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Interdisziplinäre evidenz- und konsensbasierte S3 Leitlinie

„Aufmerksamkeitsdefizit-/ Hyperaktivitätsstörung (ADHS) im Kindes-, Jugend- und Erwachsenenalter“

Version 2.0 | AWMF-Register-Nr. 028-045

Endpunktbasierte Evidenzübersicht

Federführend beteiligte Fachgesellschaften:

DGKJ
Deutsche Gesellschaft
für Kinder- und Jugendmedizin e.V.

dgppn
Deutsche Gesellschaft für
Psychiatrie und Psychotherapie,
Psychosomatik und
Nervenheilkunde e.V.

dgkjp
Deutsche Gesellschaft
für Kinder- und Jugendpsychiatrie,
Psychosomatik und Psychotherapie e.V.

Einsicht der Langfassung, Kurzfassung, der Betroffenenversion und des Leitlinienreports über https://register.awmf.org/de/leitlinien/detail/028-045.

Das dieser Veröffentlichung zugrundliegende Projekt wurde mit Mitteln des Innovationsaus-schusses beim Gemeinsamen Bundesausschuss unter dem Förderkennzeichen 01VSF21018 gefördert.

Inhaltsverzeichnis

Erläuterungen zum Verständnis der Evidenztabellen

Das vorliegende Dokument bietet Einsicht in alle den evidenzbasierten Empfehlungen der Version 2.0 der interdisziplinären evidenz- und konsensbasierten S3 Leitlinie „Aufmerksamkeitsdefizit-/ Hyperaktivitätsstörung (ADHS) im Kindes-, Jugend- und Erwachsenenalter zugrundeliegenden Studien und die daraus berücksichtigten Endpunkte. Die Auswahl erfolgte anhand der im Leitlinienreport (unter Kapitel 2.2) ausgeführten Einschlusskriterien der systematischen Literaturrecherchen. Die Evidenzübersichten sind orientiert an den Themenbereichen und spezifischen Empfehlungen der Leitlinie gegliedert. Für jede der evidenzbasierten Empfehlungen wurden die zugrundeliegenden Meta-Analysen (MAs) und randomisiert kontrollierte Studien (RCTs) in separaten Tabellen aufbereitet. Zu Beginn einer jeden Evidenzübersicht ist eine Tabelle aufgeführt, in der alle berücksichtigten Endpunktkategorien (geclustert nach Endpunkt und Rater*innen) zusammengefasst werden. Dort wird die Anzahl der Studien pro Endpunktgruppe (MAs oder RCTs), die Anzahl der einbezogenen Endpunkte pro Cluster (m), sowie die Aussagesicherheit der gesamten zugrundeliegenden Evidenz dieser Empfehlung berichtet. In den Summary of Findings (SoF) Tabellen werden die einzelnen Endpunkte der jeweiligen Cluster inklusive Referenz, Bewertung der Aussagesicherheit bzw. Risk of Bias (RoB), Effektstärke (und deren klinischer Implikation), Kommentare und zur Erhebung genutzte Messinstrumente berichtet.

Aus der Bewertung der methodischen Qualität eines extrahierten Endpunktes (nach GRADE (Guyatt et al., 2008) bei MAs, nach RoB Tool (Higgins et al., 2011) bei RCTs) ergibt sich die (gegenläufigen) Abstufungen der Aussagesicherheit, die in Tabelle 1 aufgeführt sind. Die aus den berichteten Effekten abzuleitenden klinischen Implikationen werden für jeden Endpunkt angegeben und sind in Tabelle 2 erläutert.

Tabelle 1

Abstufungen der Aussagesicherheit der Evidenz entsprechend GRADE (Guyatt et al., 2008) für MAs und des RoB Tools (Higgins et al., 2011) für RCTs

MAs		**RCTs**	
⊕⊕⊕⊕	High certainty of evidence	●	Very high risk
⊕⊕⊕◯	Moderate certainty of evidence	◑	High risk
⊕⊕◯◯	Low certainty of evidence	○	No risk
⊕◯◯◯	Very Low certainty of evidence		

Anmerkung. MAs = Meta-Analysen, RCTs = Randomized Controlled Trials.

Tabelle 2

Übersicht der klinischen Implikationen basierend auf dem CI (oder p-Wert) eines Endpunkts

Klinische Implikationen	
I	In favor of the intervention
U	Does not favor intervention or control
C	In favor of the control

Anmerkung. I = Intervention, U = Unclear, C = Control. Die klinische Implikation wird für jeden Endpunkt separat angegeben.

