The efficacy of psychological interventions for adults with ADHD

Alexandra Philipsen – UKAAN, LONDON 2014

Financial Disclosure

- Advisory Boards, Phase III Studies, Research Report, Travel:

  Janssen-Cilag, Lilly, Medice, Novartis, Shire

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

Medium to large effect size for psychopharmacological treatment in Adult ADHD

Faraone et al. J Clin Psychopharmacol 2004, J Clin Psych 2010,
Koesters et al. J Psychopharmacol 2008,
Moriyama TS et al. CNS Spectrum 2013

Why psychological interventions ?

Background

- Co-occurring Disorders and Psychosocial Consequences in Adulthood[1]
- Low Self Esteem[2]
- Residual Symptoms under Medication or Refusal of Medication[3]
- Patients demand for Additional Therapy
- Guidelines Recommendation: "Multimodal Treatment"[3]

[1]Biederman 2005, Wilens et al. 2004, Rösler & Philipsen 2010, [2]Stevenson et al. 2002, Philipsen et al. 2007, Safren et al. 2005, [3]Ebert et al. 2003, NICE 2010, CADDRA 2008, Australian Guidelines 2009

Outline

- Background
- Research Questions
- Evidence of psychological interventions in adult ADHD
- Summary & Outlook

Individual Programmes in adult ADHD

Cognitive Behavioural Therapy (CBT)

Wilens et al. 1999, Mc Dermott et al. 2004, Safren et al. 2005, 2010, Rostain & Ramsey 2006

Problem focused Therapy

Weiss & Hechtmann et al. 2006, 2012

Overview in Young 2012, Philipsen 2012, Knouse et al. 2010

Group Programmes in adult ADHD

- **Cognitive Remediation Programme** (Stevenson et al. 2002)
- **Dialectical Behavioural Therapy** (DBT) based Programme (Hesslinger et al. 2002, Philipsen et al. 2007, Hirvikoski et al. 2011)
- **Cognitive Behavioural Therapy** (Bramham et al. 2008, Virta et al. 2008, 2010)
- **Mindfulness Meditation Training** (Zylowska et al. 2008)
- **Metacognitive Training** (Solanto et al. 2008, 2010)
- **Reasoning & Rehabilitation2** (Emilsson et al. 2011)
- **Psychoeducation** (Wiggings et al. 1999, Vidal 2013, Hirvikoski et al. 2014)

Young 2012, Philipsen 2012, Knouse et al. 2010

Research Questions

1. Is add-on psychotherapy effective in persisting ADHD symptoms in medicated patients?
2. Is “disorder tailored” psychotherapy more effective than a control condition?
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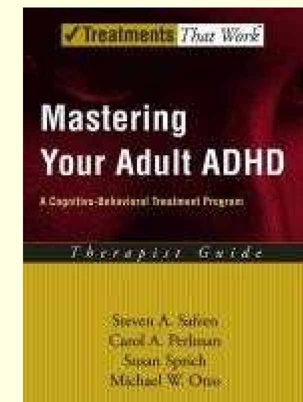
Add-on psychotherapy in persisting ADHD symptoms

- Two randomised controlled trials (RCT)
  - Individual CBT (Safren et al. 2005)
  - Group CBT (Emilsson et al. 2011)

Individual CBT

Core Modules:

- Psychoeducation, Planning / Organizing skills (4 Sessions)
- "Distractability Delay" by Alarms / Timers (3 Sessions)
- Cognitive Restructuring (Beck 1995) (3 Sessions)

