

Similarities and Differences between ADHD and Borderline Personality Disorder: Clinical Implications

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Financial Disclosure



Advisory Boards, Phase III Studies, Research and Travel Support: Janssen-Cilag, Lilly, Lundbeck, Medice, Novartis, Shire

CBT and DBT Supervisor and Teacher, Author of Articles and Books on Psychotherapy in adult ADHD and Borderline Personality Disorder

Overview

- Background
- Clinical features in ADHD and Borderline Personality Disorder (BPD)
 - Similarities
 - Differences
- Emotion Regulation & Impulse Control
- Treatment options
- Summary & Outlook

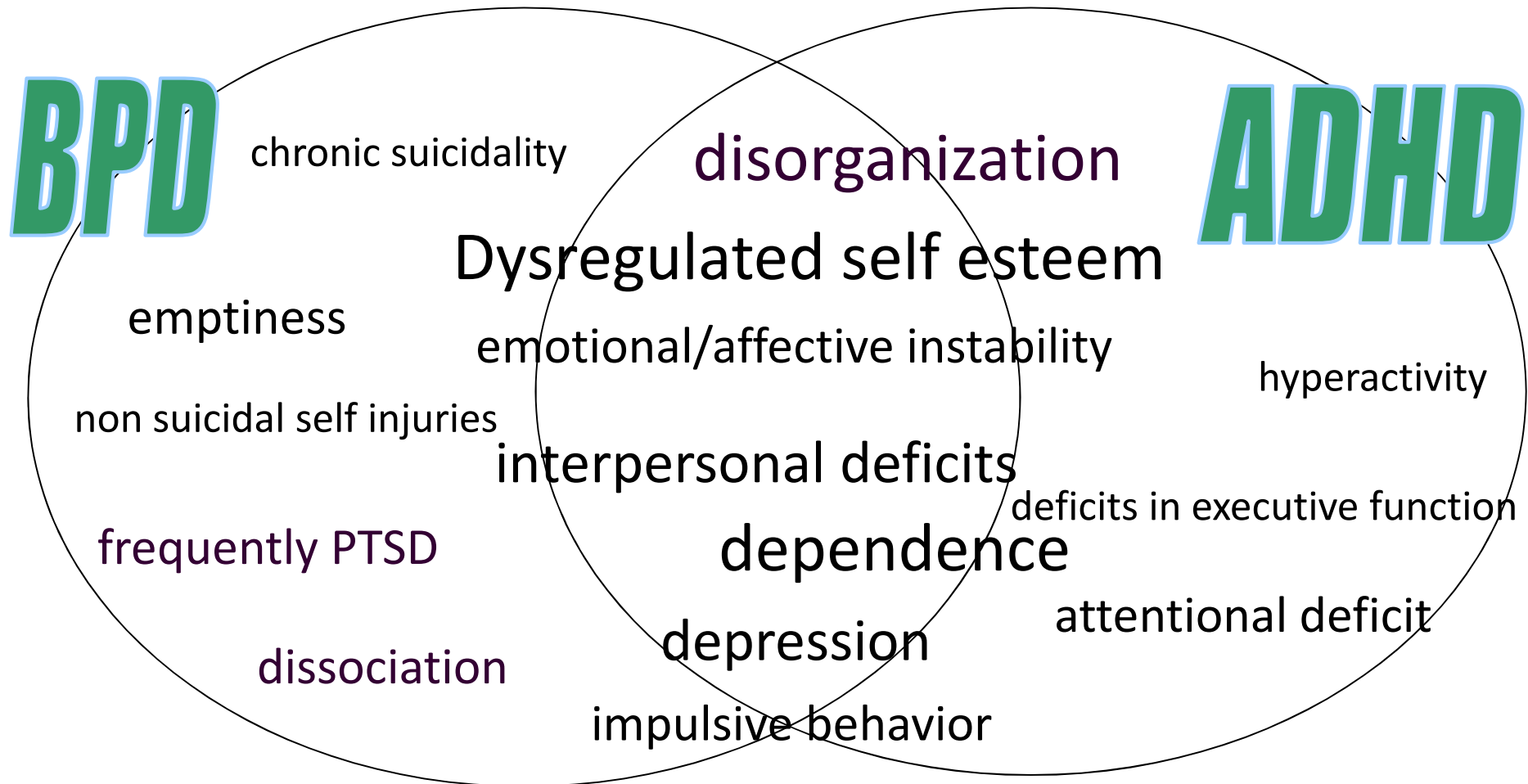
Background Borderline



- Prevalence 2 (-5%)
- 75% females (some studies gender balance)
- 55-85% self-injure their bodies
- 60 % suicide attempts, 10% commit suicide
- suicide rate 400 times greater, young woman 800 times greater
- 33% of youth who commit suicide have features of BPD
- High levels of use of mental health resources (ca. 3 billions €/y Germany)

Skodol et al. Biol Psych 2002, Lieb et al. Lancet 2004s

Overlapping clinical features adult ADHD & BPD



Overlapping diagnostic criteria

DSM-5 criteria for BPD (5/9)

1. frantic efforts to avoid real or imagined abandonment
2. **a pattern of unstable and intense interpersonal relationships**
3. **impulsivity**
4. **identity disturbance**
5. recurrent suicidal behavior
6. **affective instability**
7. chronic feelings of emptiness
8. **inappropriate, intense anger or difficulty controlling anger**
9. transient, stress-related paranoid ideation or severe dissociative symptoms

Wender Utah criteria for ADHD (Wender 2001)

