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BACKGROUND

Deficits in emotion regulation and inhibition, such as instable and unpredictable moods and impaired impulse control, are core features in conceptualizations of emotionally unstable personality disorder (EUPD), including the impulsive and borderline personality disorder (BPD) subtypes ¹. Despite the central role of these deficits in EUPD, empirical investigations of emotion regulation and (dis)inhibition are rather scarce, especially studies using biological markers ^{2,3}. Comparisons with other patient groups are lacking entirely. Research questions addressed by this project funded by the FOR5187:

Do patients with EUPD differ in electrophysiological correlates of

- emotional reactivity,
- emotion regulation,
- and inhibition

from patients with internalizing disorders and healthy control participants?

STUDY DESIGN

Procedure & Sample

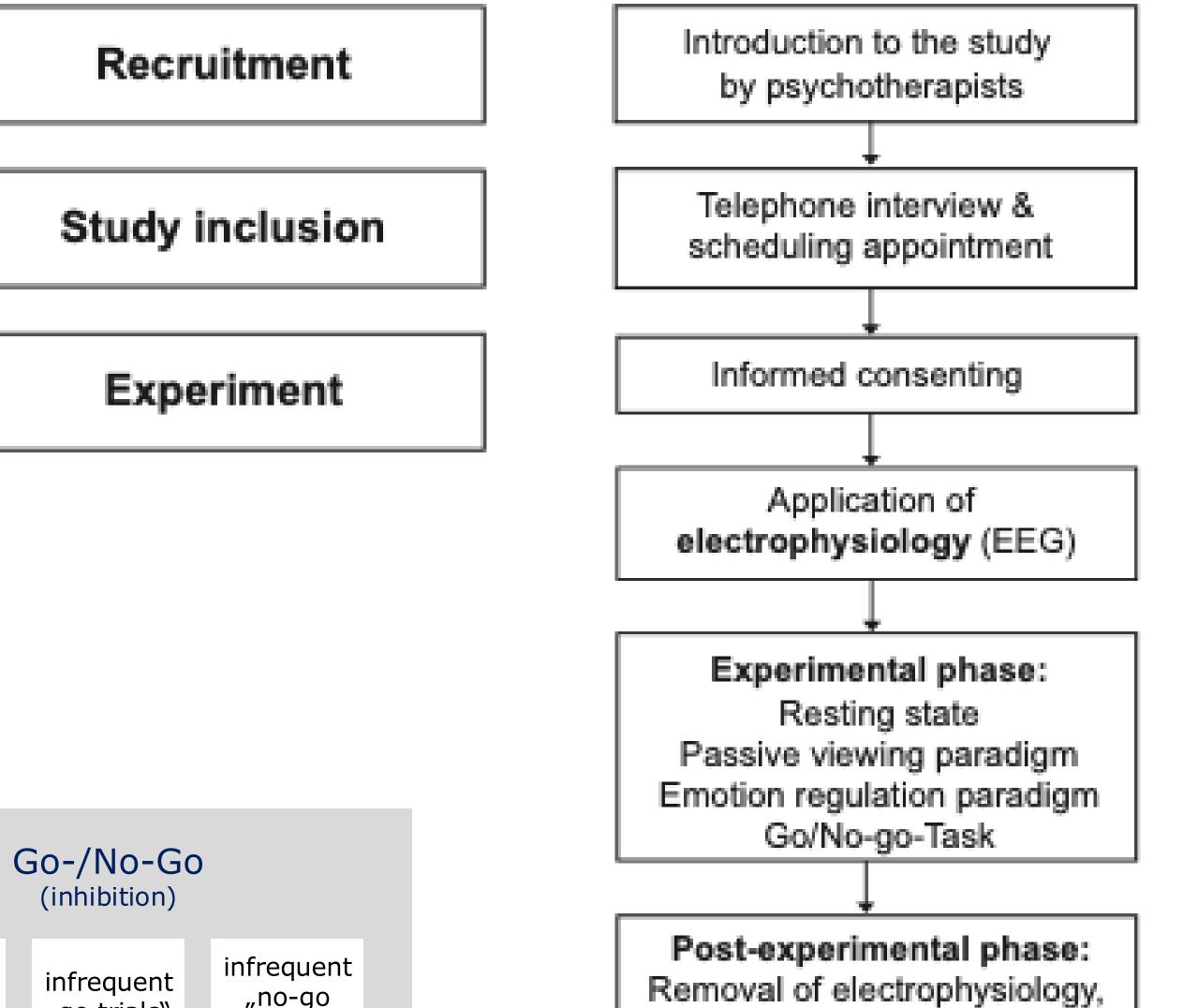
We plan to assess at least 35 patients with EUPD who will be patients seeking treatment at the Zentrum für Psychotherapie am Institut für Psychologie der Humboldt-Universität zu Berlin (**ZPHU**). Inclusion criteria:

- Diagnosis of EUPD (corresponding to ICD-10 F60.30 & F60.31),
- Age \geq 18 years and fully legally competent,
- No current diagnosis of moderate to severe substance use disorder (including regular use of benzodiazepines), normal or corrected-to-normal vision, no history of severe neurological disorders

Presence of other diagnoses will not lead to exclusion and EUPD does not have to be the primary diagnosis. Inclusion in the study will be possible over the whole course of treatment.

Experimental Protocol

Resting State		Passive Viewing			Emotion Regulation		Go-/No-Go		
		(implicit emotion regulation)			(explicit emotion regulation)		(inhibition)		
eyes closed	eyes open	viewing neutral	viewing threatening	viewing pleasant	reappraise threatening	savor pleasant	frequent "go trials"	infrequent "go trials"	infrequent "no-go trials"





EXPERIMENTAL TASKS

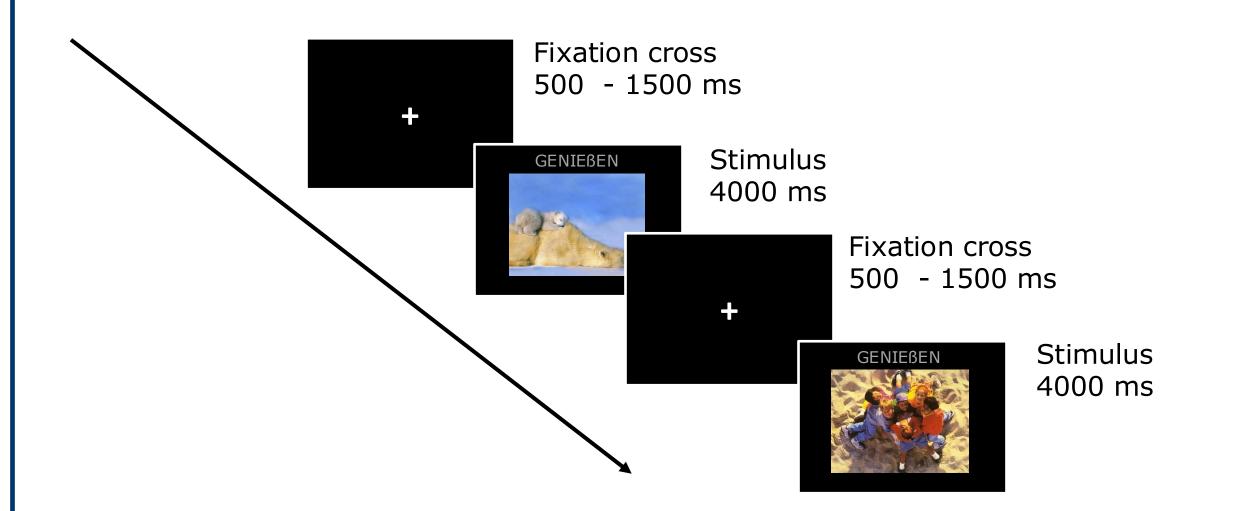
1. Resting State

Participants will be instructed to alternatingly keep their eyes open or closed for one-minute periods, as indicated by an auditory signal, for an overall duration of 4 minutes. Order of eyes-opened and eyes-closed periods will be counterbalanced across participants.