Die Evidenztabellen der Empfehlungen des Diagnostikkapitels beinhalten ebenfalls Übersichten mit Endpunktkategorien, der Anzahl der enthaltenen MAs bzw. Primärstudien (PS) und der Qualität der Evidenz der Entpunktkategorien (Gesamt). In den SoF-Tabellen werden die Referenz, die Stichprobe sowie die diagnostische Prozedur bzw. das diagnostische Kriterium, die Aussagesicherheit entsprechend dem GRADE Ansatz (Guyatt et al., 2008) bzw. dem QUADAS-2 (Quality Assessment of Diagnostic Accurycy Studies) Ansatz (Whiting et al., 2011), die Hauptschlussfolgerungen, sowie die diagnostischen Validitäts-/Reliabilitätsmaße berichtet. Die Interpretation der gekennzeichneten Aussagesicherheit nach QUADAS-2 Ansatz wird in Tabelle 3 erläutert.

Tabelle 3.

Abstufungen der Aussagesicherheit der Evidenz entsprechend des QUADAS-2 Ansatzes

PS	
++	High certainty of evidence
+	Acceptable certainty of evidence
0	Low certainty of evidence

Anmerkung: PS = Primärstudien.

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Higgins, J. P., Altman, D. G., Gøtzsche, P. C., Jüni, P., Moher, D., Oxman, A. D., Savovic, J., Schulz, K. F., Weeks, L., & Sterne, J. A. (2011). The Cochrane Collaboration's tool for assessing risk of bias in randomised trials. *BMJ*, *343*, d5928. https://doi.org/10.1136/bmj.d5928

Whiting, P., Rutjes, A., Westwood, M., Mallett, S., Deeks, J., Reitsma, J., Leeflang, M., Sterne, J., & Bossuyt, P. (2011). QUADAS-2: A Revised Tool for the Quality Assessment of Diagnostic Accuracy Studies. *Annals of Internal Medicine*, *155*, 529-536. https://doi.org/10.1059/0003-4819-155-8-201110180-00009

1.1 Diagnostik

1.1.1 Bei welchen Personen sollte eine ADHS-Diagnose durchgeführt werden? 1.1.5 Welche Bedeutung haben Fragebogenverfahren und Verhaltensbeobachtungen bei der Diagnostik von ADHS?

1.1.1 A & 1.1.5 A

Berücksichtigte Endpunktkategorien: Meta-Analysen

Endpunktkategorien	MAs	Gesamtaussagesicherheit der Evidenz
Inkrementelle/ differentielle Validität Kinder und Jugendliche	1	Moderat

Anmerkung. MAs = Anzahl der Meta-Analysen

Berücksichtigte Endpunktkategorien: Primärstudien

Endpunktkategorien	PS	Gesamtaussagesicherheit der Evidenz
Inkrementelle/ differentielle Validität Kinder und Jugendliche	11	Moderat
Inkrementelle/ differentielle Validität Erwachsene	1	
Interrater-Reliabilität	8	

Anmerkung. PS = Anzahl der Primärstudien

Summary of Findings Tabelle: Meta-Analysen

Referenz	Stichprobe und diagnostische Prozedur	Aussagesicherheit (GRADE)	Hauptschlussfolgerungen	Diagnostische Validitäts-/ Reliabilitätsmaße
Inkrementelle/ differentielle Validität Kinder und Jugendliche				
Staff et al., 2021 **The Validity of Teacher Rating Scales for the Assessment of ADHD Symptoms in the Classroom: A Systematic Review and Meta-Analysis** **J Atten Disord. 25(11), 1578-1593**	Children Teacher rating scale: CTRS-R:S = Conners' Teacher Rating Scale—Revised: Short Form, SWAN = Strengths and Weaknesses of ADHD-Symptoms and Normal-Behaviors	Moderate ⊕⊕⊕◯ Based only on "inconsistency"-criterium of GRADE-rating for all outcomes in comparison to semi-structured interview, Based on the "inconsistency" – and "publication bias"-criterium of GRADE-rating for	Results support convergent validity of teacher rating scales when validated against semi-structured clinical interview, with strong correlations for all (sub)scales. Divergent validity was confirmed for rating scale measures validated against semi-structured clinical interview. Validated against structured observations, convergent validity of rating scales was further confirmed, although correlations with teacher rating scales were only small to moderate. Divergent validity was supported only for the inattention symptom domain. Finally,	Convergent validity, Divergent validity (correlations measured)

	all outcomes in comparison to structured observations	as expected, overall, independent of the type of instrument, convergent validity was larger for ratings of hyperactivity/impulsivity than for ratings of inattention.	