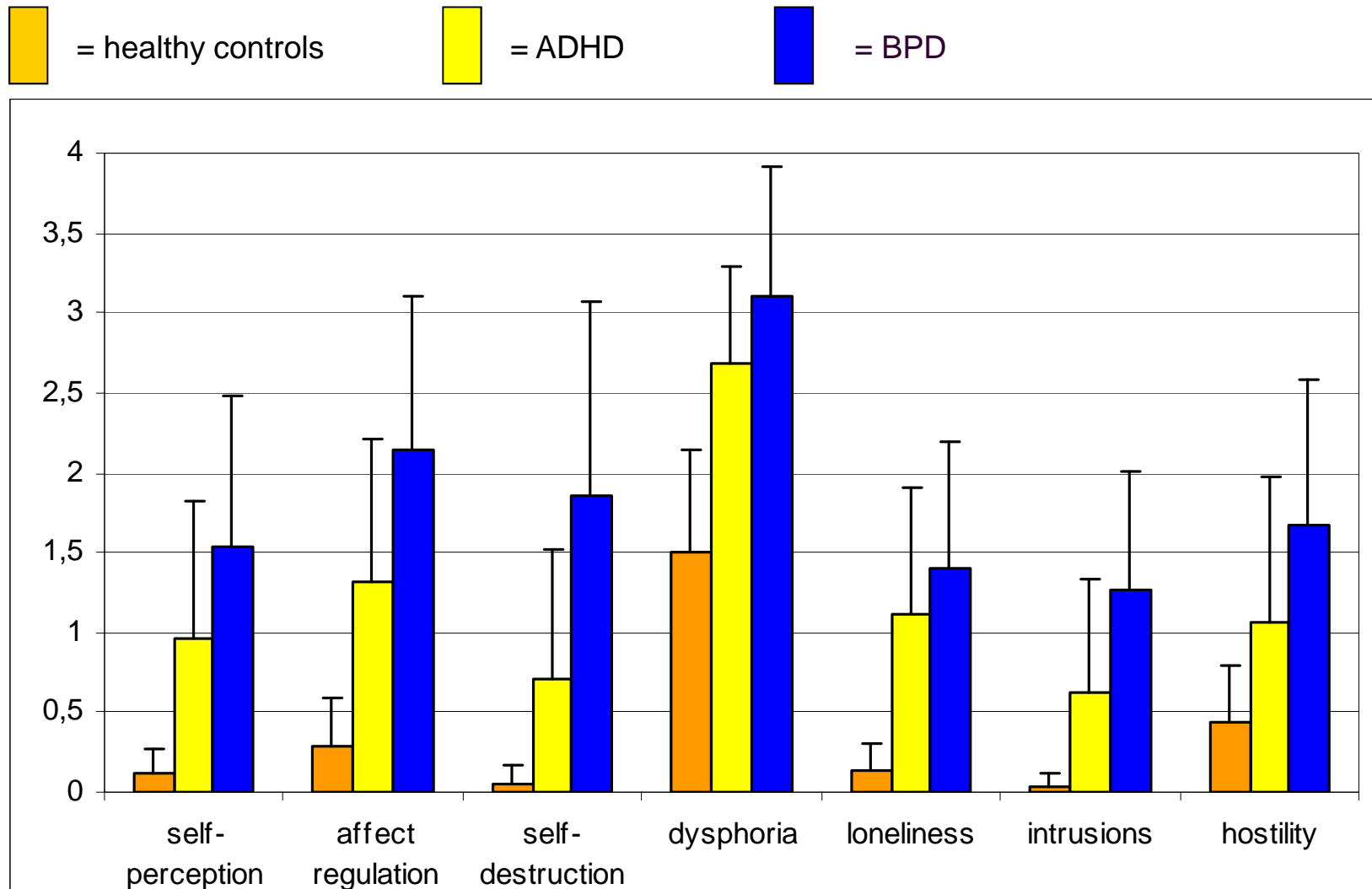
1. Inattention
2. Hyperactivity
(subjective feelings of restlessness)

3. **affective lability**
4. desorganized behavior
5. **difficulty controlling affects**
6. **Impulsivity**
7. **emotional hyperreactivity**

Studies on overlapping clinical features?

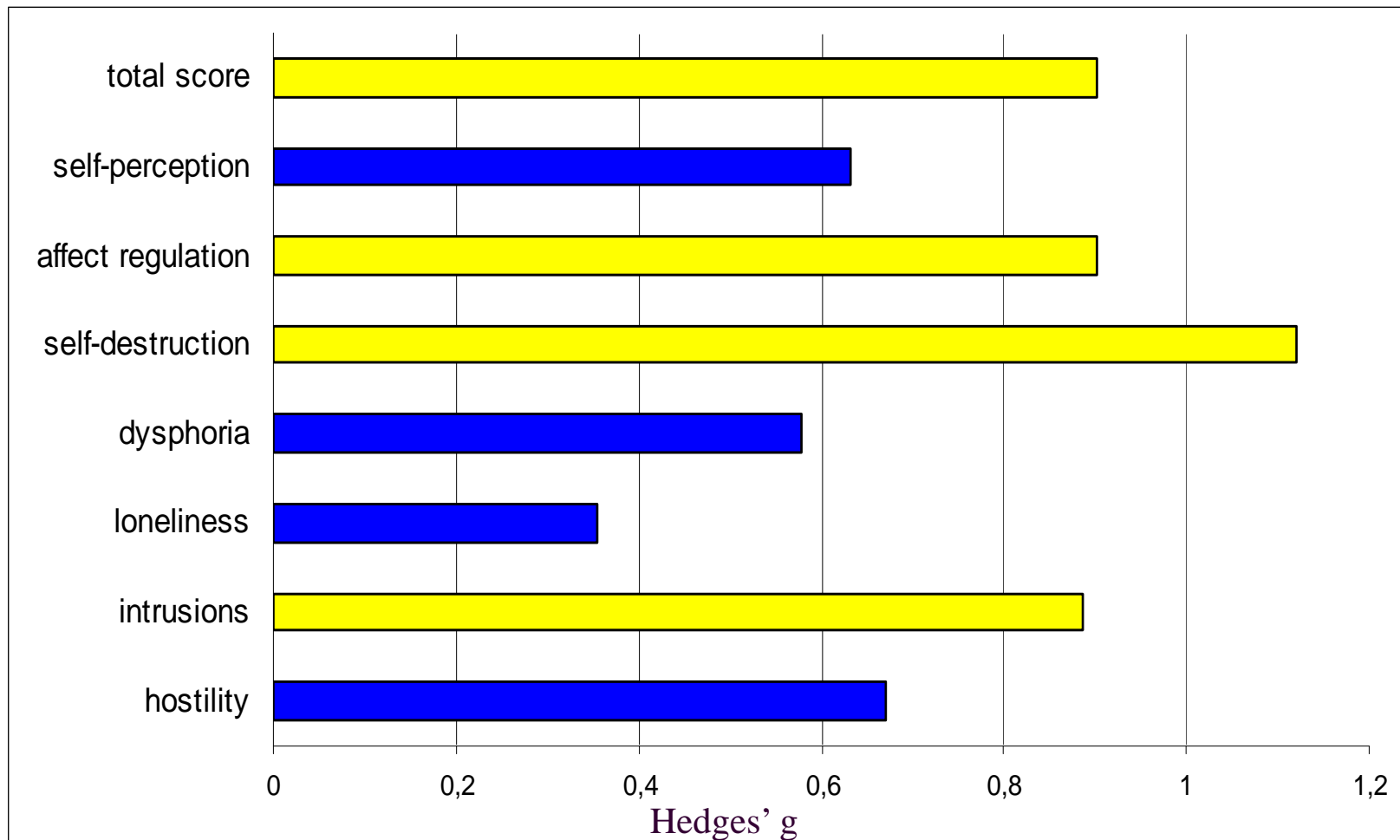
Borderline symptoms in adult ADHD:

Comparison of healthy controls, patients with adult ADHD and BPD on the Borderline Symptom List mean subscale scores (N=180, mean+SD)



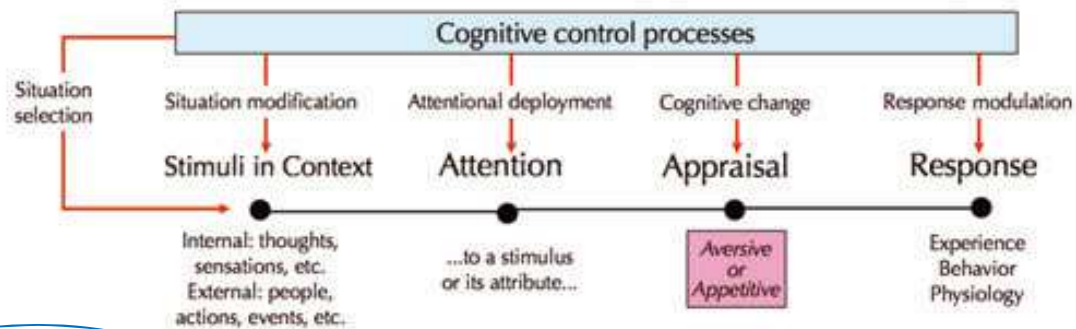
What is the difference?

