

## **Borderline Personality Disorder and Emotion Regulation**

Effects of emotion-focused vs. cognitive schema therapy interventions on emotion regulation deficits in borderline personality disorder - associations between clinical efficacy, brain network function and local glutamate/GABA metabolism

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Supplementary material - Information on assessment tools, reliability criteria and classification of Reliable Change Index (RCI) results

Abbreviation	Inventory	Information	Reliability (Cronbach's alpha)	Test-retest reliability
<b>PF-TK (s)</b>	Patient Questionnaire Day-Clinic Jena (Patientenfragebogen Tagesklinik)	Standardized assessment of patient's case history, including psychiatric/psychotherapeutic history		
<b>SEFP assessed with STIP-5.1 (c)</b>	Levels of Personality Functioning Scale (LPFS) ( <b>Criterion A</b> ) (Skala zur Erfassung des Funktionsniveaus der Persönlichkeit) assessed with the Semi-Structured Interview for Personality Functioning DSM-5 (STIP-5.1)	Measures the impairments in personality functioning (Criterion A); enabling a dimensional assessment of the general severity of personality pathology (English version: Levels of Personality Functioning Scale, LPFS)	$\alpha = .94$ to $.97$ (Hutsebaut et al., 2017)	not available so far
<b>PID-5 (s)</b>	Personality Inventory for DSM-5 ( <b>Criterion B</b> ) (Persönlichkeits-Inventar für DSM-5)	Assessment of maladaptive personality traits	domain scales: $\alpha = .84$ to $.96$ ; facets: $\alpha = .72$ to $.96$ (Al-Dajani et al., 2015)	$r_{tt} = .92$ to $.95$ (Dhillon & Bagby, 2015)
<b>BPDSI-IV (c)</b>	Borderline Personality Disorder Severity Index (fourth edition)	DSM-IV based semi-structured interview that assesses frequency and severity of borderline manifestations during the last three months; interview is appropriate for repeated measurements and therefore for treatment evaluation.	$\alpha = .96$ (Kröger et al., 2013)	$r_{tt} = .72$ to $.77$ (Arntz et al. 2003)
<b>EHI (s)</b>	Edinburgh Handedness Inventory	Most widely used handedness inventory	$\alpha = .95$ (Veale, 2014)	
<b>IDA-R</b>	Integrierte Diagnose der ADHS im Erwachsenenalter	Well-established screening instrument for ADHD in adulthood	$\alpha = .86$ (Retz et al., 2013)	
<b>WAIS-IV</b>	Wechsler Adult Intelligence Scale (fourth version)	Well-established scale to assess cognitive ability in adults	$\alpha = .97$ (Wechsler, 2008)	
<b>CTQ (s)</b>	Childhood Trauma Questionnaire	Screening measure for history of childhood maltreatment	$\alpha = .94$ (Wingenfeld et al., 2013)	
<b>ERI (s)</b>	Emotion Regulation Inventory (Emotionsregulations-Inventar)	Follows the Process Model of Emotion Regulation proposed by James Gross; <b>primary outcome measure</b>	$\alpha = .82$ (König, 2011)	$r_{tt} = .62$ to $.80$ (König, 2011)
<b>FSVV (s)</b>	Questionnaire concerning self-harming behavior (Fragebogen zu selbstverletzendem Verhalten) (modified version)	Gathers information about nature of self-harming behavior, triggers, consequences, indirect methods and destabilizing factors; <b>primary outcome measure</b>	not available so far	$r_{tt} = .63$ to $.84$ (frequency) (Reicherzer & Brandl, 2011)
<b>BSL-95 (s)</b>	Borderline Symptom List (Borderline-Symptom-Liste)	Self-rating instrument for specific assessment of borderline-typical symptomatology; sensitivity for change according to therapy; <b>secondary outcome measure (BPD-specific)</b>	$\alpha = .97$ (Bohus et al., 2007)	$r_{tt} = .84$ (Bohus et al., 2007)
<b>IIP-D (s)</b>	Inventory of Interpersonal Problems (Inventar zur Erfassung interpersonaler Probleme)	Measures distress arising from interpersonal sources; <b>secondary outcome measure (BPD-specific)</b>	$\alpha = .71$ to $.82$ (Horowitz et al., 2000)	$r_{tt} = .81$ to $.90$ (Horowitz et al., 2000)
<b>FGG (s)</b>	Questionnaire of thoughts and feelings (Fragebogen zu Gedanken und Gefühlen)	Assessment of borderline-specific cognitions; based on cognitive models and Linehan's biosocial model of BPD; <b>secondary outcome measure (BPD-specific)</b>	$\alpha = .97$ (Renneberg & Seehausen, 2010)	$r_{tt} = .96$ in BPD (Renneberg & Seehausen, 2010)