Anmerkung. *n* = Anzahl der Versuchspersonen, *k* = Anzahl der inkludierten Primärstudien. R = risk of bias, IC = inconsistency, ID = indirectness, IP = imprecision, P = publication bias.

Summary of Findings Tabelle: Primärstudien

Referenz	Stichprobe und diagnostische Prozedur	Aussagesicherheit (QUADAS-2)	Hauptschlussfolgerungen	Diagnostische Validitäts-/ Reliabilitätsmaße
Inkrementelle/ differentielle Validität Kinder und Jugendliche				
Raiker et al., 2017 **Accuracy of Achenbach Scales in the Screening of Attention-Deficit/Hyperactivity Disorder in a Community Mental Health Clinic** **J Am Acad Child Adolesc Psychiatry, 56(5), 401-409**	Children and adolescents Achenbach Scales	++	Parent-reported attention problems were more useful than teacher- and self-report in identifying ADHD. Combining parent and teacher report improved identification. Multilevel likelihood ratios are provided to facilitate routine clinical use.	ROC-AUC
Slobodin & Davidovitch, 2022 **Primary School Children's Self-Reports of Attention Deficit Hyperactivity Disorder-Related Symptoms and Their Associations With Subjective and Objective Measures of Attention Deficit Hyperactivity Disorder** **Front Hum Neurosci, 16, 806047**	Children aged 7-10 years (n = 190) Children's self-reports of their attention level and ADHD-related symptoms, parent, and teacher forms of the Conners ADHD rating scales, Child Behavior Checklist (CBCL),	Not applicable. Comments: not a diagnostic accuracy study	Children's self-evaluations of their functioning were often associated with their teachers' and parents' evaluations. However, these correlations were small to moderate (Cohen, 1988) and not symptom-specific. These results suggest that adding children self -report to the diagnostic process of ADHD may improve the low-medium correspondence between informants' reports and objective measures of ADHD documented in the literature.	Correlations between self-report of ADHD-related symptoms and impaired MOXO-CPT indices.

	Teacher's Report Form (TRF), and CPT scores			
Gomez et al., 2021 **ROC Analyses of Relevant Conners 3–Short Forms, CBCL, and TRF Scales for Screening ADHD and ODD.** **Assessment 28(1)**	Children aged 6-11 years (*n* = 264) Conners 3–short form scales, Child Behavior Checklist (CBCL), Teachers Report Form (TRF)	++	The C 3-P(S) inattention and hyperactivity/impulsivity scales, and the CBCL attention problems scale, are not only effective, but are equally effective in identifying children with ADHD. Thus, it can be argued that the C 3-T(S) inattention and hyperactivity/impulsivity scales may be a little better than the TRF attention problems scale for identifying children with ADHD. However, this needs to be viewed in the context that we concluded that both these scales may not be favorable for diagnosis of ADHD.	ROC-AUC, Sensitivity, Specificity, Positive Predictive Values, Negative Predictive Values
Overgaard et al., 2019 **The predictive validity of the Strengths and Difficulties Questionnaire for child attention-deficit/hyperactivity disorder** **Eur Child Adolesc Psychiatry, 28(5), 625-633**	Children aged 7-15 years (*n* = 51096) Strengths and Difficulties Questionnaire (SDQ)	+	In sum, the parent SDQ HI subscale scores discriminated well between children with and without ADHD and gave a higher risk for subsequent ADHD than the SDQ conduct, emotional and peer problem scores. Although the sensitivity analyses were similar to earlier community studies with increased sensitivity at lower scores (≥ 4), they resulted in many false screening positive diagnoses. Including impact in addition to obtaining high HI scores reduced the number of false positive predictions, but this rate would still be a problem if the SDQ HI subscale was to be used in the general population with a low proportion of ADHD.	ROC-AUC, Sensitivity, Specificity, predictive validity scores