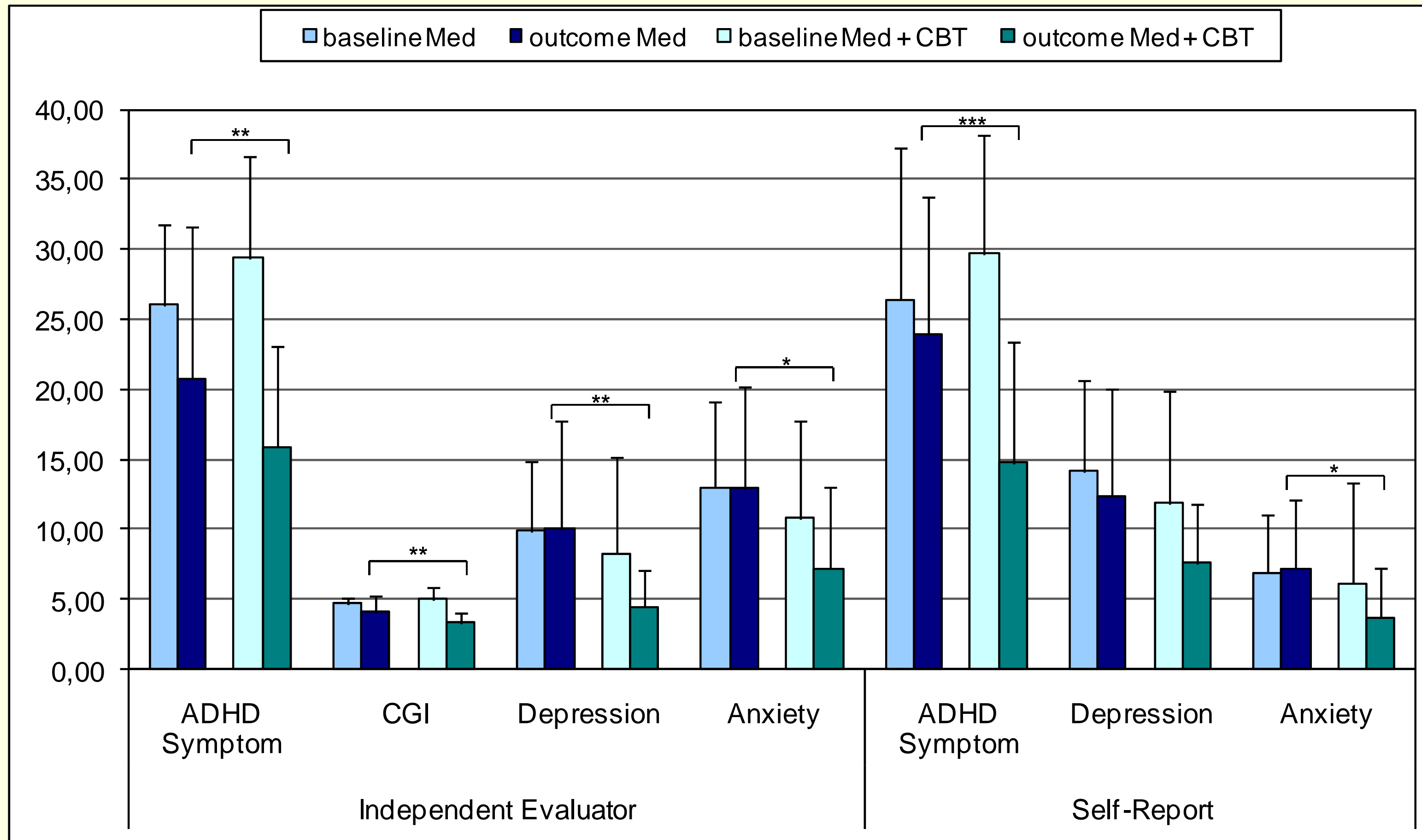


Optional Modules (1-2 Sessions each):

- "Procrastination"
- Frustration / Anger Management, Stress Reduction, Assertiveness Training
- Communication Skills (Stay on Topic, Eye Contact)

