Temperament traits and psychopathy in a group of patients with antisocial personality disorder

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Abstract

Objective: The Psychopathy Checklist Revised (PCL-R) and Temperament and Character Inventory (TCI) have been used extensively in research of personality disorders; however, no previous study has investigated the relation between psychopathy factors and temperament and character traits in patients with antisocial personality disorder (ASPD). Our aim was to fill this gap in the literature.

Methods: The PCL-R Factor scores and the TCI temperament and character scores were evaluated in 68 men with ASPD and 65 healthy male controls.

Results: The ASPD cases had significantly higher PCL-R Factor 1, Factor 2, and Total scores, as well as significantly higher TCI Novelty Seeking and Harm Avoidance scores, whereas the control group had higher TCI Reward Dependence, Persistence, Self-Directedness, and Cooperativeness scores. Correlation analysis revealed that, in the whole study group, PCL-R Factor 1, Factor 2, and Total scores were positively correlated with Novelty Seeking and Harm Avoidance scores and negatively correlated with Reward Dependence, Persistence, Self-Directedness, and Cooperativeness scores. When each group was analyzed separately, the correlations were not significant. Regression analysis supported the main findings.

Conclusion: Our results showed that both PCL-R Factor 1 score, which is claimed to reflect “core psychopathy,” and PCL-R Factor 2 score, which reflects criminal behaviors, were positively correlated with Novelty Seeking and Harm Avoidance and were negatively correlated with Reward Dependence in the whole sample. The reduced variance of PCL-R in each group might lead to nonsignificant associations within groups. Without the subjects with severe psychopathy in the present study, it might not be possible to show the association.

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1. Introduction

Antisocial personality disorder (ASPD) is characterized by hallmark features of pervasive violation of rights of other people, irresponsibility, impulsiveness, aggressiveness, deceitfulness, and lack of remorse [1]. Psychopathy is a closely related but somewhat different concept. The Hare Psychopathy Checklist-Revised (PCL-R) is the most frequently used instrument to measure psychopathy [2,3]. To rate PCL-R items, data obtained by semistructured interview and case history are used. The 4 subgroup scores that PCL-R provide are Interpersonal, Affective, Lifestyle, and Antisocial subgroups, in that order. The Interpersonal and Affective subgroups compose Factor 1, and the Lifestyle and Antisocial subgroups compose Factor 2. The Total score is obtained by simply adding Factor 1 and Factor 2. A Total score more than 29 has been accepted as an indication of significant psychopathy.

From a critical point of view, it is still unclear how to describe personality disorders best. Previously, it has been suggested that personality may better be conceptualized as interacting domains of character and temperament [4]. To quantify temperament and character dimensions of personality, the Temperament and Character Inventory (TCI) has been used extensively [5]. Temperament traits (Novelty Seeking, Harm Avoidance, Reward Dependence, Persistence) represent stable, heritable, neurobiological dispositions to learn...
automatic behavioral reactions in response to specific environmental stimuli (danger, novelty, and reward) [6], whereas character traits change with maturation and are more closely associated with higher cognitive processes including interpretation and formal construction. As one may expect, poorly developed character traits are common in all personality disorders [6].

One common feature of Cluster B personality disorders (ASPD, borderline personality disorder, histrionic personality disorder) is high Novelty Seeking trait. Among them, ASPD has especially been reported to reflect high Novelty Seeking, low Harm Avoidance, and low Reward Dependence traits [7]. This latter condition is also described as “secondary psychopathy” by Cloninger.

One recent study interestingly reported high Harm Avoidance in ASPD subjects with alcohol abuse [8]. These authors found that offenders with low Harm Avoidance committed less impulsive violence, whereas Harm Avoidance was high in subjects with either ASPD or borderline personality disorder. The authors came to the hypothesis that low Harm Avoidance might be associated with high PCL-R Factor 1 score. It is worth to note that although PCL-R and TCI have been extensively used in researches about personality disorders, no previous study has investigated the relation between psychopathy factors and temperament and character traits in patients with ASPD. Our aim was to explore this relation in male patients with ASPD and in healthy control subjects.

2. Methods

2.1. Sample

Study sample included 68 male cases with ASPD and 65 healthy men as control cases. All cases were evaluated during their military service, which is mandatory for every male in Turkey. Participants with ASPD were referred from several military health departments that were subordinate to the tertiary military health center in which the study was conducted. Control group was ascertained from other military personnel.

The study was approved by the local ethical committee, and all patients and control subjects gave written informed consent before enrollment.

2.2. Evaluation

Sixty-eight adult male offenders who were referred for assessment of their antisocial behaviors formed the study group. Their ASPD diagnosis was confirmed by using the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV), criteria. Psychopathy of all participants was evaluated with the PCL-R. It is a 20-item, reliable, and valid instrument to assess psychopathy, both in categorical and dimensional natures. All patients in the study group scored more than 29 (maximum score available is 40) in the PCL-R, which indicates a high degree of psychopathy [9]. The Total PCL-R score includes 2 factor scores. Factor 1 reflects interpersonal/affective problems, callousness, and domination seeking, whereas Factor 2 reflects social deviance. It has been argued that Factor 1 is an indicator of “core” personality traits of psychopathy. In the present study, PCL-R was administered to the participants by a single psychiatrist who personally did interviews and examinations of all participants.

All participants were also screened for current and lifetime psychosis, schizophrenia, major depressive disorder, substance abuse (other than smoking), and bipolar affective disorder by the corresponding modules of the Structural Clinical Interview for DSM-IV Axis I Disorders (SCID-I) [10]. The SCID-I is a semistructured interview for DSM-IV Axis I diagnoses, which was administered by trained interviewers. It consists of 6 modules and usually takes 25 to 50 minutes to complete. It was translated into Turkish by Ozkurkcgil and colleagues [11] and was found to be valid and reliable. We used SCID-I as a screening measure in the control group.

The TCI was used to assess temperament and character dimensions. It is a self-administered questionnaire including 240 true/false items. Novelty Seeking and Harm Avoidance are measured by 4 subscales; Reward Dependence, by 3 subscales; and Persistence, by 1 subscale. The Turkish version of TCI has been approved by Cloninger and found to be valid and reliable [12].

2.3. Statistics

We compared the noncontinuous variables with $\chi^2$ test. We used analysis of variance to compare PCL-R and TCI scores between groups. Pearson correlation analysis was used to compute the correlation coefficients. Multiple linear regression was used to evaluate the effects of age, education, substance use, medicolegal issues, and PCL-R Total score on TCI Novelty Seeking, Harm Avoidance, Reward Dependence, and Persistence scores. Two-tailed results were reported, and $P$ values lower than .05 were accepted as statistically significance level.

3. Results

Descriptive results of the patient and control groups are summarized in Table 1. The ASPD cases were less educated, were less frequently employed long-term, had poorer family relations, and had higher rates of suicide attempts, self-injurious behaviors, and criminal behaviors. It is also important to note that 15 of the ASPD subjects were convicted with attempted murder or murder.

Univariate analysis of variance revealed that the ASPD cases had significantly higher PCL-R subgroups 1, 2, 3, and 4;
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