Effect sizes of the subscale differences between adult ADHD and BPD (Hedges' g, n = 120)



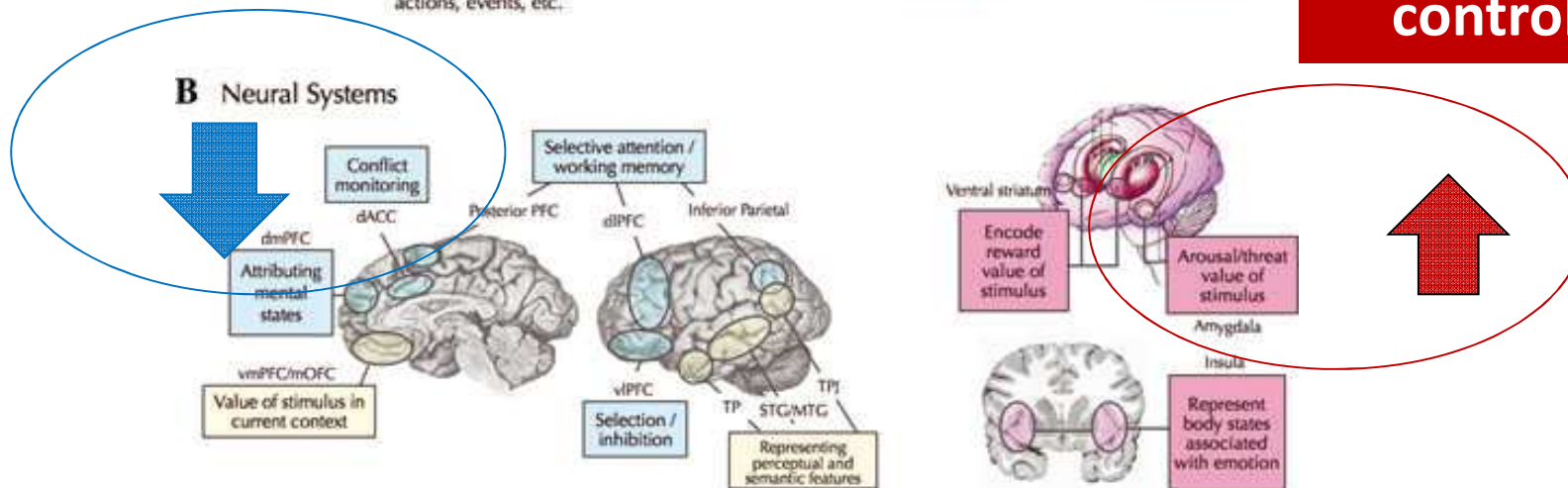
Emotion regulation?

A Strategies and Processes



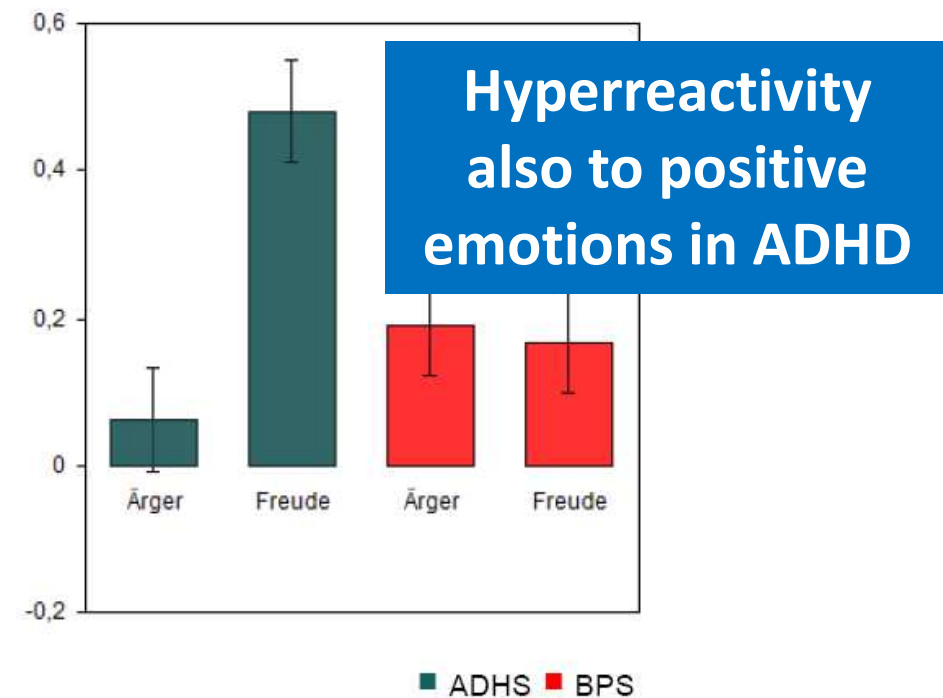
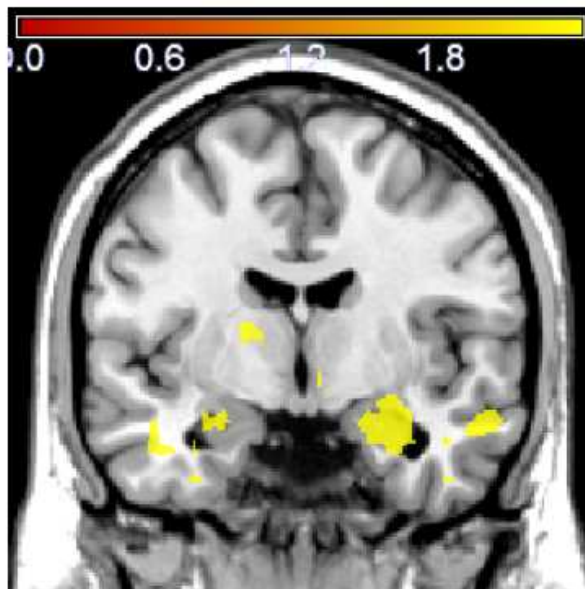
Impaired top-down control in BPD

