

Temporal Relations Between Arousal and Perceived Rejection in Patients with Borderline Personality Disorder

Johannes Heekerens¹, Lars Schulze², Juliane Enge¹, Babette Renneberg², Stefan Röpke¹
¹ Charite Universitätsmedizin Berlin, ² Freie Universität Berlin



Introduction

In recent years, researchers have investigated the temporal effects of affective dysregulation in borderline personality disorder (BPD; Ebner-Priemer et al., 2015). Studies particularly show elevated trait levels of tense arousal in BPD (e.g., Stiglmayr et al., 2008). Researchers hypothesized that experiences of tense arousal may be a result of a distorted processing of rejection-related cues that promotes perceptions of rejection in BPD (Downey & Feldman, 1996). Although an increased tendency to perceive rejection has been linked to BPD (Renneberg et al., 2012), the temporal relations between tense arousal and perceived rejection in the everyday lives of patients with BPD remain largely unclear.

Objectives

To address this issue, we conducted an e-diary study including patients with BPD, patients with depressive disorders (DD), and healthy controls (HC). We hypothesized:

- 1) Patients in the BPD group report the highest trait levels of tense arousal and perceived rejection.
- 2) The autoregressive and cross-lagged relations between perceived rejection and tense arousal are largest among BPD patients.

Methods

Sample and Procedure

The final sample comprised 42 in the BPD group, 43 in the DD group, and 40 in the HC group. All participants were interviewed using the German version of the SCID-I and SCID-II for DSM-IV. E-diary data were collected during a single day between 8am and 9pm using a specially developed smartphone app. Signals were prompted in intervals of 15min (+/- 5min).

Exclusion Criteria

We excluded participants who met a lifetime diagnosis of psychotic, bipolar, or substance use disorders. In addition, participants with cognitive or neurological disorders were excluded.

E-Diary Measures

Tense arousal was assessed using a visual analog scale ranging from 0 ("no tension at all") to 100 ("extreme tension"). Perceived rejection used two items ranging from 0 ("not at all rejected" or "completely rejected") and 100 ("completely accepted" or "not at all accepted"). For rejection, we built a composite score reflecting mean values. Multilevel reliability coefficient omega for the overall composite was 0.86 (within-level: 0.77, between-level: 0.88).