Safren et al. (2005) Behav Res Ther, 43

Individual CBT + Med vs. Med in persisting ADHD

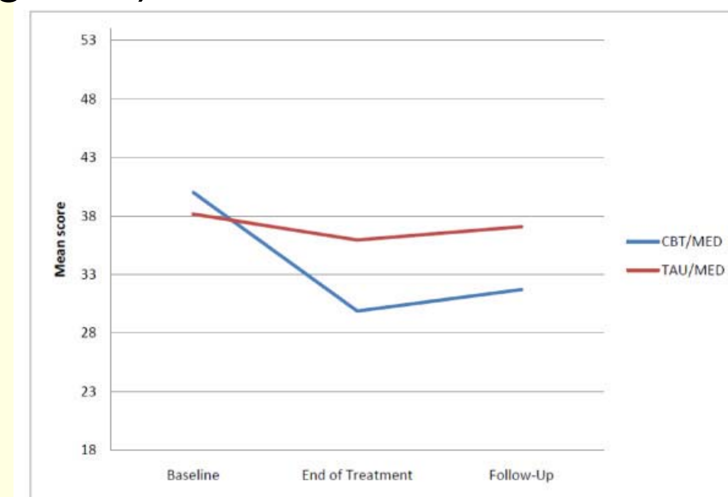


p < .05; ** p < .01; *** p < .001; „ADHD Symptom (IE)“: ADHD Rating Scale, „CGI“: Clinical Global Impression, „Depression (IE)“: Hamilton Depression Scale, „Anxiety (IE)“: Hamilton Anxiety Scale, „ADHD Symptom (SR)“: Current Symptom Scale, „Depression (SR)“: Beck Depression Inventory, „Anxiety (SR)“: Beck Anxiety Inventory.

Safren et al. Behav Res Ther 43, 2005, N = 31, Effect size: 1.97 (ADHD-CL IE)

Group CBT + Med vs. Med in persisting ADHD

- Reasoning & Rehabilitation2
- 15 Sessions, 5 Modules:
  - Neurocognitive (learning strategies,..)
  - Problem solving
  - Controlling emotions
  - Pro social behaviour
  - Critical judgement
- N = 54 stable medication



F(1,31)=11.02, p<0.1, d=1.03; F=7.6, p>0.05, d=1.17; IE, mean K-SADS ADHD

Emilsson, Young et al. BMC Psychiatry, 2011

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Individual CBT vs. Relaxation Training

- RCT
- N = 86 (all medicated), 12 Sessions, 15 weeks

- Response
  - ADHS-Rating Scale 33% vs. 67% (d=0.6)
  - CGI 23% vs. 53% (d=0.53)
- CBT significantly more effective
- Follow-up 6 + 12 months
- stable effects over one year

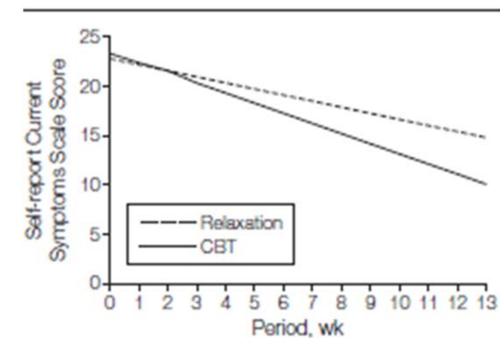

Figure 2. Mixed-Effects Analysis of Self-report Current Symptoms Scale Score for Baseline to Posttreatment

CBT indicates cognitive behavioral therapy. On the x-axis, the 0 time point indicates baseline and 13 weeks indicates posttreatment.

Safren et al. JAMA, 2010

Group programmes vs. non specific control group interventions

Authors	Therapy/ Study Design	N	Med	No. of sessions weeks	Outcome criteria	ES
Solanto 2010	**Meta-cognitive therapy** versus Supportive Group	88	49	12 Sessions 12 Weeks	ADHD-CL, **Subscale Inattention**, CAARS Inattention, BDI, Selfesteem	**1.6**
Hirvikoski 2011	**DBT-based** versus Discussion Group	51	37	14 Sessions 14 Weeks	**ADHD-CL,** BDI, Beck Anxiety Scale (BAI), subjectiv Stress, Sleep, Sheehan Disability Scale	**0.6**

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Previous Studies on Psychoeducation (PE) in adult ADHD

- **4-week PE group**, controlled, wait list, n=17
  - ADHD sign. ↓, but Self-esteem ↓

  Wiggins et al. Journal of Mental Health Counseling, 1999

- **12-week PE group**, randomised controlled, CBT, n=32

  Vidal et al. J Nerv Ment Dis 2013

- **8-week PE group** (PEGASUS), open feasibility study, n=51, including significant others: n=57

  Hirvikoski et al. Atten Def Hyp Dis 2014

Previous Studies on Psychoeducation (PE) in adult ADHD

- **4-week PE group**, controlled, wait list, n=17
  - ADHD sign. ↓, but Self-esteem ↓

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- **12-week PE group**, randomised controlled, CBT, n=32

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- **8-week PE group** (PEGASUS), open feasibility study, n=51, including significant others: n=57