B Neural Systems



Emotion regulation in ADHD

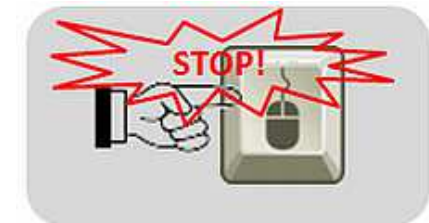
- Impaired self-regulation of emotions
- ↑ „negative“ emotions in daily life



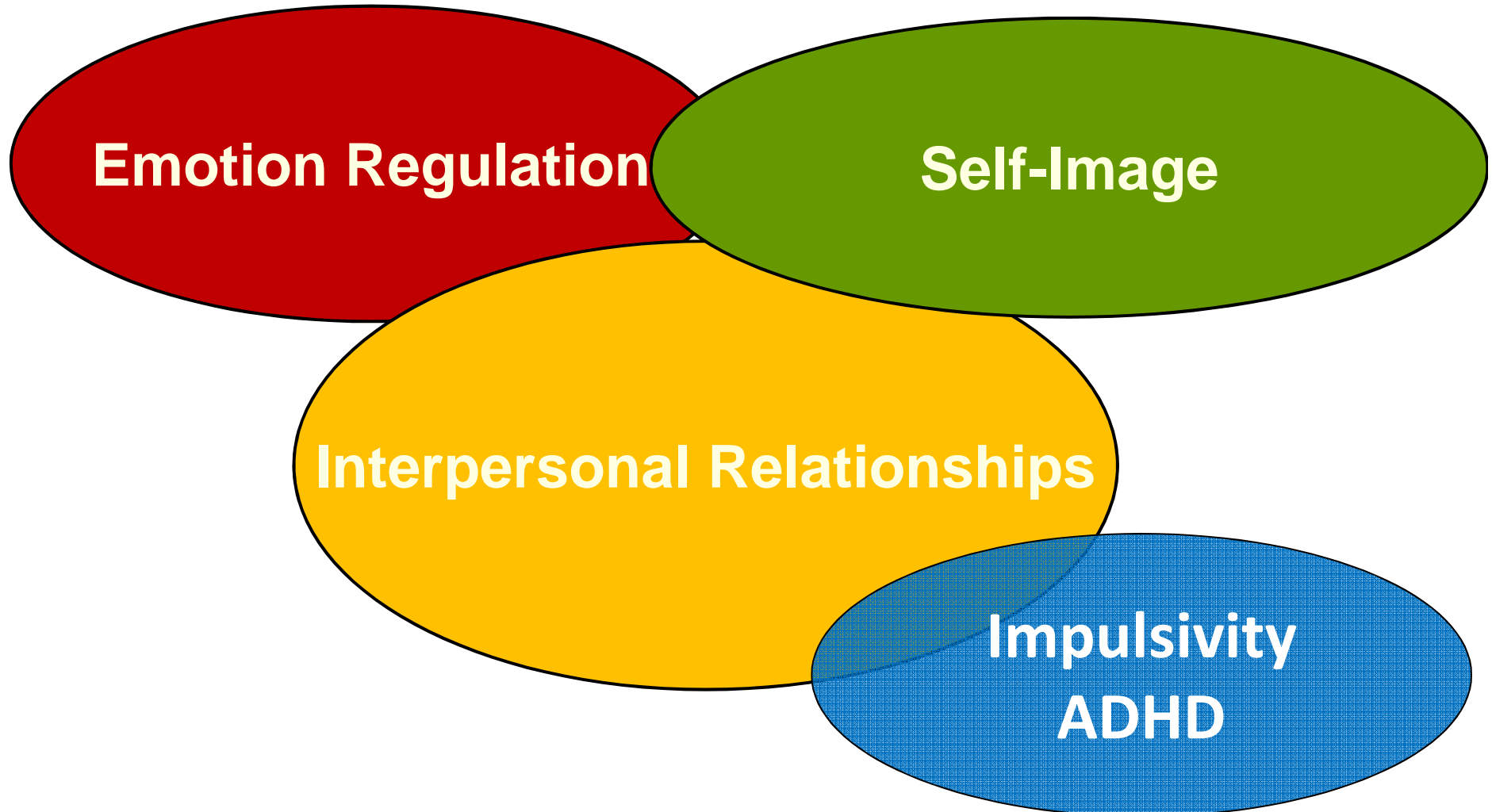
Surman CB et al. ADHD, 2013; Skirrow C et al. Psychol Med. 2014 Dec;44(16):3571-83; Tiescher et al. in prep.

Impulse control?

- Self-rated impulsivity BPD and ADHD > controls
- Impaired response inhibition (↑ Stop Signal Reaction Time) in BPD and ADHD (Barkley et al. 1997, Alderson et 2007, Nigg et al. 2005)
- Impulse control in BPD impaired after inducing negative emotions such as anger (Jacob et al. 2010)
- Impulsivity in BPD driven by comorbid ADHD (Speranza et al. 2011, Sebastian 2013)



Core Features BPD



Comorbidity ADHD and BPD

Prevalence of childhood ADHD in BPD

	BPD (n = 42)	Any Cluster B PD (n = 94)	Any Cluster A or C PD (n = 38)	No PD (n = 69)	Non- clinical Subjects (n = 201)
WURS Score	n (%)	n (%)	n (%)	n (%)	n (%)
< 46	17 (40,5)	84 (89,4)	34 (89,5)	65 (94,2)	188 (93,5)
≥ 46	25 (59,5)	10 (10,6)	4 (10,5)	4 (5,8)	13 (6,5)

Subjects in the control groups were not allowed to have BPD codiagnosis; WURS = Wender Utah Rating Scale

Fossati A et al. 2002

Attention-deficit hyperactivity disorder as a potentially aggravating factor in borderline personality disorder

Alexandra Philipsen, Matthias F. Limberger, Klaus Lieb, Bernd Feige, Nikolaus Kleindienst, Ulrich Ebner-Priemer, Johanna Barth, Christian Schmahl and Martin Bohus

Background

Clinical experience suggests that people with borderline personality disorder often meet criteria for attention-deficit hyperactivity disorder (ADHD). However, empirical data are sparse.

Aims

To establish the prevalence of childhood and adult ADHD in a group of women with borderline personality disorder and to investigate the psychopathology and childhood experiences of those with and without ADHD.

Method

We assessed women seeking treatment for borderline personality disorder ($n=118$) for childhood and adult ADHD, co-occurring Axis I and Axis II disorders, severity of borderline symptomatology and traumatic childhood experiences.

Results

Childhood (41.5%) and adult (16.1%) ADHD prevalence was high. Childhood ADHD was associated with emotional abuse in childhood and greater severity of adult borderline symptoms. Adult ADHD was associated with greater risk for co-occurring Axis I and II disorders.