Harvey et al., 2009 **Predicting attention-deficit/hyperactivity disorder and oppositional defiant disorder from preschool diagnostic assessments** **J Consult Clin Psychol., 77(2), 349-54**	168 children, (their 168 female primary caregivers and 121 male caregivers) Based on interviews and ratings scales (DISC-IV and BASC scores)	+	Combining a DSM-IV based diagnostic interview and a standardized rating scale, children with ADHD could be discriminated from those with transient problems as early as age 3 with reasonable accuracy (76%).	Predictive Power
Vaughn, & Hoza, 2013 **The Incremental Utility of Behavioral Rating Scales and a Structured Diagnostic Interview in the Assessment of Attention-Deficit/Hyperactivity Disorder** **Journal of Emotional and Behavioral Disorders, 21(4), 227-239**	Children aged 7-11 years (ADHD: *n* = 185, CG: *n* = 85) Semi-structured clinical interview, parent- and teacher-completed Disruptive Behavior Disorders (DBD) Rating Scales, Computerized DISC-IV parent version, CBCL and TRF, and WJ-TC and WJ-TA, TOF.	Not applicable. Comment: In the part of incremental utility they used as reference standard a combination of the different index test that they measured after their each incremental utility.	Consistent with our expectations and previous research (Pelham et al., 2005), our results consistently supported the superiority of both parent-completed methods and of symptom-based rating scales when examined incrementally. Results were less consistent regarding the incremental utility of empirically derived rating scales beyond symptom-based ratings.	Incremental utility
Sisteré et al., 2014 **Validity of the DSM-Oriented scales of the Child Behavior Checklist and Youth Self-Report** **Psicothema, 26(3), 364-71**	Children and adolescents aged 8-17 years (*n* = 420 CBCL; *n* = 108 CBCL + YSR) DSM-oriented scales of the ASEBA inventories	+	The DSM-Oriented scales showed significant incremental validity in conjunction with the Empirical Syndrome scales for discriminating DSM-IV diagnoses, and considerable incremental validity in conjunction with the diagnoses obtained through the diagnostic interview for predicting the level of functional impairment.	Incremental validity

Vugteveen et al., 2021 **Validity Aspects of the Strengths and Difficulties Questionnaire (SDQ) Adolescent Self-Report and Parent-Report Versions Among Dutch Adolescents** **Assessment, 28(2), 601-616**	Adolescents aged 12-17 years Strengths and Difficulties Questionnaire (SDQ) self- and parent-report, CBCL and YSR, IDS-2	+	Both SDQ versions were found to be useful for screening for three specific types of problems: anxiety/mood disorder, conduct/oppositional deviant disorder, and attention-deficit/hyperactivity disorder. Additionally, parent-rated SDQ scores were found to be useful for screening for autism spectrum disorder.	CFA and ESEM, Cronbach's alpha coefficient, t test, AUC values
Schulz-Zhecheva et al., 2019 **ADHD Traits in German School-Aged Children: Validation of the German Strengths and Weaknesses of ADHS Symptoms and Normal Behavior (SWAN-DE) Scale** **J Atten Disord, 23(6), 553-562**	Children (*n* = 405) SWAN-DE	Not applicable. Comments: not a diagnostic accuracy study	Regarding its clinical utility, SWAN-DE and particularly SWAN-TOT showed an excellent ability to differentiate between participants with and without ADHD.	Validity ROC-AUC (discrimination power), Sensitivity, Specificity
Izzo et al., 2019 **The Conners 3-short forms: Evaluating the adequacy of brief versions to assess ADHD symptoms and related problems** **Clin Child Psychol Psychiatry, 24(4), 791-808**	Children and adolescents Conners 3-short form scales	Not applicable. Comments: not a diagnostic accuracy study	Findings confirmed the original multidimensional structures and supported the Conners 3–Short Form scales as reliable and valid tools to assess ADHD and its main comorbid conditions.	internal consistency as measure of accuracy of the test.
Hall et al., 2019 **The validity of the Strengths and Difficulties Questionnaire (SDQ) for children with ADHD symptoms**	Children and adolescents aged 6–17 years with ADHD (*n* = 250) Strengths and Difficulties Questionnaire (SDQ), parent	+	SDQ ratings of 'probable' hyperactivity disorder were good predictors of clinical and research diagnoses of ADHD, Further examination of the SDQ hyperactivity 'probable' rating	To evaluate ESEM model fit, Comparative Fit Index (CFI), non-normed fit index (NNFI) and Root Mean Square Error of

