PD	59 (100.0)	36 (61.0)	
No PD	–	23 (39.0)	

At the first testing, the personality disorders most frequently diagnosed were: antisocial 32 (54.2%), paranoid 31 (52.5%) and borderline personality disorder 30 (50.8%). The least frequently diagnosed personality disorders were: schizoid 12 (20.3%) and sadistic personality disorder 10 (16.9%). Two years later we observed an apparent decrease in the prevalence of all personality disorders, with the exception of histrionic personality disorder. The change in prevalence of personality disorders was significant for eight of the 13 personality disorders. Further, at post-test only 36 patients fulfilled criteria for at least one personality disorder and 23 patients had ceased to meet the criteria for a personality disorder.

Dimensional traits

From Table 2, it can be seen that pre-test scores are higher than post-test scores on the total number of personality-disorder criteria met. The mean PDQ-R total

Table 2: Mean number of DSM criteria met at pre-test and post-test, based on the PDQ-R (n = 59)

Personality disorder	T1 (pre-test)	T2 (post-test)	T	*p*
Schizoid	2.5 (1.5)	1.9 (1.1)	2.95	0.01
Schizotypical	3.5 (1.9)	2.4 (1.9)	4.24	0.00
Paranoid	3.6 (1.8)	2.5 (1.6)	4.02	0.00
Antisocial	3.7 (2.0)	3.1 (2.0)	3.06	0.00
Borderline	4.5 (1.9)	3.4 (1.9)	4.82	0.00
Histrionic	3.0 (1.8)	2.9 (1.7)	0.47	0.64
Narcissistic	3.2 (1.8)	2.4 (1.4)	3.59	0.00
Avoidant	2.6 (1.8)	1.9 (1.5)	3.41	0.00
Dependent	3.1 (1.8)	2.2 (1.3)	3.82	0.00
Obsessive–compulsive	2.9 (1.7)	2.1 (1.7)	3.70	0.00
Passive–aggressive	3.1 (2.0)	1.9 (1.8)	3.74	0.00
Self-defeating	3.3 (2.1)	1.8 (1.7)	5.69	0.00
Sadistic	2.2 (1.6)	1.9 (1.5)	1.60	0.12
Total	43.8 (15.9)	31.6 (14.8)	6.68	0.00

pre-test score was 43.8 (SD = 15.9) and the mean post-test score was 31.6 (SD = 14.8). The changes in mean number of DSM criteria met are significant for all personality disorders, with the exception of histrionic and sadistic personality disorder. This change is a clear indication for a reduced level of severity of personality disorder pathology (Tyrer and Johnson, 1996) after two years of inpatient treatment.

The analysis of the reliability and clinical significance of the changes in the individual subjects (Table 3) showed that 23 of the 59 patients (39%) improved reliably, that is, showed a decrease of more than two standard deviations on the PDQ-R total score. The magnitude of this change was also clinically significant, that is from the patient range to the normal range, for 16 patients (27%) of the sample. Of the total sample only one patient (1.7%) was functioning at a reliably worse level after two years of inpatient treatment.

In addition, we also calculated reliable and clinically significant improvement for categorical personality disorder diagnoses (see Figure 1).

The effects for patients with a specific personality disorder at pre-test are different for each personality disorder. Patients with schizoid (SZD), dependent (DEP) and passive-aggressive (PAG) personality disorder have a relatively good prognosis in terms of reliable and clinically (RC and CS in the figure) meaningful improvement. For this group the changes are not only at a statistical significant level but also clinically significant/important. Little or no reliable or clinically significant change, however, was observed for patients with antisocial (ASP), histrionic (HST), narcissistic (NAR) or avoidant (AVD) personality disorder.

Table 3: Reliable and clinically significant change of individual patients on PDQ-R total score (*n* = 59)

Clinically significant change	Reliable deterioration	Change not reliable	Reliable improvement	Total
Normal–patient	1	1	–	2 (3.4%)
Normal–normal	–	10	1	11 (18.6%)
Patient–patient	–	19	6	25 (42.4%)
Patient–normal	–	5	16	21 (35.6%)
Total	1 (1.7%)	35 (59.3%)	23 (39%)	59

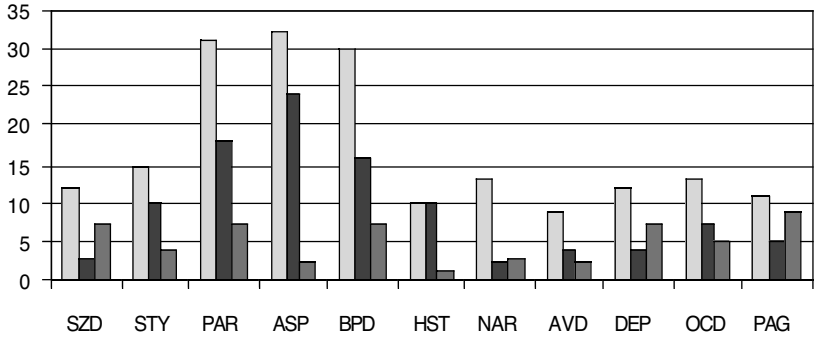

Figure 1: Pre- and post test prevalence of personality disorders combined with reliable change and clinical significance (*n*=59)

Note: The y axis represents the number of patients. The bar colours represent TI scores, T2 scores and RC & CS scores.