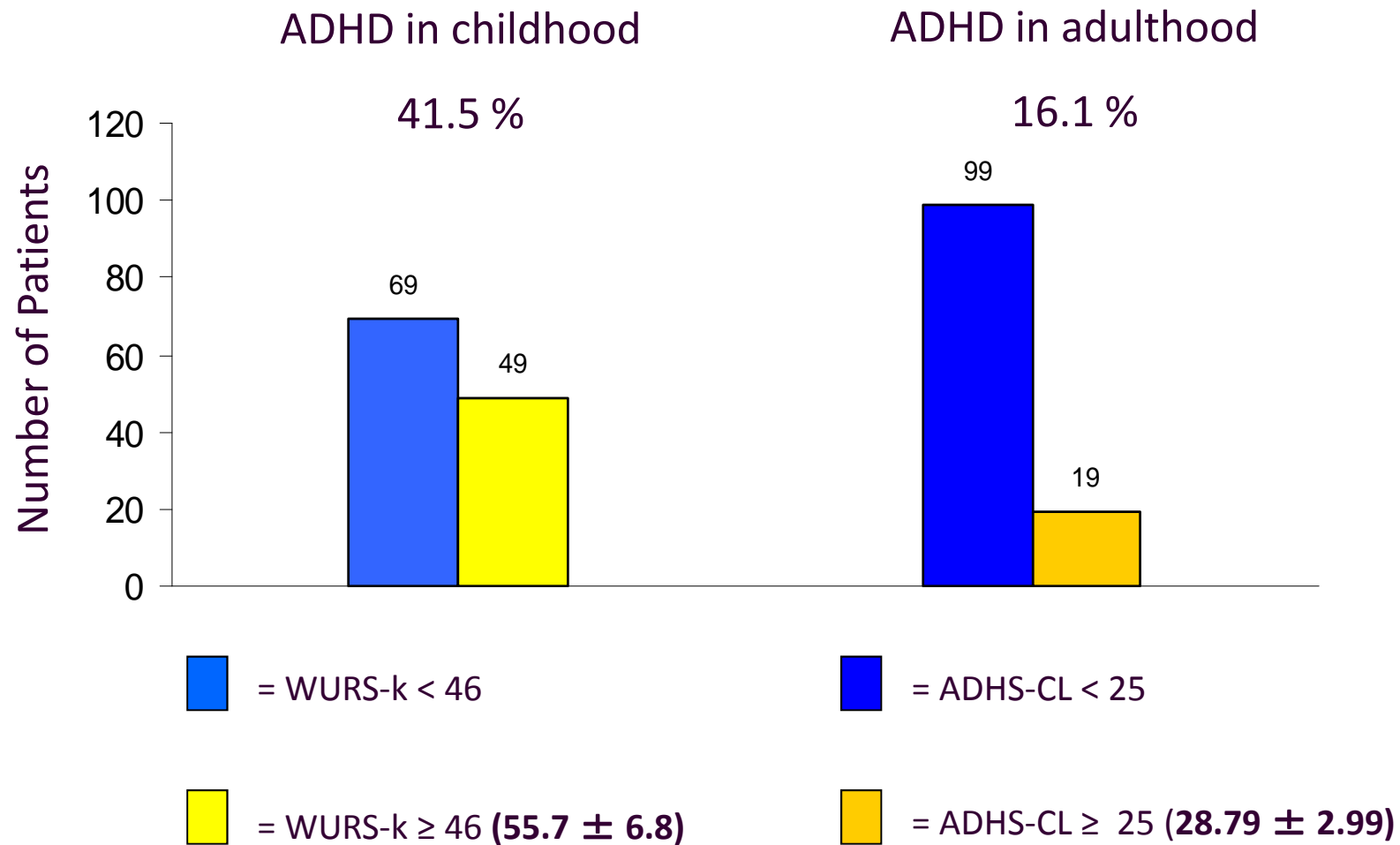
Conclusions

Adults with severe borderline personality disorder frequently show a history of childhood ADHD symptomatology. Persisting ADHD correlates with frequency of co-occurring Axis I and II disorders. Severity of borderline symptomatology in adulthood is associated with emotional abuse in childhood. Further studies are needed to differentiate any potential causal relationship between ADHD and borderline personality disorder.