PLoS One, 14(6), e0218518	and teacher rating		showed good specificity, but poor sensitivity for ADHD.	Approximation (RMSEA) along with χ2 test were examined
Inkrementelle/ differentielle Validität Erwachsene				
Riglin et al., 2021 **Investigating the validity of the Strengths and Difficulties Questionnaire to assess ADHD in young adulthood** **Psychiatry Res., 301, 113984**	Adults aged 25 years (*n* = 4121) Strengths and Difficulties Questionnaire (SDQ)	+	We found the hyperactivity/ADHD subscale to have high validity in distinguishing those meeting ADHD diagnostic criteria from those who did not. This suggests that the SDQ subscale, which is widely used in child and adolescent populations, is also suitable for use in young adults.	ROC-AUC, Sensitivity, Specificity, Positive Predictive Values, Negative Predictive Values
Interrater Reliabilität				
Sibley et al., 2019 **Reexamining ADHD-Related Self-Reporting Problems Using Polynomial Regression** **Assessment, 26(2), 305-314**	Adolescents aged 11-15 years (*n* = 107) Self-reporting (adolescent versions of the DSM-5 ADHD Rating Scale, Narcissistic Personality Inventory (NPI-16))	Not applicable. Comments: not a diagnostic accuracy study	a) Adolescents with ADHD reported significantly lower levels of inattention and H/I than parents. b) Use of polynomial regression provided no evidence that discrepancies between parent and adolescent symptom reports were associated with any of the hypothesized predictors.	Informant discrepancies (between parent and adolescent reports of inattention and H/I severity). Predictors of discrepancies.
Slobodin & Davidovitch, 2022 **Primary School Children's Self-Reports of Attention Deficit Hyperactivity Disorder-Related Symptoms and Their Associations With Subjective and Objective Measures of Attention Deficit Hyperactivity Disorder**	Children aged 7-10 years (n = 190) Children's self-reports of their attention level and ADHD-related symptoms, parent, and teacher forms of the Conners ADHD rating scales, Child	Not applicable. Comments: not a diagnostic accuracy study	Children's self-evaluations of their functioning were often associated with their teachers' and parents' evaluations. However, these correlations were small to moderate (Cohen, 1988) and not symptom-specific. These results suggest that adding children self -report to the diagnostic process of ADHD may improve the low-medium correspondence between informants' reports and objective	Correlations between self, parent, and teacher reports of ADHD-related symptoms

***Front Hum Neurosci, 16,* 806047**	Behavior Checklist (CBCL), Teacher's Report Form (TRF), and CPT scores		measures of ADHD documented in the literature.	
Takeda et al., 2020 **Factors Associated With Discrepancy in Parent-Teacher Reporting of Symptoms of ADHD in a Large Clinic-Referred Sample of Children** ***J Atten Disord., 24(11),* 1605-1615**	Children and adolescents (*M* = 9.7 years, *n* = 894) ADHD Rating Scale, Fourth Edition, Home and School Version (ADHD-RS-IV, Home, School)	Not applicable. Comments: not a diagnostic accuracy study	When predicting parent–teacher discrepancy from demographic variables, we found discrepancy between parents and teachers, with teachers reporting higher levels of symptoms for ethnic minority children than for non-minority children. When the extreme groups were examined, SES mattered more than ethnicity.	Discrepancy measures
Vaughn, & Hoza, 2013 **The Incremental Utility of Behavioral Rating Scales and a Structured Diagnostic Interview in the Assessment of Attention-Deficit/Hyperactivity Disorder** ***Journal of Emotional and Behavioral Disorders, 21(4),* 227-239**	Children aged 7-11 years (ADHD: *n* = 185, CG: *n* = 85) Semi-structured clinical interview, parent- and teacher-completed Disruptive Behavior Disorders (DBD) Rating Scales, Computerized DISC-IV parent version, CBCL and TRF, and WJ-TC and WJ-TA, TOF.	Not applicable. Comment: In the part of incremental utility, they used a combination of the different index test that they measured after each incremental utility as reference standard.	Consistent with our expectations and previous research (Pelham et al., 2005), our results consistently supported the superiority of both parent-completed methods and of symptom-based rating scales when examined incrementally. Results were less consistent regarding the incremental utility of empirically derived rating scales beyond symptom-based ratings.	Correlation and rate of agreement.

de Nijs et al., 2004 **Attention-deficit/hyperactivity disorder (ADHD): parents' judgment about school, teachers' judgment about home** **Eur Child Adolesc Psychiatry, 13(5), 315-20**	Children (*n* = 30) DISC-IV	Not applicable. Comments: not a diagnostic accuracy study	Parent and teacher often disagreed about the child's behaviours in school and at home. Slight to moderate levels of agreement were also found between parents' scores about ADHD symptoms at home and teachers' scores about ADHD symptoms at school.	Levels of agreement between parents' and teachers' about children's ADHD symptoms at home and at school.
Vugteveen et al., 2021 **Validity Aspects of the Strengths and Difficulties Questionnaire (SDQ) Adolescent Self-Report and Parent-Report Versions Among Dutch Adolescents** **Assessment, 28(2), 601-616**	Adolescents aged 12-17 years Strengths and Difficulties Questionnaire (SDQ) self- and parent-report, CBCL and YSR, IDS-2	+	Both SDQ versions were found to be useful for screening for three specific types of problems: anxiety/mood disorder, conduct/oppositional deviant disorder, and attention-deficit/hyperactivity disorder. Additionally, parent-rated SDQ scores were found to be useful for screening for autism spectrum disorder.	Spearman rho correlations
Schulz-Zhecheva et al., 2019 **ADHD Traits in German School-Aged Children: Validation of the German Strengths and Weaknesses of ADHS Symptoms and Normal Behavior (SWAN-DE) Scale** **J Atten Disord, 23(6), 553-562**	Children (*n* = 405) SWAN-DE	Not applicable. Comments: not a diagnostic accuracy study	Regarding its clinical utility, SWAN-DE and particularly SWAN-TOT showed an excellent ability to differentiate between participants with and without ADHD.	Reliability

