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Evaluation of personality traits in panic disorder using Swedish universities Scales of Personality

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ABSTRACT

Personality factors may interact with development and expressions of panic disorder (PD). This study sought to identify differences in personality traits between patients with PD and healthy individuals and explore the relationships between personality domains and various demographic and clinical variables of PD. Personality traits were evaluated in 193 patients and 314 matched healthy subjects using the Swedish universities Scales of Personality (SSP). All SSP traits, except for detachment and physical trait aggression, were significantly deviated in PD group, as compared to healthy subjects. The SSP factors of neuroticism and aggressiveness, but not extraversion, were significantly higher in PD group than in controls. More pronounced aberrations in personality traits were observed in PD with affective comorbidity. Only few demographic and clinical variables were associated with SSP scores in PD group. These results add to the evidence of maladaptive personality disposition in patients with PD, particularly high neuroticism and manifest somatic trait anxiety. Use of SSP proved to add clinically relevant information on personality traits in patients with PD.

1. Introduction

Panic disorder (PD) is a prevalent and often disabling psychiatric condition commonly comorbid with other anxiety and mood disorders (Kessler et al., 2006). Personality factors may interact with development and expressions of PD. The tripartite model of emotional disorders (Clark, Watson, & Mineka, 1994) suggests that negative affectivity, or neuroticism in personality terms, predisposes to both, anxiety disorders and depression, while the component of heightened arousal constitutes a specific vulnerability for anxiety disorders, especially for PD. Furthermore, anxious arousal can manifest on cognitive level as trait fear of anxiety-related sensations, defined as anxiety sensitivity (Reiss & McNally, 1985), which has been viewed as predisposing to PD. Personality characteristics may also affect the variability in clinical phenotypes of PD and mediate comorbidity of PD and mood disorders.

Earlier measurement of five-factor model personality traits with the Revised Neuroticism-Extraversion-Openness Personality Inventory (NEO-PI-R) showed high neuroticism and low positive emotions in patients with PD (Bienvenu, Brown, et al., 2001; Bienvenu et al., 2004). Carrera et al. (2006) used the NEO Five Factor Inventory of Personality (NEO-FFI) to compare patients with first stages of PD (n = 103, 66 with agoraphobia) to healthy controls matched by age and gender and found significantly higher neuroticism and lower extraversion among patients; however openness, agreeableness, and conscientiousness were not different from healthy subjects. When they compared patients and controls taking into account agoraphobia, neuroticism was significantly higher for both agoraphobic and non-agoraphobic patients. However, subjects with PD were more introverted only when agoraphobia was present (Carrera et al., 2006). In another PD sample, a higher neuroticism was detected using the Maudsley Personality Inventory, especially in a group of PD comorbid with major depression (Freire et al., 2007). On the contrary, comorbid PD group in this study had the lowest extraversion, followed by major depression and non-comorbid PD groups. Cuijpers, van Straten, and Donker (2005) used NEO-FFI to examine the relationship between personality and patterns of comorbidity in a large sample of outpatients with mood and anxiety disorders, including PD. They found that patients with two or more disorders had higher neuroticism, but lower agreeableness and extraversion, than patients with one disorder; however conscientiousness and openness did not significantly differ between diagnostic groups.

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Additionally, significantly stronger harm avoidance was reported in PD patients with affective comorbidity as compared to those with pure PD (Ampollini, Marchesi, Signifredi, & Maggini, 1997). Taken together, studies to date indicate some alterations in personality profiles of patients with PD, which are more pronounced in the presence of comorbid affective disorders. Considering that most of the cited studies included relatively small samples and provided only preliminary evidence, further more extensive investigations are warranted to evaluate the relationship between personality disposition and various clinical and related demographic factors in PD.

The Swedish universities Scales of Personality (SSP) employed in this study is a self-rated questionnaire based on the Karolinska Scales of Personality (KSP) designed to measure stable personality traits related to psychopathology (Gustavsson et al., 2000). Similarly to KSP, SSP was not intended to assess the whole personality, but to cover several constructs relevant for psychobiological research. The anxiety-related scales of SSP originated from the two-factor theory of anxiety: somatic anxiety, referring to physiological symptoms and somatic complaints, and psychic anxiety referring to worry and restlessness (Buss, 1962). The aggression scales were based on the differentiation between the motor/instrumental, emotional, and cognitive components of aggressiveness (Buss, 1988). The Sjöbring (1958) temperament model was the starting point for assessment of sensation seeking, impulsivity and sociability. The final version of SSP comprised 13 scales assessing various aspects of trait anxiety, aggression, sensation seeking, impulse control, relation to social environment, and conformity. Factor analysis suggested that SSP measures three broader constructs: neuroticism, extraversion and aggressiveness (Gustavsson et al., 2000). Recently, we showed reliability and validity of the Estonian version of SSP in non-psychiatric population (Aluoja et al., 2009). The expected associations with the five basic factors of personality (Costa & McCrae, 1992) confirmed the validity of SSP. The SSP scales reflecting anxiety-proneness (somatic and psychic trait anxiety, stress susceptibility) and cognitive-affective facets of aggression (embitterment, irritability and mistrust) had strongest associations with Neuroticism assessed by the NEO-PI-R. Adventure seeking, low detachment and impulsiveness had highest correlations with Extraversion. Lack of assertiveness related equally with Extraversion and Neuroticism. All aggression-related scales and social desirability were associated with Agreeableness. NEO-PI-R dimensions Openness and Conscientiousness had weaker correlations with the SSP (Aluoja et al., 2009).