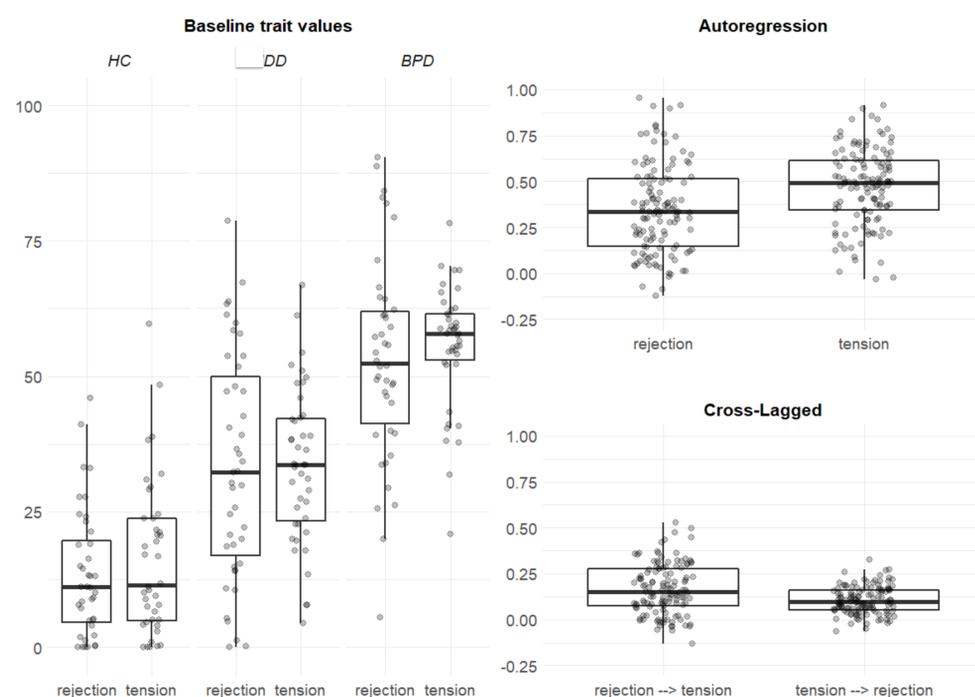
Statistical Analysis

Hypotheses were tested using dynamic SEM that allows to investigate trait levels and interindividual autoregressive/cross-lagged effects. A grouping variable was used as predictor. The framework allows to account for varying time intervals between assessments due to non-compliance. All Bayesian analyses used noninformative priors. Model convergence was assumed after inspection of trace plots and if the potential scale reduction factor fell below 1.10.

Results

As shown in the figure, dynamic SEM results indicate:

- 1) Higher trait levels in tense arousal and perceived rejection in the BPD compared with the DD and HC groups.
- 2) Significant (fixed) autoregressive effects and substantial person-specific variation for tense arousal and perceived rejection but no significant group differences in (fixed) autoregressive and cross-lagged effects.



Discussion

Results from this study confirm earlier evidence showing high trait levels of tense arousal (Stiglmayr et al., 2001) and perceived rejection (Renneberg et al., 2012) in BPD using an experience sampling approach.

However, there were no significant group differences in the degree to which a person's current level of tense arousal predicts subsequent tense arousal. This finding does not support the idea that BPD is characterized by slower returns to affective baseline (Ebner-Priemer et al., 2015).

Finally, there were no significant group differences in the degree to which a person's current level of perceived rejection predicts subsequent tense arousal. This finding does not support the broader notion that BPD is associated with an affective hypersensitivity to rejection (Chapman et al., 2015).

References

- Chapman, A. L., Dixon-Gordon K. L., Butler S. M., Walters K. N. (2015). Emotional reactivity to social rejection versus a frustration induction among persons with borderline personality features. *Personality Disorders: Theory, Research, and Treatment*, 6(1), 88–96. <http://dx.doi.org/10.1037/per0000101>
- Downey, G., & Feldman, S. I. (1996). Implications of rejection sensitivity for intimate relationships. *Journal of Personality and Social Psychology*, 70(6), 1327–1343. <https://doi.org/10.1037//0022-3514.70.6.1327>
- Ebner-Priemer, U. W., (...) & Kuppens, P. (2015). Unraveling affective dysregulation in borderline personality disorder: A theoretical model and empirical evidence. *Journal of Abnormal Psychology*, 124(1), 186–198. <https://doi.org/10.1037/abn0000021>
- Renneberg, B., Herm, K., Hahn, A., Staebler, K., Lammers, C.-H., & Roepke, S. (2012). Perception of social participation in borderline personality disorder. *Clinical Psychology & Psychotherapy*, 19(6), 473–480. <https://doi.org/10.1002/cpp.772>
- Stiglmayr, C. E., Bischkopf, J., Albrecht, V., Porzig, N., Scheuer, S., Lammers, C.-H., & Auckenthaler, A. (2008). The experience of tension in patients with borderline personality disorder compared to other patient groups and healthy controls. *Journal of Social and Clinical Psychology*, 27(5), 425–446. <https://doi.org/10.1521/jscp.2008.27.5.425>
- Stiglmayr, C. E., Shapiro, D. A., Stieglitz, R. D., Limberger, M. F., & Bohus, M. (2001). Experience of tension and dissociation in female patients with borderline personality disorder: A controlled study. *Journal of Psychiatric Research*, 35(2), 111–118. [https://doi.org/10.1016/s0022-3956\(01\)00012-7](https://doi.org/10.1016/s0022-3956(01)00012-7)