Izzo et al., 2019 **The Conners 3-short forms: Evaluating the adequacy of brief versions to assess ADHD symptoms and related problems** **Clin Child Psychol Psychiatry, 24(4), 791-808**	Children and adolescents Conners 3-short form scales	Not applicable. Comments: not a diagnostic accuracy study	Findings confirmed the original multidimensional structures and supported the Conners 3–Short Form scales as reliable and valid tools to assess ADHD and its main comorbid conditions.	Reliability, Across-informant correlations between different versions (parent–teacher ratings, parent–youth rating, and teacher–youth ratings)

Anmerkung. *n* = Anzahl der Versuchspersonen. SG = sequence generation, CC = concealment, BP = blinding participants, BA = blinding assessors, ID = incomplete data, OR = outcome reporting, CE = carry over effects, SX = stopped early, UM = unvalidated measures, OI = other issue.

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1.1.6 Welche Bedeutung haben testpsychologische Untersuchungen im Rahmen der neuropsychologischen sowie der Entwicklungs- und Leistungsdiagnostik?

1.1.6 A

Berücksichtigte Endpunktkategorien: Primärstudien

Endpunktkategorien	PS	Gesamtaussagesicherheit der Evidenz
Differentielle Validität Kinder und Jugendliche	10	Sehr schwach/ schwach
Differentielle Validität Erwachsene	13	
Inkrementelle Validität Kinder und Jugendliche	4	
Inkrementelle Validität Erwachsene	5	
Validitätsüberprüfungen zu deutschsprachigen Verfahren	6	

Anmerkung. PS = Anzahl der Primärstudien

Summary of findings Tabelle: Primärstudien

Referenz	Stichprobe und diagnostisches Kriterium	Aussagesicherheit (QUADAS-2)	Differentielle/ inkrementelle Validität	Prädiktoren
Differentielle Validität Kinder und Jugendliche				
Areces et al., 2018 **Efficacy of a Continuous Performance Test Based on Virtual Reality in the Diagnosis of ADHD and Its Clinical Presentations** **J Atten Disord., 22(11), 1081-1091**	Children aged 5-16 years (89/28; inattentive *n* = 28, impulsive/hyperactive *n* = 29, combined *n* = 32) Criterion n.a.	0	MANOVAS: significant differences between ADHD subtypes and CG with effect sizes d ~1. The differentiation between both subtypes with OE, CE, and TR is dependent on visual and auditory stimuli.	Aula Nesplora (CPT VR)
Berger et al., 2017 **Usefulness and Validity of Continuous Performance Tests in the Diagnosis of Attention-Deficit Hyperactivity Disorder Children**	Children aged 7-12 years (339/459) Criterion n.a.	0	CPT total AUC .91-.96	Moxo-CPT

Arch Clin Neuropsychol., 32(1), 81-93				
Chen et al., 2022 **Incremental Validity of Multi-Method and Multi-Informant Evaluations in the Clinical Diagnosis of Preschool ADHD** **J Atten Disord., 26(10), 1293-1303**	Children aged 5-7 years (38/32; clinical sample) Criterion: preliminary diagnosis	0	DBD-RS AUC .81; K-CPT AUC .74 (total value); Among the individual variables, HRT, HRT SD, variability, and HRT ISI change showed significant differences.	K-CPT2
Emser et al., 2018 **Assessing ADHD symptoms in children and adults: evaluating the role of objective measures** **Behav Brain Funct., 14(1), 11**	30/30 children 38/38 adults Criterion: preliminary diagnosis	0	SE .80, SP .77, TQ 78% SE .82, SP .76, TQ 79%	QB & KITAP QB+ & TAP
Hamadache et al., 2021 **Is the QbMini a Valid Instrument for ADHD Assessment?** **J Atten Disord., 25(10), 1384-1394**	Children aged 5 years (37/55 clinically unremarkable, 26 SLD) Criterion: preliminary diagnosis	0	Comparison ADHD – CG (AUC): HY .80, IA .67, IMP .589, Total .816 Comparison ADHD – SLD all below .60 → insufficient For comparison: FBB-ADHD-V ADHD – CG: HY/IMP .87, IA .87, Total .88 ADHD – SLD: HY/IMP .768, IA .613, Total .698	QbMini

