



Ruprecht-Karls-Universität Heidelberg
Medizinische Fakultät Mannheim
Dissertations-Kurzfassung

Impulsivity and Aggression in female Borderline Personality Disorder patients – the role of stress, neurometabolites and Attention Deficit Hyperactivity Disorder

Autor: Sylvia Cackowski
Institut / Klinik: Zentralinstitut für Seelische Gesundheit Mannheim (ZI)
Doktorvater: Prof. Dr. Ch. Schmahl

Difficulties in emotion regulation, anger outbursts, impulsive and aggressive acts are characteristics of the Borderline Personality Disorder (BPD) and can severely impair the social functioning of individuals with BPD. There have been suggestions about potential variables which might affect impulsivity and aggression in BPD patients, such as the emotional context or the presence of comorbid conditions such as the Attention Deficit Hyperactivity Disorder (ADHD). On a neurochemical level an important role of the glutamatergic and GABAergic system in the expression of impulsivity and aggression has been suggested. The central aim of this doctoral thesis was to contribute to the understanding of impulsivity and aggression in female BPD patients by investigating the impact of stress and controlling for ADHD symptomatology.

In two laboratory studies different components of impulsivity, anger and aggression on subjective and behavioral level were investigated dependent on stress induction. In study 1, impulsivity was examined in 31 women with BPD and 30 healthy women using self-reports and two laboratory tasks assessing response inhibition and decision making/reward choice behavior. ADHD symptomatology was considered as a covariate. Study 2 examined anger and aggression with self-report measures and a paradigm assessing impulsive aggression in 29 female BPD patients without ADHD, in a clinical comparison group of 28 female ADHD patients and 30 HCs. A third study was conducted with a group of 26 BPD patients without ADHD, 22 ADHD patients and 30 HCs using MR-spectroscopy (MRS) in order to associate glutamate and GABA concentration with self-reported impulsivity and aggression.

The results of the three studies further supported previous findings of elevated self-reported impulsivity, anger and aggression proneness in female BPD patients, independent of ADHD co-occurrence. In study 1 an impact of stress was observable on state impulsivity and response inhibition. State impulsivity was increased after stress induction in both, BPD and HCs, with a stronger increase in patients. Regarding response inhibition under resting conditions, group differences between BPD and HCs were observable, but did not remain significant when ADHD symptomatology was controlled. After stress induction BPD patients showed impaired performance in response inhibition compared with HCs, even when considering ADHD symptomatology. No significant effects were found for decision making/reward choice behavior. Study 2 revealed a stress-dependency of angry states in BPD patients without co-occurring ADHD. Nevertheless, impulsive aggressive reactions were not pronounced in BPD patients compared to HCs or ADHD patients, neither affected by stress. In study 3 further support for the involvement of glutamatergic and GABAergic mechanisms in the expression of impulsivity and aggression was gained.

Taken together, the findings emphasize the role of stress especially on self-perceived state impulsivity and anger as well as on response inhibition in BPD when controlling ADHD symptomatology. Other aspects such as decision making/reward choice behavior and impulsive aggression have not been affected by enhanced stress levels in our samples of female BPD patients. Thus, the results add further support to the idea that the multifaceted construct impulsivity partly depends on the emotional context, instead of being a stable deficit. Furthermore, regarding ADHD symptomatology the current findings are in line with suggestions that impulsive behavior might be more pronounced in BPD patients with co-occurring ADHD, while BPD patients (without ADHD) may show impulse-control problems particularly in stressful emotional contexts. In the clinical context, impulsivity and aggressiveness appear to be of high importance as impulsive behavior in BPD patients is predominantly self-destructive up to life-threatening. Thus, teaching skills to improve distress tolerance and training the utilization of impulse control skills mainly under stressful daily life conditions is crucial and could help to maintain goal-directed behavior and stabilize interpersonal relationships in individuals with BPD patients, independent of co-occurring ADHD.