<b>SMI (s)</b>	Schema Mode Inventory (118 item version) ( <u>S</u> chema- <u>M</u> odus- <u>I</u> nventar)	Measures the presence and intensity of the 14 schema modes; <b>secondary outcome measure (BPD-specific)</b>	$\alpha = .85$ (Reiss et al., 2011)	$r_{tt} = .84$ (Lobbestael et al., 2010)
<b>YSQ-s3r (s)</b>	Young <u>S</u> chema <u>Q</u> uestionnaire (third version, short form)	Measure of early maladaptive schemas (that are theoretically and empirically linked with personality disorder features); <b>secondary outcome measure (BPD-specific)</b>	$\alpha = .70$ to $.91$ for 17 of the 18 scales (Kriston et al., 2012)	$r_{tt} = .70$ to $.89$ for 17 of the 18 schemas (Phillips et al., 2017)
<b>BDI-II (s)</b>	Beck Depression Inventory-II ( <u>B</u> eck <u>D</u> epressions <u>i</u> nventar- <u>I</u> I)	Assessing the intensity of <b>depressive symptoms</b> ; items are congruent with the depression criteria of the DSM-IV	$\alpha = .84$ to $.90$ (Kühner et al, 2007)	$r_{tt} = .78$ (Kühner et al, 2007)
<b>SCL-90-R (s)</b>	Symptom <u>C</u> hecklist- <u>90</u> - <u>R</u> evised	Evaluation/Screening of <b>general psychopathology</b> within the past 7 days	$\alpha = .96$ to $.98$ (Franke, 2002)	$r_{tt} = .69$ to $.92$ (Franke, 2002)
<b>FEP-2 (s)</b>	Questionnaire to evaluation psychotherapeutic processes ( <u>E</u> ragebogen zur <u>E</u> valuation von <u>P</u> sychotherapie <u>v</u> erläufen)	Monitoring of change and progress in psychotherapeutic and psychiatric interventions; measures 4 dimensions of therapeutic outcome	$\alpha = .74$ to $.94$ (Lutz et al., 2009)	$r_{tt} = .69$ to $.77$ (Lutz et al., 2009)
<b>INEP (s)</b>	Inventory for the Assessment of Negative Effects of Psychotherapy ( <u>I</u> nventar zur <u>E</u> rfassung <u>N</u> egativer <u>E</u> ffekte von <u>P</u> sychotherapie)	self-report instrument for assessing negative effects of psychotherapy	$\alpha = .86$ (Ladwig et al, 2014)	

Proposed terms to classify the Reliable Change Index and Clinical Significance (Wise, 2004)

<i>Reliable Change Indexes</i>	<i>Clinical Significance and Normative Change Criterion</i>			
	Confidence Levels (%)	Change of 2 SDs	Change of 1 SD	Change of 0.5 SD
<b>1.96</b>	95	<b>Recovered</b>	(+) Response	(+) Minimal Response
1.28	90	Remitted	(+) Response	(+) Minimal Response
0.84	80	Improved	(+) Partial Response	(+) Minimal Response
-0.84	80	Mildly Deteriorated	(-) Partial Response	(-) Minimal Response
-1.28	90	Moderately Deteriorated	(-) Response	(-) Minimal Response
-1.96	95	Deteriorated	(-) Response	(-) Minimal Response