Discussion

Our intent was to study the impact of inpatient treatment on personality-disordered criminal offenders, and to examine which personality disorders would benefit from the therapy offered. The findings of this study appear to indicate that two years of compulsory treatment in a forensic psychiatric hospital has a positive impact on mentally disordered offenders with personality disorders. Twenty-three of the 59 patients had ceased to show clinical features sufficient to meet criteria for a personality disorder at all. All other measures including number of personality disorders recorded and severity of pathology indicated statistically significant and clinically important improvement. Even with the more stringent method of Jacobson and Truax (1991), almost 40% improved

reliably and more than one-quarter of the sample improved to a clinically significant extent in personality-disorder features. Such positive changes are consistent with some other research (Budman et al., 1996; Bateman and Fonagy, 2000).

The study had several limitations and therefore some caution is necessary in generalizing from the present findings. First, we did not use a control group with non-treated patients. Without a control sample it is impossible to be certain whether the changes noted can be attributed to the treatment intervention. This limitation is difficult to tackle in forensic psychiatric treatment outcome research because a randomized controlled trial is not feasible in a context where the Courts decide on the placement of the offender in a forensic psychiatric hospital, and on subsequent release. Also, for this difficulty in categorizing a population with multiple and chronic problems, one can argue that randomized controlled trails are of limited use, because they are best used for studies that examine subjects with relatively 'pure' disorders (Guthrie, 2000).

A second possible limitation was that we used a self-report questionnaire to evaluate changes in personality-disorder pathology. Self-report questionnaires have some advantages in the evaluation of personality disorders (Hunt and Andrews, 1992) but they also have major limitations, and multi-method assessment is desirable (Blackburn et al., 1990). It is evident from various studies that self-report questionnaires tend to over-diagnose personality disorders compared with interview measures. Therefore, we need to be cautious in assigning too much weight to the findings concerning differences between the personality disorder diagnoses, since the validity of these (self-report) diagnoses could be called into question. An alternative way of considering the findings is to regard the comorbidity of personality disorders as a measure of severity. This has been suggested by several studies which indicate that those with more personality-disorder diagnoses have more severe pathology and are seen as more impaired by clinicians (Tyrer and Johnson, 1996). As one safeguard in the present study, however, we did use multi-method assessment to measure personality disorder pathology at pre-testing (De Ruiter and Greeven, 2000).

A third limitation of the study is that at post-test the patients were still in the structured environment of the forensic psychiatric hospital. Although the overall findings from the study show a general decline in personality-disorder pathology, thus suggesting that the patients' functioning improved, it is possible that the decrease in personality disorder pathology is, at least partially, a result of the structured environment, which allows the patients to experience less stress (Strupp et al., 1997).

Nevertheless, our findings reveal a significant decrease in some personality-disorder pathology during two years of treatment. The change shown in this study is not only a statistically significant overall change but, perhaps, a more clinically digestible finding: about 40% of the subjects showed reliable improvement. This is important in light of the therapeutic nihilism view held by many professionals when considering the management of these patients

(Dolan and Coid, 1993). Less hopeful was the finding that the most prevalent personality-disorder pathology, i.e. cluster B disorders, showed the least clinically significant improvement. Also, the fact that personality-disorder pathology associated with violence, for example impulsivity, narcissistic rage and sadistic traits, did not change significantly was not very encouraging. This finding is only partially explained by the fact that some DSM cluster B criteria are based on historical data and are therefore difficult to change. On the more positive side, however, given that the mean length of inpatient treatment on the unit is four years, most of the patients were only halfway through treatment.

What can we learn from these findings if one at least assumes that personality-disorder pathology forms a central element in the treatment of forensic psychiatric patients, and that it plays a causal role in criminal and violent behaviour (Serin, 1995; Burke and Hart, 2000)? In our opinion the findings point to the necessity to direct the treatment of personality-disordered offenders more specifically at those personality-disorder traits that are especially associated with violence and to focus on empirically identified risk factors for crime and violence. This finding is in line with the so-called 'need principle' distinguished by Andrews et al. (1990). The need principle proposes that the targets of treatment should be matched to the specific criminogenic needs of mentally disordered offenders. Criminogenic needs are those aspects of the offender's functioning that give rise to his/her antisocial and criminal behaviour. From this perspective, psychopathology and severity of personality disorder are important in managing mentally disordered offenders but, in terms of future risk of reoffending, these factors are overshadowed by the more general factors identified in the criminological research (Bonta et al., 1998).

This is one of the first prospective studies of change in personality-disorder features during inpatient treatment in a forensic psychiatric hospital. Despite the limitations of the design, the results of the study are encouraging, for both the staff members and the patients, and they repudiate the doctrine that 'nothing works' (Lösel, 1993). At this stage, however, we do not know how the patients will fare when they return to open society and how the findings are related to reduction of violent and criminal behaviour. In follow-up research in the coming years, we hope to relate our treatment findings to recidivism rates, and learn more about the characteristics of those who succeed and those who fail.

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Address correspondence to: Dr Peter GJ Greeven, PhD, Programme Director, Expertise centre for Forensic Psychiatry (EFP), Maliesingel 29, 3581 BJ Utrecht, The Netherlands. Fax: +31 (0)30 29 100 10; E–mail: pgreeven@efp.nl