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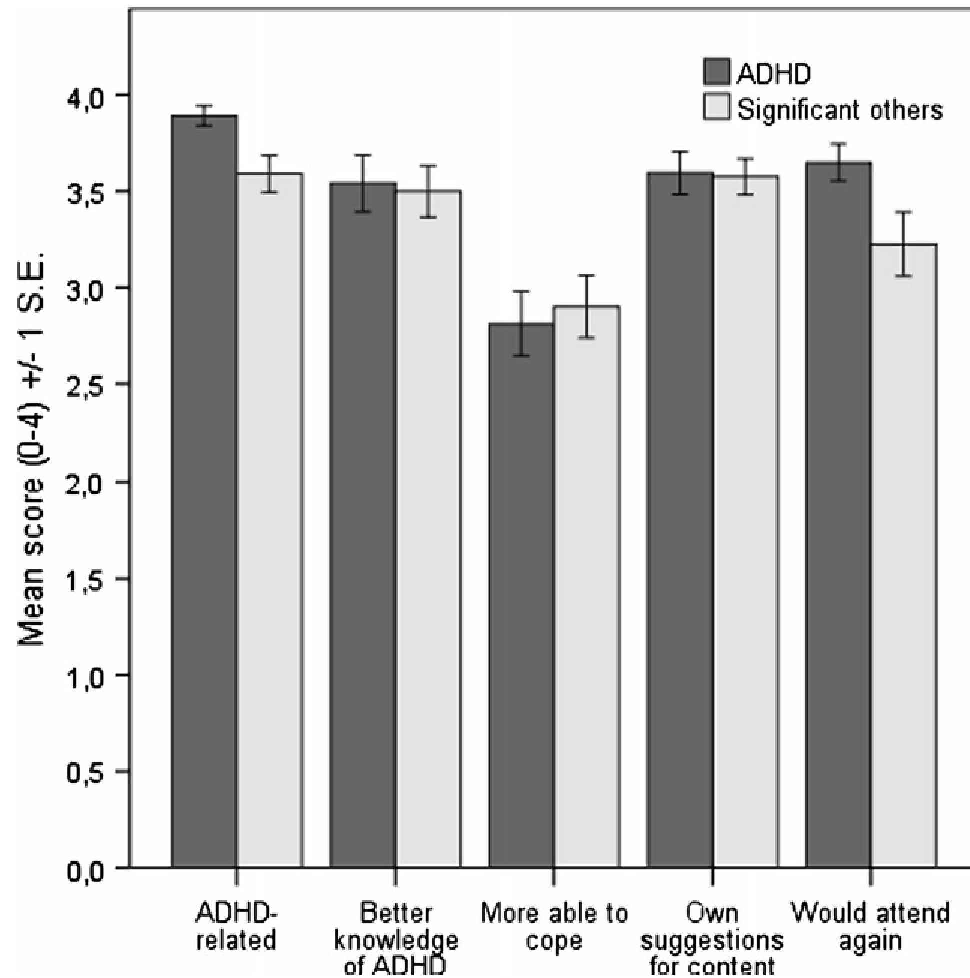
8-week PE (PEGASUS): Treatment Satisfaction of Patients and Significant Others



Hirvikosiki et al. ADHD,
May 2014,
open feasibility trial, N=51

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Studies reporting influence of medication

