



The prognostic value of the PCL-R in relation to the SUD treatment ending

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ABSTRACT

Scientific research about patients with substance use disorders (SUD) treated within the context of forensic compulsory addiction treatment is seldom available. Scientifically supported surveys regarding the treatability of SUD patients are rare. Some authors claim that the Psychopathy-Checklist-Revised (PCL-R) has value for predicting therapeutic success. PCL-R scores rely on extensive interview data and a detailed review of criminal records and social history. The scores reflect 1) the affective and interpersonal psychological traits; and 2) socially deviant conduct.

This study was conducted by the forensic professional clinic at the hospital for Psychiatry and Neurology Hildburghausen. We assessed 102 male patients using the PCL-R. This investigation evaluated the Total score of the PCL-R and the score of Factor 1 and Factor 2 in relation to the end of treatment by court order. The results showed significant differences between patients who completed treatment and those who did not. Patients that dropped out of treatment had a higher score in PCL-R. With the use of the PCL-R it is possible to make a quantitative statement about which patients will complete treatment.

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1. Introduction

There are few empirical studies dealing with the prediction of outcomes of patients in a forensic compulsory addiction treatment (treatment pursuant to Section 64 of the German Criminal Code). Fries, Endrass, Ridinger, Urbaniok, and Rossegger (2011) provide a review of predictors of the course of inpatient treatment and therapy in offenders with substance dependency. They concluded that more prospective studies using standardized assessment tools were required to clarify the treatment response of psychopathic forensic patients.

Psychometric instruments in forensic psychiatry to assist in the assessment of the likelihood of criminal reoffense might also assist in the assessment of which patients would complete and benefit from treatment. The Hare Psychopathy Checklist-Revised (PCL-R) assesses the presence of psychopathic traits in an individual and has been found to be reliable and valid.

Hare, Clark, Grann, and Thornton (2000), as well as Lösel (1998), hold the opinion that the PCL-R allows to draw important conclusions about treatability. Many authors share the view that the current attempts to treat patients with a score higher than 30 lead to few or no changes in their criminal behavior (Harris, Rice, & Cormier, 1991; Rice & Harris, 1992). Nuhn-Naber and Rehder (2005) question the efficacy of psychotherapies to treat patients having a high PCL-R score. The

use of the PCL-R to receive prognostic information about treatability seems complicated in forensic psychiatry, because only few patients might show a PCL-R-Score higher than 25. Investigations on Danish prisoners have shown only a PCL-R mean of 11.3 (Andersen, Sestoft, Lillebaek, Gabrielsen, & Kramp, 1996), investigations on Scottish prisoners a PCL-R mean of 13.8 (Cooke & Michie, 1999). According to Ross and Pfäfflin (2005), the PCL-R Total score is not useful to provide therapeutically relevant additional information. They questioned if there was a critical PCL-R overall score or separate factor score which would select which patients are most amenable to treatment.

We examined those questions. The study was conducted by the forensic professional clinic at the hospital for Psychiatry and Neurology Hildburghausen. Patients were classified as potentially treatable when they followed substance use disorder (SUD) treatment.

2. The custodial addiction treatment order—Section 64

According to German law, a prison sentence and a fine are types of punishment of an individual. There are, in addition, sanctions for “dangerous offenders”. These sanctions are not categorized as punishment, but rather as a preventative measure. One of these preventive measures is the custodial addiction treatment order—Section 64.

Section 64: Custodial addiction treatment order

“If a person has an addiction to alcohol or other drugs and is convicted of an unlawful act committed while he was intoxicated or as a result of his addiction, or is not convicted only because he has been found to be insane or insanity cannot be excluded on the

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evidence, the court shall make a custodial addiction treatment order if there is a danger that he will commit future serious unlawful acts as a consequence of his addiction.

Such an order shall not be made unless ab initio there is a sufficiently certain prospect of success that the person can be healed by way of custodial addiction treatment or that a relapse into addictive behavior and the commission of serious unlawful acts caused by that addiction can be prevented for a substantial period of time."

Offenders with a drug dependence and sufficiently certain prospect of success are confined to special detoxification centers in forensic psychiatric hospitals (Section 64 of the German penal code). Expert witnesses from the fields of psychiatry and psychology are asked about the following questions by the courts: the diagnosis of an addiction or dependency syndrome; the relationship between criminal offense and the tendency to consume drugs, and the likelihood of re-offense; the nature of future re-offense; the likelihood of successful treatment of the drug dependence (Konrad & Lau, 2010).

Treatment is limited to two years and can be extended if the offender had an additional penalty in the final judgment by court. According to Gericke and Kallert (2007), successful treatment takes about two years. Nevertheless, more than 50% of the SUD treatments are terminated due to poor treatment outcome (Von der Haar, 2010). Schalast, Mushoff, and Demmerlin (2004) noted that the termination of the SUD treatment has become common.