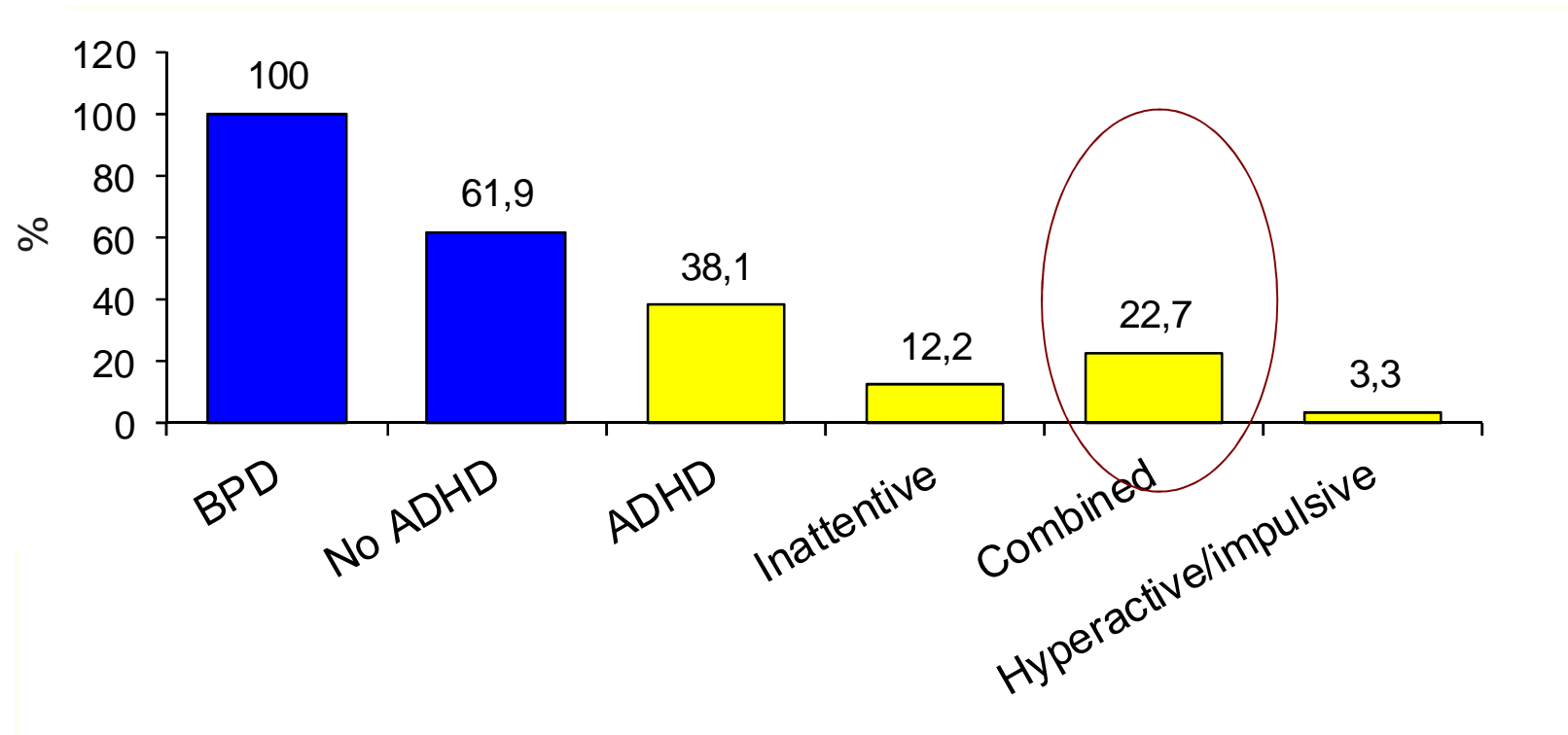
Declaration of interest

None. Funding detailed in Acknowledgements.

Prevalence of ADHD in female BPD (n = 118)



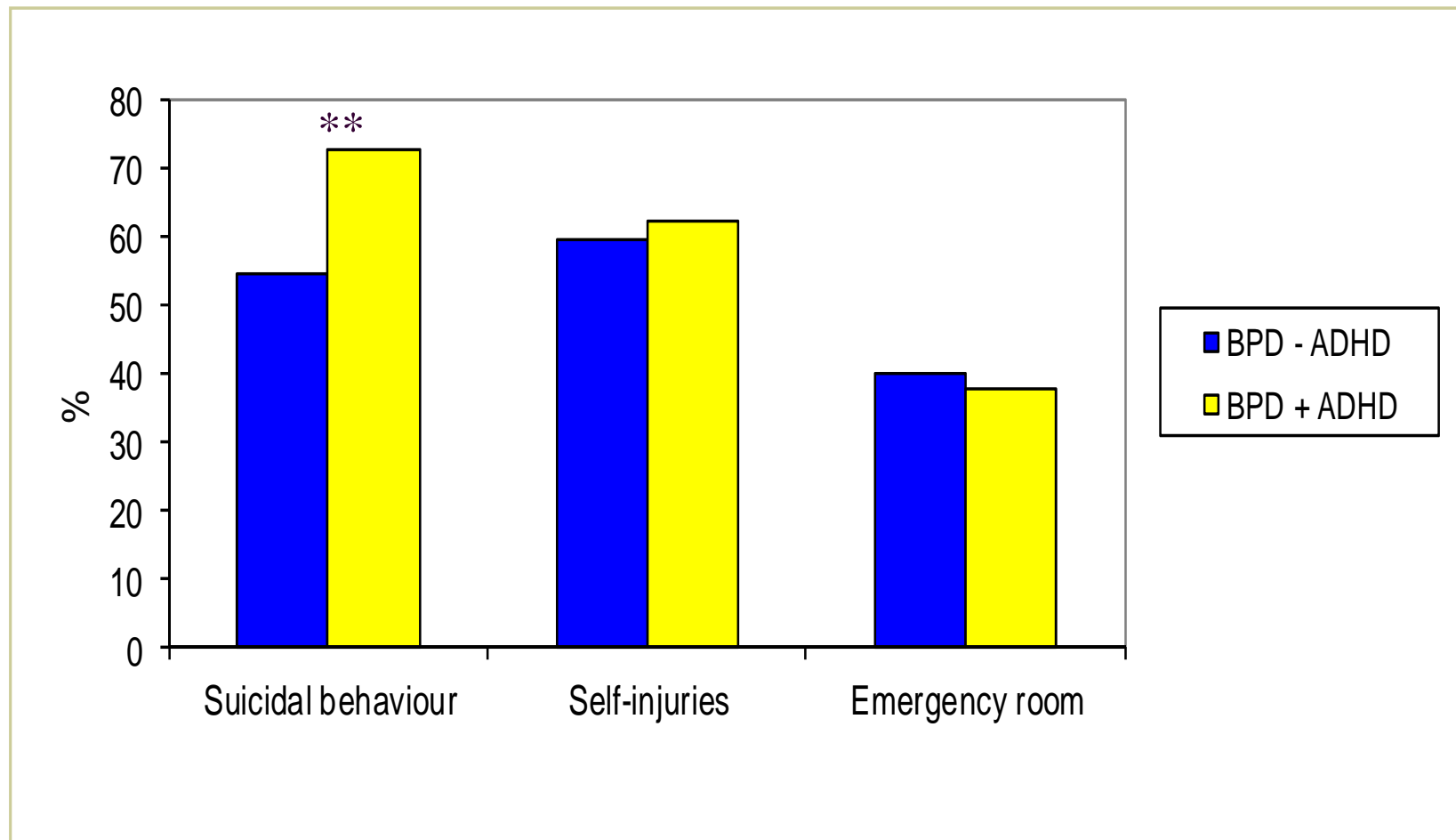
Prevalence of ADHD Subtypes in BPD



(N=181, 76% females)

Ferrer et al. J Pers Dis 2010

Influence on suicidality and self-injurious behaviour



** P = 0.009

Association of ADHD Diagnosis and Severity of Borderline Symptoms as well as Childhood Trauma Experiences (n = 118)

	WURS-k score \geq 46 (n = 49)	WURS-k score < 46 (n = 69)	Wald Z	p
BSL Sum score	188.18 \pm 65.35	151.78 \pm 57.90	2.33	.020
Emotional Abuse	19.87 \pm 3.93	16.18 \pm 5.82	2.62	.009
Physical Abuse	12.28 \pm 6.09	9.98 \pm 6.20	0.36	.717
Sexual Abuse	12.71 \pm 7.43	11.16 \pm 7.53	-0.87	.386
Emotional Neglect	18.86 \pm 4.69	17.20 \pm 5.05	-0.78	.438
Physical Neglect	11.25 \pm 3.76	9.57 \pm 3.90	0.22	.822

MLR p = 0.001

Philipsen et al. British J Psych, 2008

BPD + ADHD associated with ↑ comorbid disorders

Axis I (mean No. 5.04 ± 2.45):

specific phobia, somatisation disorder,

trend for panic disorder and anorexia

Axis II (mean No. 1.09 ± 1.02):

paranoid PD,

trend for schizoid and dependent

**BPD + ADHD
more severely ill**

Treatment

BPD (first line)

- Dialectical behavioral therapy (DBT) (*Linehan 1993, Bohus et al. 2004*)
- Schema Focussed Therapy (*Young, Giesen-Blo et al. 2006*)
- Mentalization Based Treatment (*MBT, Bateman & Fonagy*)
- Transference Focussed Treatment (*TFT, Kernberg*)