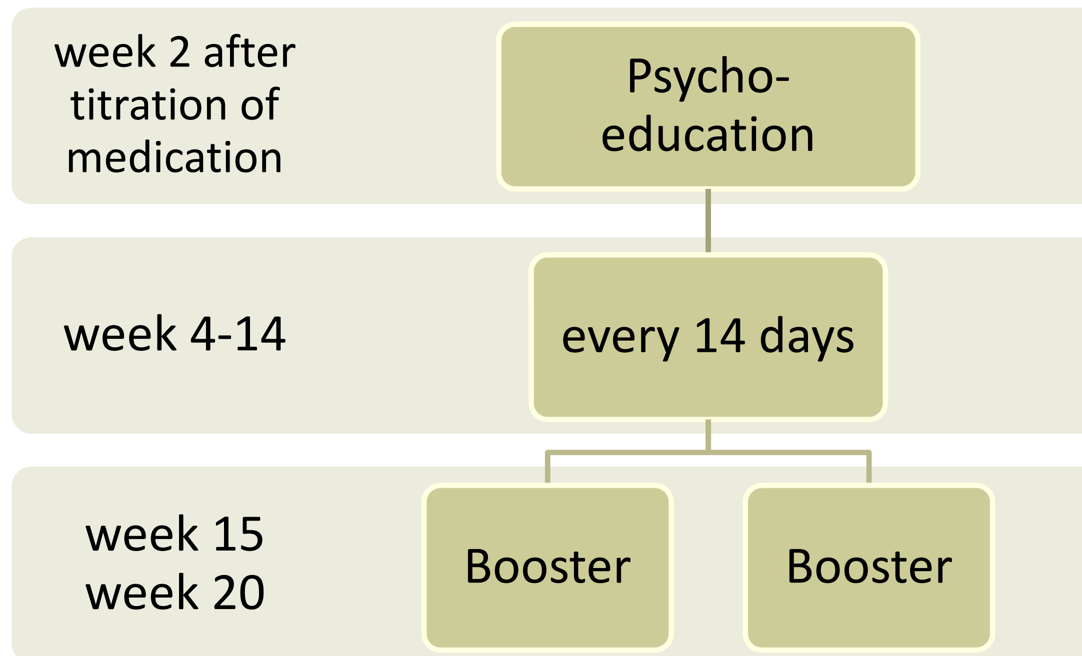
Authors	Therapy / Study Design	N	Med	Duration / No. of Sessions	Outcome Criteria	ES
Stevenson et al 2002	**CBT,** controlled (waitlist)	43	23	8 weekly sessions, additional coaching	ADHD-CL, State/Trait Anger, Self Esteem, Organizational Skills **Follow-up Examination**: after 2 and 12 months	**1.65** neg
Philipsen et al 2007	**DBT-based,** open, multicenter	72	48	13 weekly sessions	ADHD-CL, BDI, SCL-16, VAS, Acceptance, Relevance, Feasibility	**0.91** neg
Zylowska et al 2008	**Mindfulness Meditation Training**, open	32	19	8 weekly sessions	ADHD-CL, BDI, Adapted Childrens' Anxiety Scale, neuropsychological testing (e.g. digit span, stroop test)	**0.80** neg
Solanto et al 2010	**Meta-cognitive therapy,** controlled vs **supportive therapy**	88	49	12 weekly sessions	ADHD-CL, inattentive subscale, CAARS inattention subscale, BDI, Self Esteem	**1.57** neg

Limitation

- No information on severity of ADHD before medication
- Probably, non-medicated ADHD patients less affected than medicated patients
- Controlled studies needed
  - **Problem focused therapy**, M. Weiss et al. BMC Psychiatry, 2012
  - **DBT-based therapy**, Philipsen et al. ADHD 2010, ADHD 2014

Problem focused therapy: study design

- Multicentre study (5), 2000-2002
- Secondary analysis, N = 48 (Dexamphetamine/Placebo)