Hult et al., 2018 **ADHD and the QbTest: Diagnostic Validity of QbTest** **J Atten Disord., 22(11), 1074-1080**	Children aged 8-12 years (124/-) Criterion n.a.	Not applicable.	Measures for subscales only: SE 47–67%; SP 72–84%; AUC 0.70–0.80 The test was unable to distinguish between ADHD subtypes.	QB-Test
Johansson et al., 2021 **The Quantified Behavioral Test Failed to Differentiate ADHD in Adolescents With Neurodevelopmental Problems** **J Atten Disord., 25(3), 312-321**	Children aged 14-16 years (89/248) Criterion: twin study, clinical diagnostic	++	AUCs: Total .58; Act .49; Inatt .59	QB+
Labarga et al., 2019 **Validierung des QbMini Tests zur Diagnose der Aufmerksamkeitsdefizit-/Hyperaktivitätsstörung (ADHS) bei fünfjährigen Kindern** **Zeitschrift für Neuropsychologie, 30 (3), 149-156**	Children aged 5 years (40/55); clinical sample Criterion: diagnosis without predictors (Qb, FBB-ADHD-V, CBCL)	0	ADHD vs. typically developing AUCs QbMini: HYP .818; IA .634, IMP .493 FBB-ADHD-V: ATT .837; HY/IM .857; Total .880 CBCL: Ext .757, Attention probl. .919, Diss. Behav. .579; Aggr. Behav. .782	QbMini
Tallberg et al., 2019 **Incremental clinical utility of continuous performance tests in childhood ADHD - an evidence-based assessment approach**	Children aged 9-14 years (80/38; clinical sample; other psychiatric disorder in 63% of the CG; IQ 87/92) Criterion: clinical diagnosis (based on e-interview, parent & teacher	+	(a) Diagnosis CPT Confidence Index AUC 0.73 (b) MPD setting Qb: no statistical significance regarding the prediction of treatment success with medication → irrelevant	a) CPT-II b) QB

Scand J Psychol., 60(1), 26-35	questionnaires (SNAP-IV-30 Items)			
Won et al., 2020 **Application of Attention-Deficit/Hyperactivity Disorder Diagnostic Tools: Strengths and Weaknesses of the Korean ADHD Rating Scale and Continuous Performance Test** **Neuropsychiatr Dis Treat., 16, 2397-2406**	Children aged 7-12 years (62/12) Criterion: interview → ADHD, NOS (not otherwise specified), CG	0	AUCs: HI/IA: ADHD vs. CG .74/.731; ADHD+NOS vs. CG .779/.692; ADHD vs. NOS+CG .626/.625 (Indication of correlation with IQ)	IVA-Plus (CPT)
Differentielle Validität Erwachsene				
Adamou et al., 2022 **Efficacy of Continuous Performance Testing in Adult ADHD in a Clinical Sample Using QbTest** **J Atten Disord., 26(11), 1483-1491**	Adults aged 24-42 years (38/31) (45/24) Criterion: clinical diagnosis including DIVA	+	SE 70%, SP 43% Cutoff 1.5 SD: PPV	QB+
Alaghband-Rad et al., 2021 **A Preliminary Investigation of Deficits in Executive Functions of Adults With Attention Deficit**	Adults (24/19); clinical sample; CG publicly recruited Criterion: comprehensive assessment by psychiatrist (no further info on	0	CPT: no significant differences between ADHD and CG Small sample	CPT-2, TOL, Stroop, CAARS

Hyperactivity Disorder **J Nerv Ment Dis., 209(1), 35-39**	methods; duration 1 hour)			
Baggio et al., 2020 **Does the continuous performance test predict ADHD symptoms severity and ADHD presentation in adults? Journal of Attention Disorders, 24(6), 840–848**	Adults (104/97) Criterion: preliminary diagnosis (CG clinical sample without ADHD diagnosis); no info about distribution of comorbidities in EG and CG	+	No difference for IA, Significant difference for HY, 79.8 % were identified as meeting ADHD criteria	CPT3
Bijlenga et al., 2019 **Objective assessment of attention-deficit/hyperactivity disorder in older adults compared with controls using the QbTest** **Int J Geriatr Psychiatry., 34(10), 1526-1533**	Adults aged 55-79 years (97/112) Criterion: preliminary diagnosis (CG convenience sample)	0	CFA: structure comparable to younger patients; OCR 70 %	QB raw scores
Bottini et al., 2019 **When Measures Diverge: The Intersection of Psychometric Instruments and Clinical Judgment in Multimodal Adult Attention-Deficit/Hyperactivity Disorder Assessment**	Adults (*n* = 45) Criterion: contamination (retrospective, no CG)	Not applicable.	CAARS: SE 60.0, SP 70.4 TOVA API: SE 80.0, SP 65.4	PASAT, TOVA, TMT