Stoffers JM et al, 2012 (Cochrane)

Adult ADHD

- Cognitive behavioral therapy (*Safren et al. 2005, 2010, Rostain & Ramsay 2006, Bramham, Young et al. 2009, Metacognitive Solanto et al. 2008, 2010*)
- R & R (*Emilsson et al. 2011, Young et al. 2015*)
- DBT (*Hesslinger et al. 2002, Philipsen et al. 2007, 2015, Hirvikoski et al. 2012, Fleming et al. 2015, Morgensterns et al. 2015*)
- Mindfulness based Therapy (*Zylowska et al. 2008, Mitchell et al. 2013, Edel et al. 2014, Hepark et al. 2014, Schoenberg et al. 2014, Hepark et al. 2015, Janssen et al. 2015*)

Studies on Medication in BPD + ADHD

- Case Reports in the early 80s (Hooberman 1984, etc.)
- „Amphetamine challenge test“
Schulz SC et al. American Journal of Psychiatry, 1988
- 3 naturalistic studies
Golubchik et al. Int Clin Psychopharmacol 23(4):228-31, 2008 (N=14),
Golubchnik et al. Clin Neuropharmacol 32(5):239-42, 2009,
Treatment with MPH without specific psychotherapeutic treatment
Prada et al. Atten Defic Hyperact Disord 7(3):199-209, 2015 (N=166)
Treatment with MPH and dialectical behavior therapy (DBT)

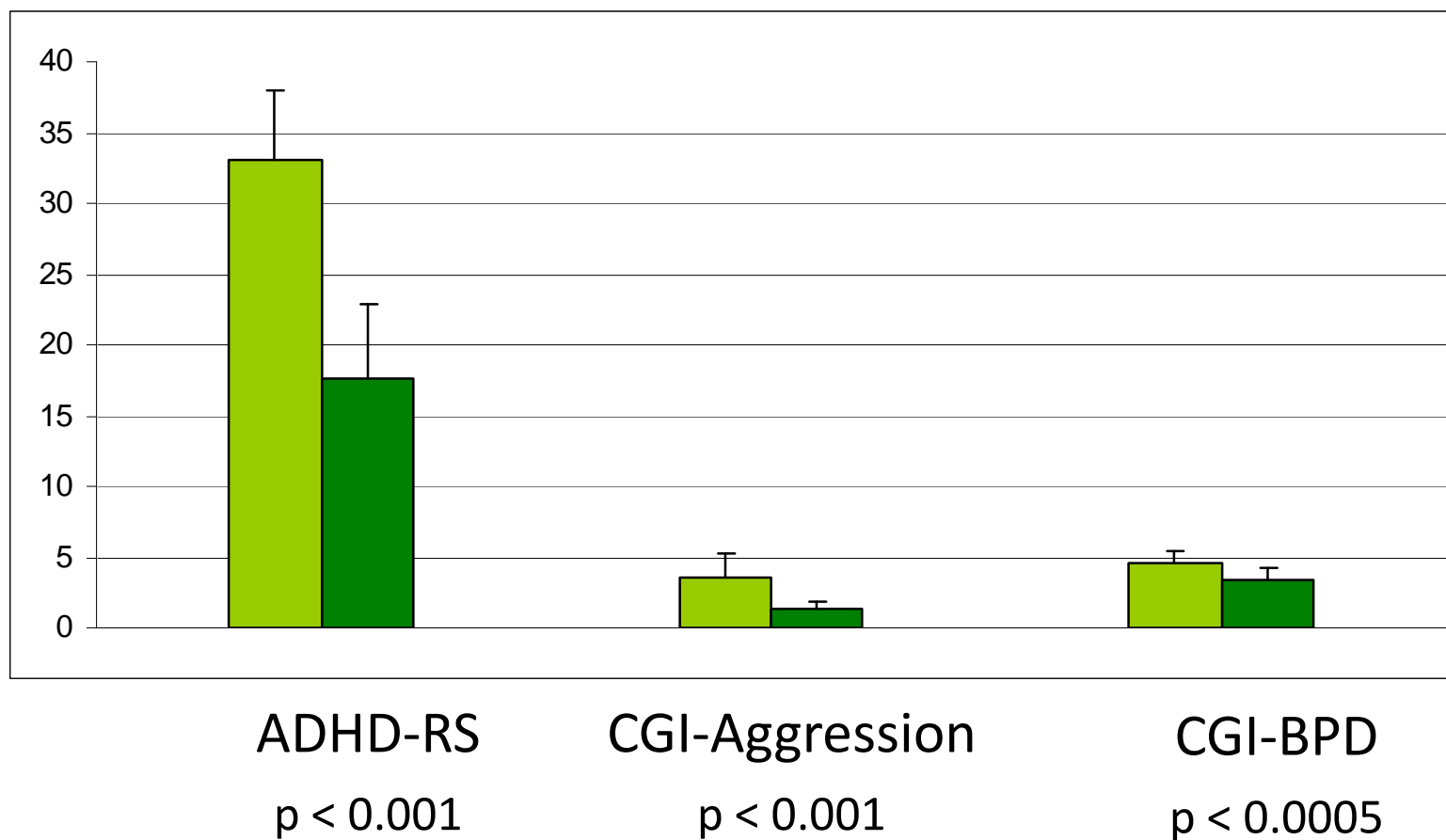
Studie zur Wirksamkeit von Methylphenidat bei ADHS & BPS

Golubchik et al. 2008:

- offene Studie
- 14 Mädchen mit ADHS (DSM-IV) und BPS (SKID-II)
- 14-19 Jahre (16.6 ± 1.4 J)
- 12 Wochen Methylphenidat (MPH)
- Outcome-Kriterien:
 - ADHD-Rating Scale
 - Clinical Global Impression Skala (Aggressivität, Borderline-Symptomatik)