Weiss et al. BMC, 2012

Results

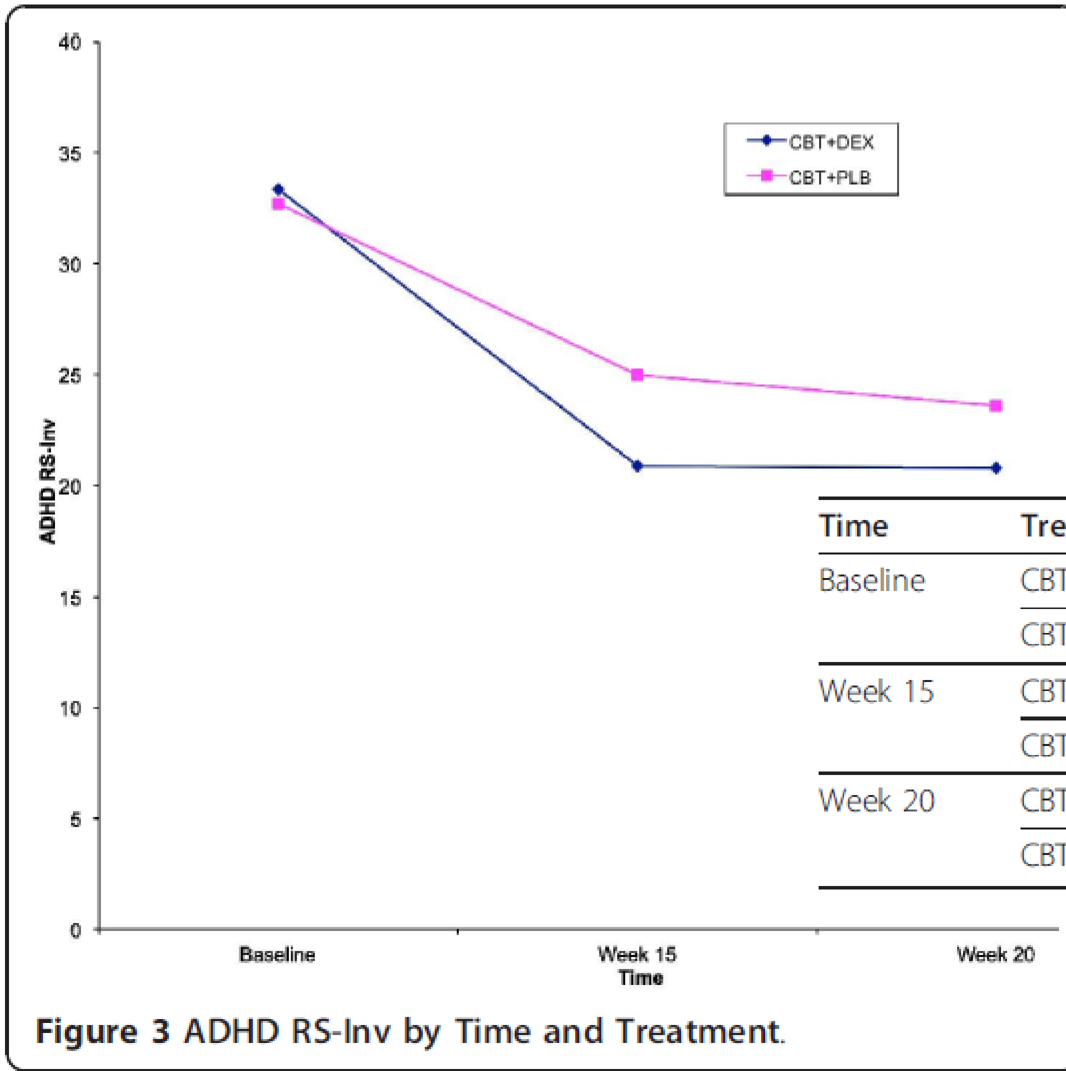


Figure 3 ADHD RS-Inv by Time and Treatment.

- effect size 1.1
- no significant difference medication vs. Placebo

Time	Treatment	Mean	SD	N	*p*
Baseline	CBT+DEX	33.35	8.21	23	.77
	CBT+PLB	32.68	7.62	25	
Week 15	CBT+DEX	20.87	9.32	23	.21
	CBT+PLB	24.96	12.25	25	
Week 20	CBT+DEX	20.78	9.65	23	.39
	CBT+PLB	23.56	12.39	25	

- **Underpowered!**

Weiss et al. BMC, 2012

COMPAS (Comparison of Methylphenidate and Psychotherapy in Adult ADHD Study)