2. Passive Viewing & Emotion Regulation Paradigm

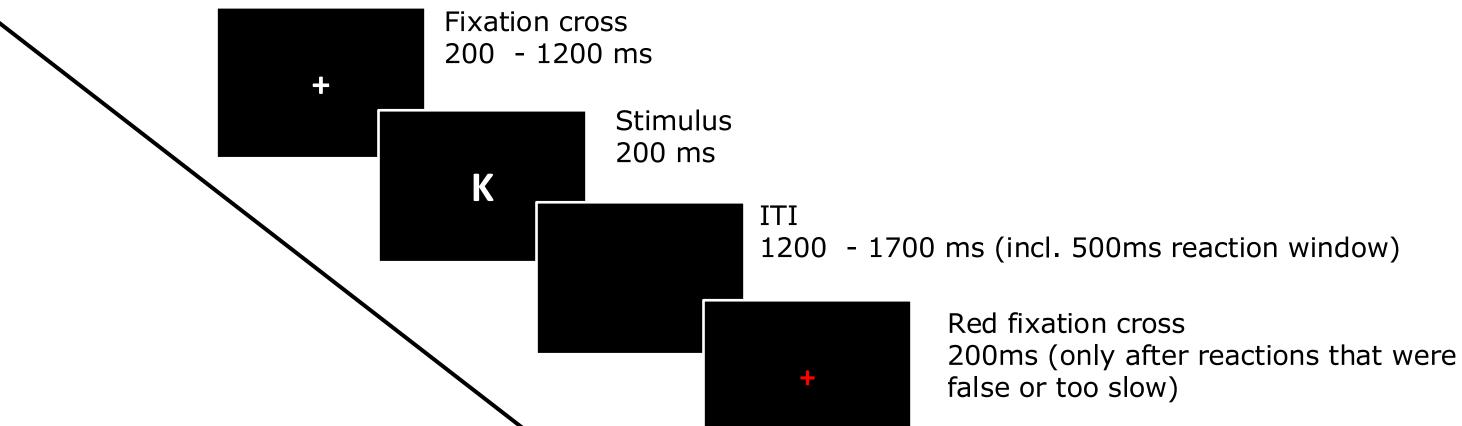
Participants will be instructed to maintain, reduce, or enhance emotional responses using passive viewing, reappraisal or savoring.

Stimuli: Neutral, threatening and pleasant pictures (IAPS)⁴



3. Go/No-Go Task

Two of three letters will be associated with pressing a button (so called go-trials), one with refraining from any reaction (so called no-go-trials). 60% = frequent go-trials, 20% = infrequent gotrials, 20% = infrequent no-go-trials.





This study design will enable us to investigate—for the first time—electrophysiological correlates of emotion processing in patients with **EUPD**, and to replicate findings concerning correlates of inhibition. Moreover, we will be able to compare the correlates of emotion processing with exactly analogous data from the large transdiagnostic sample of the FOR5187 study (estimated n = 300) and from a healthy control group (estimated n = 80).

REFERENCES

- 1. Andermann, M., Izurieta Hidalgo, N. A., Rupp, A., Schmahl, C., Herpertz, S. C., & Bertsch, K. (2022). Behavioral and neurophysiological correlates of emotional face processing in borderline personality disorder: are there differences between men and women?. European Archives of Psychiatry and Clinical Neuroscience, 272(8), 1583–1594. https://doi.org/10.1007/s00406-022-01434-4
- 2. Marissen, M. A., Meuleman, L., & Franken, I. H. (2010). Altered emotional information processing in borderline personality disorder: An electrophysiological study. Psychiatry Research: Neuroimaging, 181(3), 226–232. https://doi.org/10.1016/j.pscychresns.2009.10.006
- 3. Popkirov, S., Flasbeck, V., Schlegel, U., Juckel, G., & Brüne, M. (2018) Alexithymia in borderline personality disorder is not associated with deficits in automatic visual processing of negative emotional stimuli. Psychiatry Research, 263, 121-124. https://doi.org/10.1016/j.psychres.2018.03.009

4. Lang, P.J., Bradley, M.M., & Cuthbert, B.N. (2008). International Affective Picture System (IAPS): Affective ratings of pictures and instruction manual. Technical Report A-8. University of Florida: Gainesville, FL Acknowledgement: This study is funded by the German Research Foundation (Forschungsgruppe 5187; project number 442075332).