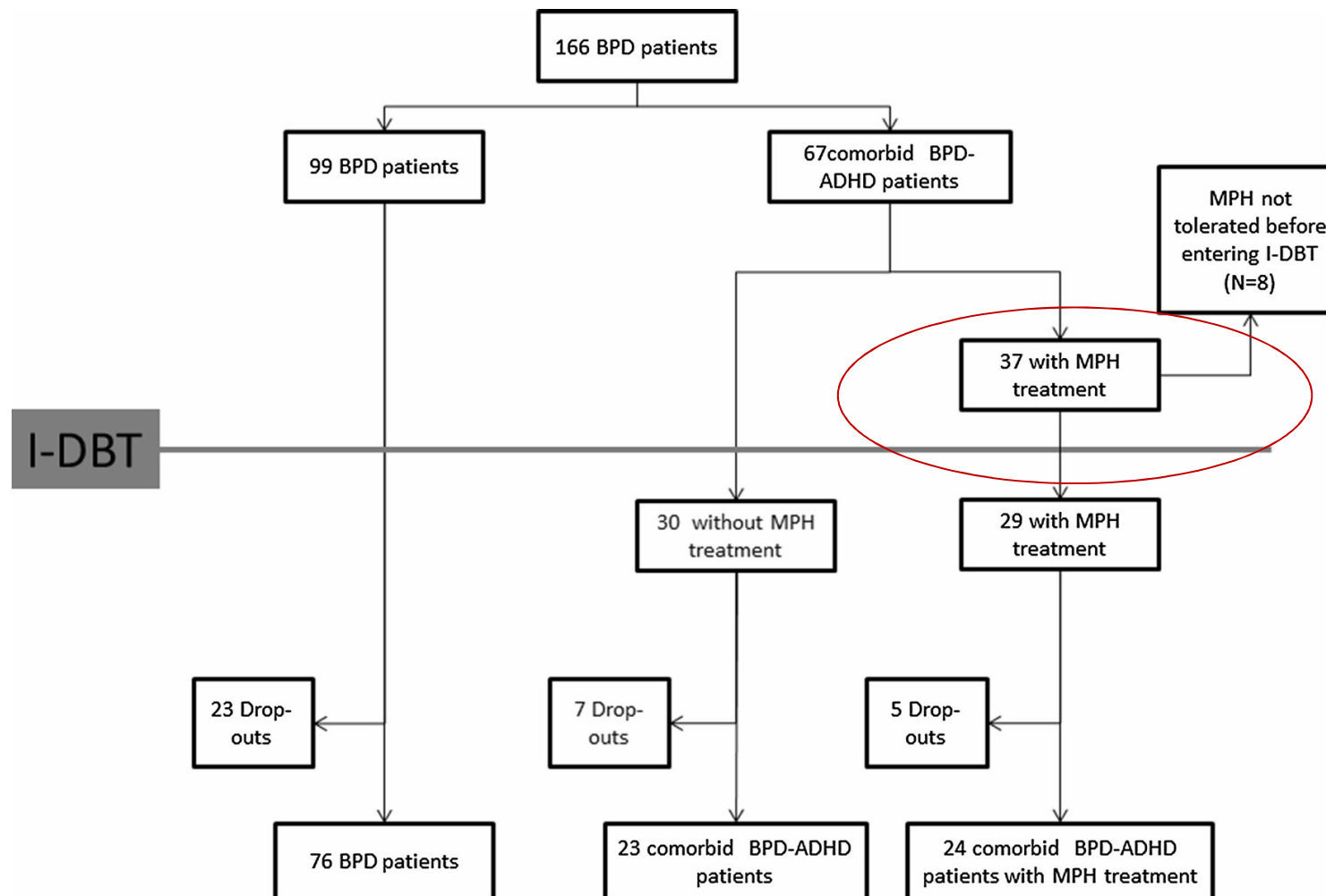
Results in adolescent females after 12 week treatment

MPH 25.2 ± 7.9 mg (n=14)



N=3 without self-injurious behavior after stimulant treatment (MPH)

Study Design (Prada et al. ADHD, 2015)



Effects MPH in BPD+ADHD

Table 2 Comparison of the evolution of the scores between BPD patients (BPD), BPD patients with comorbid ADHD receiving MPH-based treatment (BPD-ADHD + MPH), and BPD patients with comorbid ADHD not receiving MPH-based treatment (BPD-ADHD)

	A. BPD (N = 76)*				B. BPD-ADHD + MPH (N = 24)*				C. BPD-ADHD (N = 23)*				Between groups comparison <i>F</i> (<i>df</i>); <i>p</i>
	Baseline		Post-treatment		Baseline		Post-treatment		Baseline		Post-treatment		
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
BIS-10													
Total score	64.06	16.72	62.30	14.60	78.37	19.54	70.10	21.59	77.35	14.04	76.11	15.20	3.31 (2,94); 0.04
Motor	21.12	7.05	20.67	7.06	29.47	7.95	25.70	9.60	25.91	6.64	26.77	7.14	3.61 (2,97); 0.03
Attentional	22.03	6.75	21.24	5.58	25.14	5.91	23.07	8.36	25.86	5.83	24.83	6.53	1.08(2,97); 0.34
Non-planning	21.17	7.06	20.39	6.47	23.75	9.26	20.84	8.59	25.57	6.54	24.50	5.88	0.34(2,94); 0.71
STAXI													
Trait Anger	27.45	6.77	24.97	6.62	29.30	7.34	24.61	7.01	26.48	6.26	26.05	7.92	3.11 (2,98); 0.05
State Anger	23.60	8.77	18.48	6.28	26.44	8.35	17.52	5.71	22.25	8.34	18.33	7.49	3.19 (2,98); 0.04
Anger In	21.54	4.62	21.05	5.52	23.74	5.56	21.78	5.54	20.94	5.94	19.65	6.69	0.71(2,98); 0.49
Anger Out	18.67	5.54	16.35	4.54	21.28	7.05	17.01	5.89	18.63	4.22	16.69	4.98	0.07(2,98); 0.93
Anger control	18.81	4.77	19.93	4.08	18.41	4.66	20.04	4.78	19.34	5.10	20.27	4.75	0.47(2,98); 0.62
ASRS v1.1 total score	38.10	10.71	36.53	11.09	43.39	11.07	35.97	12.90	43.11	10.88	41.50	11.02	4.29 (2,93); 0.02
BDI	34.03	11.68	21.09	11.04	38.09	11.68	21.09	11.04	38.09	11.68	21.09	11.04	4.03 (2,99); 0.02
Hopelessness	11.11	4.44	8.23	4.92	11.11	4.44	8.23	4.92	11.11	4.44	8.23	4.92	0.02(2,100); 0.97

Significant differences are bolded. Analyses (ANCOVA) were adjusted on the following medications: antidepressants, antipsychotics, mood stabilizers

* Number of subjects who completed the study

Effect on Anger and Depression

Summary

- Overlapping clinical features between ADHD and BPD
- Various borderline typical symptoms in adults with ADHD
- Impaired impulse control driven by negative emotions in BPD
- Impulsivity in BPD consequence of ADHD
- Hyperreactivity to positive emotions in ADHD
- ADHD and BPD often comorbid conditions
 - 40 - 60% of BPD childhood ADHD
 - At least 16% of BPD severe adult ADHD
- **BPD patients should be systematically screened for ADHD**

Summary & Outlook

- MPH = enhancement of psychotherapy (DBT) in BPD+ADHD
- Adaptation and Evaluation of effective treatment strategies for severely ill BPD patients with ADHD
 - RCTs psychopharmacological treatment (methylphenidate, ATX..)
 - Psychotherapy (including ADHD relevant topics e.g. “chaos and control” and stress management)
 - Physical activity



Thank you!



KARL-JASPERS-KLINIK 
Psychiatrieverbund Oldenburger Land gGmbH