Design

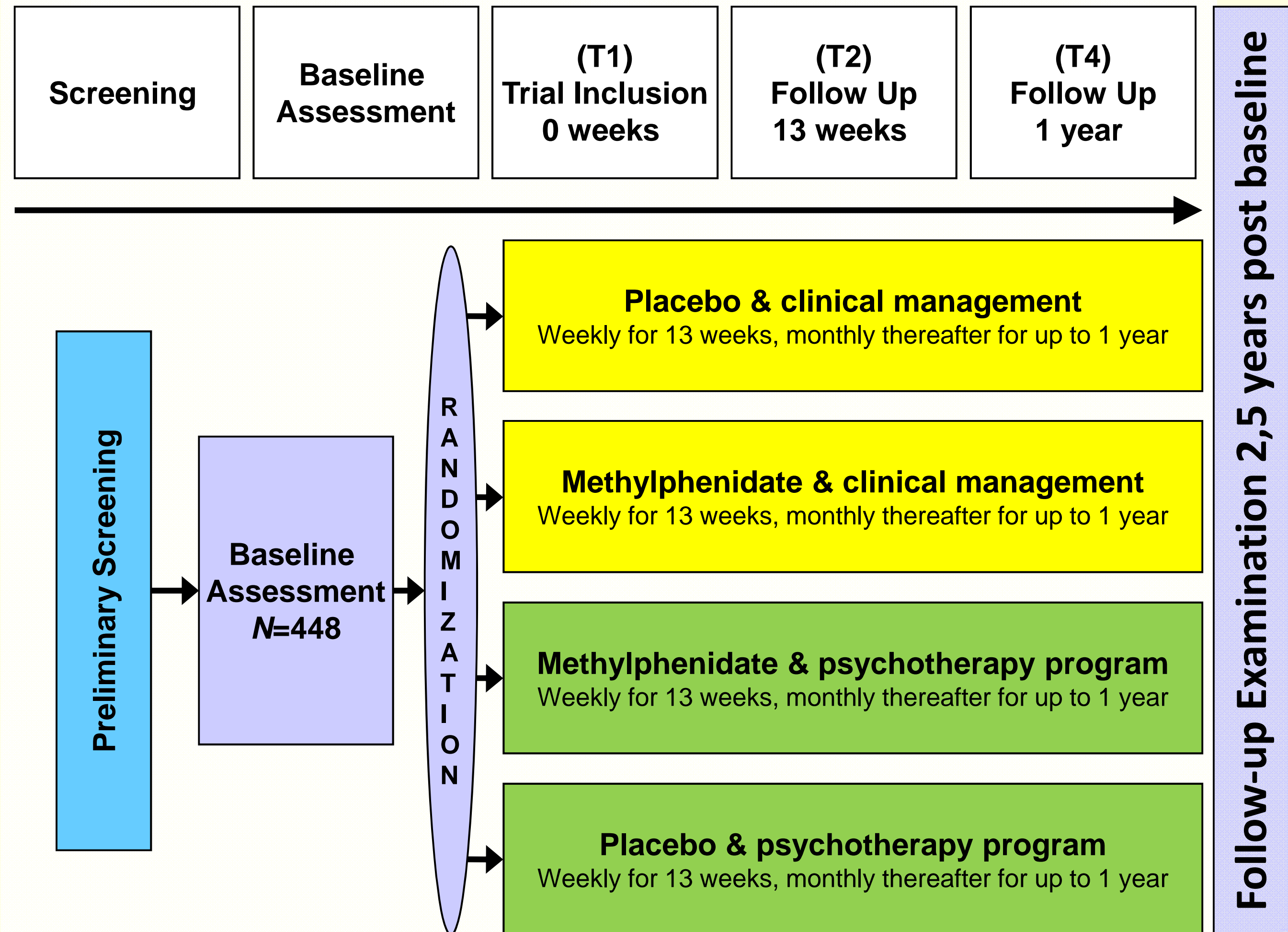
- randomised controlled
- multicentred
- placebo-controlled
- double blind

Subjects

- *N*=433
- adult patients with ADHD

Outcome Criteria

- **Primary: ADHD-Index (12 Items of the Conners Adult Rating Scale, observer rated (T1/T2)**



Hypotheses COMPAS

- Methylphenidate more effective than Placebo
- Disorder tailored psychotherapy more effective than clinical management
- Combination of disorder tailored psychotherapy and medication superior to medication and clinical management or psychotherapy and placebo

Primary Outcome: ADHD - Index 12 Items, N=419 (Full Analysis Set), LMCF

- Data submitted

ES	W0 / W52
CM+PCB	0.55
GPT+PCB	0.75
GPT+MPH	1.02
CM+MPH	1.07

Research Questions

1. Is add-on psychotherapy in residual ADHD symptoms after medication effective? **YES**

2. Is "disorder tailored" psychotherapy more effective than a control condition? **YES**

3. Is psychotherapy more effective than psychoeducation? **NO**

4. Is psychotherapy in medicated adult ADHD patients more effective than in unmedicated patients? **YES**

Summary

- Psychological interventions are effective in adult ADHD
  - **In persisting ADHD symptoms after medication**
- **ADHD specific psychological interventions** are more effective than relaxation, supportive groups, or discussion groups
- **Psychoeducation and clinical management** are effective treatments in adult ADHD
- **Combination of medication and psychotherapy** is more effective than placebo and psychotherapy

Outlook

- More data on daily functioning needed
- More follow-up data needed
- Data on predictors for response needed

  Severity, subtype, sociodemographics, adherence, ….

European Medical School Oldenburg-Groningen

Thank you!