3. The concept of PCL-R according to Hare

The Hare Psychopathy Checklist—Revised (PCL-R) is used to assess a person's psychopathic or antisocial tendencies based on 20 items of personality traits and behavioral characteristics:

1. Glibness/superficial charm
2. Grandiose sense of self-worth
3. Need for stimulation/proneness to boredom
4. Pathological lying [lying for its own sake]
5. Conning/manipulative
6. Lack of remorse or guilt
7. Shallow affect
8. Callous/lack of empathy
9. Parasitic lifestyle
10. Poor behavioral controls
11. Promiscuous sexual behavior
12. Early behavior problems
13. Lack of realistic long-term goals
14. Impulsivity
15. Irresponsibility
16. Failure to accept responsibility for own actions
17. Many short-term marital relationships
18. Juvenile delinquency
19. Revocation of conditional release
20. Criminal versatility

Symptoms usually begin in childhood. In general, these patients show long lasting, characteristic social dysfunction. The validity of the "Psychopathy" construct remains argumentative (Cooke, Michie, Hart, & Clark, 2004). According to Nedopil (2005), the PCL-R is a diagnostic instrument that has prognostic capacities. It has well operationalized items that allow reliable and valid data collection, and it describes some clinically relevant personality characteristics which are important especially in forensic psychiatry and in criminology.

4. The factor structure of the PCL-R

Hare and Neumann (2005) and Bolt, Hare, Vitale, and Newman (2004) described the PCL-R as a homogenous construct. But there is

strong evidence that the PCL-R consists of different factors which include diverse meaningful psychological facets. Hare originally determined a 2-factor-model. Factor 1 can be described as the "interpersonal and/or affective" factor in accordance with the model of Cleckley (1976). Factor 2 is related to antisocial behavior as defined in DSM-IV (Hare, 1990; Walters, 2003). Although recent studies deal with a 4-factor-model (Mokros et al., 2011), as finally suggested by Hare in the second edition of his PCL-R-Manual (Hare, 2003), this study focuses on the originally determined 2-factor-model. These two factors of the PCL-R are considered as one of the best predictors of recidivism (Nedopil, 2005).

Factor 1 (items 1, 2, 4, 5, 6, 7, 8, 16) clearly reflects a set of interpersonal and affective characteristics. In interpersonal contacts, psychopaths show a superficial charm and an egocentric and manipulative behavior. They are arrogant, have a grandiose sense of self-worth and a failure to accept responsibility for own actions. Shallow affects and many short-time relationships are typical affective characteristics. They are not anxious, and have a lack of remorse, guilt and empathy.

Factor 2 (items 3, 9, 10, 12, 13, 14, 15, 18, 19) indicates a chronically instable and antisocial lifestyle. The psychopath behaves impulsive, permanently seeking out for sensation. Furthermore, the items include early behavioral problems, juvenile delinquency, aggressive behavior, proneness to boredom, absence of planning and irresponsibility as an adult.

5. Method

The study was conducted by the forensic professional clinic at Hildburghausen. This clinic is the only one in the federal state of Thuringia that provides treatment for addicted offenders. The clinic has the possibility of treating up to 128 addicted offenders with a final judgment pursuant to Section 64 of the German Criminal Code.

A total of 102 male patients without a migration background were assessed with the PCL-R according to Hare. The patients were older than 18 years and diagnosed with substance use and abuse disorders (pursuant to Section 64 of the German Criminal Code). The interviews were carried out in the rooms of the forensic professional clinic of Hildburghausen and lasted between 1 1/2 and 2 h. The interviews were carried out by a professional who was not involved in the therapeutic process.

In the study, the patients were divided into two groups to analyze potential differences in the results of the PCL-R. The first group ($n = 22$) was composed of patients whose treatment had been discontinued. Some of these patients had terminated themselves; some patients' treatment had been terminated by the clinic when the patients were not adherent, had persisted in delinquent behavior and a poor outcome was anticipated. These patients were isolated from the other patients in a special ward. They were waiting to go back to prison. The second group ($n = 80$) was composed of patients with the potential to adhere to treatment and to refrain from further delinquency. This group was named "patients in treatment".

The statistical analysis was carried out by means of the statistics software SPSS. The level of significance was assessed at $p \leq 0.05$. Significance tests were used to examine whether or not a difference could be coincidental. Univariate analyses involved the examination of cross cases of a single variable with a focus on three characteristics: the distribution, the central tendency and the dispersion. Taking into account the fact that there are multiple comparisons on the groups, the Bonferroni correction was used. The statistical calculations were based on metric data for the PCL-Score. In addition, the Mann-Whitney-*U* test (a non-parametric statistical hypothesis test) was used.