The main objective of the present study was to identify differences in personality traits evaluated by SSP between patients with PD and healthy subjects. We also aimed to examine differences in personality dimensions between PD patients with and without affective comorbidity. Finally, we explored the relationship between SSP personality domains and various demographic and clinical variables of PD. We hypothesized that the patients with PD will demonstrate more pronounced anxiety-related personality traits on SSP and that the markers of complexity and course of PD will be associated with more deviations in SSP subscales and factors in a clinically meaningful and informing manner. In addition, our study sought to complement the existing body of evidence on the role of personality disposition in PD in an ethnically homogenous distinct population of Estonia.

2. Methods

2.1. Subjects

The study sample consisted of 193 patients with PD recruited at the Psychiatry Clinic of the Tartu University Hospital and 314 healthy subjects recruited by newspaper advertisement in Tartu, Estonia. Diagnosis of PD according to DSM-IV criteria was verified using the Mini International Neuropsychiatric Interview (M.I.N.I. 5.0.0; Sheehan et al., 1998) and substantiated by psychiatric history and medical records. At the time of assessment, 126 of patients (65.3%) had current symptoms of PD and 67 were in remission. PD patients with current or past comorbidity with mood disorders or with other anxiety disorders were included in the study, but no other psychiatric comorbidity was allowed. According to the clinical assessments 71 (36.8%) patients were defined as "PD only" group, who never met criteria for any other psychiatric diagnosis, with the exception of agoraphobia. The remaining 122 patients (63.2%) with comorbid mood or anxiety disorders were defined as "PD comorbid" group. Major depressive disorder was the most frequent comorbid or lifetime co-existing condition, which was diagnosed in 93 patients (with its current presence in 60 patients); whereas the criteria for bipolar disorder were met in 29 patients (with its current presence in 7). Other anxiety disorders, including social phobia and obsessive–compulsive disorder, were detected in 46 patients. Concurrent agoraphobia was present in 115 (59.6%) of the patients, among them 46 were from "PD only" and 69 from "PD comorbid" group. The earlier onset of PD with first panic attacks before age of 30 years was observed in 106 patients, whereas in 87 patients PD has developed in later lifetime period.

The healthy subjects were interviewed using the M.I.N.I. and questioned about their family psychiatric history. Only those without personal or family (defined as first-degree relatives) history of psychiatric disorders were included in this study. The majority of the subjects were of Estonian ethnicity with a similar between-group distribution (99% among patients and 95% among controls). All patients and control subjects were asked to evaluate their personality traits using the Estonian version of SSP (Aluoja et al., 2009). Data on education, employment and marital status were recorded for both groups. The Human Studies Ethics Committee of the University of Tartu approved the study protocol, and all participants provided written informed consent.

2.2. Measures

The SSP consists of 91 items grouped into 13 subscales: somatic trait anxiety (tendency to experience autonomic arousal, restless, tense), psychic trait anxiety (worry, insecurity, anticipatory anxiety), stress susceptibility (feeling pressured when hurried up or facing new tasks), lack of assertiveness (non-assertiveness in social situations), impulsiveness (acting on the spur of the moment, non-planning), adventure seeking (need for change and action), detachment (social withdrawal, avoidance of involvement), social desirability (socially conforming, friendly, helpful), embitterment (dissatisfied, blaming, and envying others), trait irritability (irritable, lacking patience), mistrust (suspicious, distrustful), verbal trait aggression (tendency to express aggressive feelings in speech), and physical trait aggression (tendency to express aggressive feelings in action, like getting into fights). Each scale is formed by 7 items rated on a scale of 1 (does not apply at all) to 4 (applies completely). Three broader factors were formed from the SSP subscales according to the factor structure of an Estonian sample (Aluoja et al., 2009): (a) neuroticism, comprised by somatic trait anxiety, psychic trait anxiety, stress susceptibility, lack of assertiveness, and embitterment subscales; (b) aggressiveness, comprised by trait irritability, verbal trait aggression, physical trait aggression and social desirability (reversed) subscales; and (c) extraversion, consisting of impulsiveness and adventure seeking subscales. Detachment and mistrust subscales have shown ambiguous relationships with broader factors and therefore were not included (Aluoja et al., 2009; Gustavsson et al., 2000).