Furthermore, we applied the principal-component analysis to all collected data to examine the dominant pattern of the PCL-R items.

6. Results

The study comprised 102 patients: 80 of them were in SUD treatment, 22 were not. Univariate ANOVA (analysis of variance) with the

Table 1

PCL-R results, divided into patients in SUD treatment and patients out of SUD treatment.

Group	n	PCL-R Total		Factor 1		Factor 2	
		M	SD	MW	SD	MW	SD
Treatment	80	13.80	5.1268	3.56	2.652	8.31	3.896
Out of treatment	22	20.03	5.5058	6.73	3.341	10.91	2.991
Total	102	15.14	5.7881	4.25	3.088	8.87	3.858

dependent variables “PCL-R Total score”, “score PCL-R Factor 1” and “score PCL-R Factor 2” showed a significant difference between the scores of patients in SUD treatment and patients out of SUD treatment. Variable “PCL-R”: $F(1,100) = 24.719$, $p < 0.001$, variable “PCL-R Factor 1”: $F(1,100) = 21.875$, $p < 0.001$ and variable “PCL-R Factor 2”: $F(1,100) = 8.388$, $p = 0.005$. The PCL-R Total score, scores Factor 1 and Factor 2 for each group are presented in Table 1.

In the Factor analysis by the mean-component-method (varimax rotation), the structures (Factors) underlying the set of items were identified. In this study, the scale assignment suggested by Hare was largely confirmed (see Table 2).

7. Conclusion

In the early 1990s, the frequency of orders by a court to SUD treatment increased considerably and with it the assessment of the efficacy of that treatment. Fewer patients complete than drop out of treatment. According to Schalast et al. (2004), the dropping out of treatment has meanwhile become the statistical norm. For both therapeutic and economic reasons, we sought to find factors predictive of SUD treatment completion and treatment efficacy. In this study we questioned whether the PCL-R is a reliable prognostic tool for SUD treatment outcomes.

The study demonstrated significant differences between patients who dropped out of the treatment and patients in treatment (out of treatment: mean = 20.0, in treatment: mean = 13.8). We sought to clarify that score on the PCL-R that would differentiate between completers of SUD treatment and patients who did not. The current study revealed contradicting findings. On the one hand, we had two patients with a score above 25 who both dropped out of the treatment. On the other hand, two patients with a score above 25 completed the SUD treatment. The results did not clarify when a patient with a PCL-R Total score higher than 25 could complete SUD treatment.

In this study, 50% of the patients who dropped out of the treatment, and 10% of the patients who finished the treatment had a score above 20. These results provide evidence that the prognosis of patients with a PCL-R Total score above 20 is difficult to assess solely by this instrument. However, the treatment of persons with a higher score is much more difficult than the treatment of persons with a lower score. Patients with a higher PCL-R Total score dropped out of the treatment much more easily than patients with a lower score. Thus, a Total score above 20 requires special attention.

Furthermore, the findings of the factor analyses supported the two statistically derived factors of Hare. Only a few items differ. In the literature, treatment of patients with a high score in the affective-interpersonal component of psychopathy (Factor 1) is difficult (Hobson, Shine, & Roberts, 2000). This, however, has not been confirmed in the current study. We found no significant difference between the examined groups. Both our groups had low scores in

Table 2

Items of the extracted Factors.

	Factor 1	Factor 2
Items by Hare	1, 2, 4, 5, 6, 7, 8, 16	3, 9, 10, 12, 13, 14, 15, 18, 19
Items—current study	1, 2, 4, 5, 6, 7, 8, 9, 11, 17	3, 10, 12, 13, 14, 15, 16, 18, 19, 20

Factor 1. All assessed patients had a PCL-R Factor 1 score with a mean of = 4.25, and the patients who dropped out of the treatment had a PCL-R Factor 1 score with a mean of = 6.73. Therefore, in our sample, the affective-interpersonal component of psychopathy was not typical of patients with a custodial addiction treatment order (Section 64). Further study is necessary to clarify the relevancy of the different PCL-R items in relation to the ending of treatment by court order.

The present study revealed that patients with a higher PCL-R Total score dropped out of the SUD treatment more often than patients with a lower PCL-R Total score. One could say that the less dangerous patients with less history of psychopathic conduct are treated and the risk ones with an extended prior history of criminal and antisocial behavior are not. This contradicts with the current view of the treatment of criminal offenders. According to Andrews et al. (1990), especially dangerous criminals, having committed serious offenses, need intensive treatment. According to the scientific findings of the PCL-R research, patients with a higher PCL-R score have a higher relapse risk. Consequently, patients with a higher PCL-R score need comprehensive treatment. However, some forensic experts claim that patients with a higher PCL-R score cannot be treated efficiently. Lösel (1998) suggests assessment by using international impact research methods.

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