Professional Psychology: Research and Practice, 50(6), 353-363				
Brunkhorst-Kanaan et al., 2020 **The Quantified Behavioral Test-A Confirmatory Test in the Diagnostic Process of Adult ADHD?** **Front Psychiatry., 11, 216**	Adults (94/20) Criterion: DIVA + clinical judgement	+	For QbAct, a significant difference was found between ADHD and non-ADHD (*p* = .019, SE .50, SP .68, AUC .65). No significant difference was found for QbIna and QbImp. The tau of reaction time variance also proved to be non-significant (p = .259). High prevalence of comorbidities (depression 27 %/45 %). Only 40 % in the control group had no clinical diagnosis.	Qb Test
Emser et al., 2018 **Assessing ADHD symptoms in children and adults: evaluating the role of objective measures** **Behav Brain Funct., 14(1), 11**	(30/30 children) 38/38 adults Criterion: preliminary diagnosis	0	SE .82, SP .76, TQ 79%	QB+ & TAP
Hirsch, & Christiansen, 2017 **Factorial Structure and Validity of the Quantified Behavior Test Plus (Qb+©)** **Assessment, 24(8), 1037-1049**	Children and adults > 12 (5151/258) Adults > 16 (206/91); Clinical sample, CG relatives Criterion: n.a.	0	RTV CHI^2 12.4**, OE 14.2** RTV SE 90%, SP 45%; Nagelkerke R^2 = .20, hit rate 76%, PPV 79%, NPV 67% → Inattention differentiates ADHD from CG. No AUCs given.	Qb+ TAP_GoNogo TAP_Get. Aufm.

Hsieh et al., 2021 **Mismatch negativity and P3a in drug-naive adults with attention-deficit hyperactivity disorder** **Psychol Med., 52(15), 1-11**	Adults (52/62), clinical sample, matched CG (publicly recruited) Criterion: clinical diagnosis according to DSM, SNAP-IV	0	ADHD-CG: F-test (ANOVA) OE 3.82 (.053) HRT 7.6 (.007) HRT Var 4.55 (.035) CE 5.53 (.021) Perseverations 8.34 (.005) HRT ISI 4.41 (.038) HRT changed by ISIs 4.68 (.033)	CCPT
Nikolas et al., 2019 **The role of neurocognitive tests in the assessment of adult attention-deficit/hyperactivity disorder** **Psychol Assess., 31(5):685-698**	Adults (ADHD 109/ Depressive 52/ Healthy 85); publicly recruited Criterion: preliminary diagnosis	0	Differentiation ADHD – Healthy: AUCs: RT .65, RT variability .66; OE .66	TOVA
Pettersson et al., 2018 **Diagnosing ADHD in Adults: An Examination of the Discriminative Validity of Neuropsychological Tests and Diagnostic Assessment Instruments** **J Atten Disord., 22(11), 1019-1031**	Adults (60/48), clinical sample Criterion: preliminary diagnosis	+	DIVA SE 90.0 SP 72.9 AUC .83 TQ 82,4% CPT-II OE SE 33.3 SP 85.4 AUC .74 CPT-II HRT Var SE 26.2 SP 85.4 AUC .71 Kombi of Qb and CPT-II .SE .80 SP 66.7 TQ 74%	CPT-II
Ulberstad et al., 2020 **Objective measurement of attention deficit hyperactivity disorder symptoms**	Adolescents and adults (12-60 years old; 69/73) Criterion: clinical diagnosis (including Ob-Test, but not	0	SE 82.6, SP 79; TQ 81% AUC/effect size: HYP: Microevents .80/1.36; IA: OE .75/.90; RT .73/.83; RT Var .81/1.29 IMP: CE .74/.84.	ObCheck (Comp-Test online)

outside the clinic using the QbCheck: Reliability and validity **Int J Methods Psychiatr Res., 29(2), e1822**	ObCheck = predictor variable)			
Weyandt et al., 2017 **Neuropsychological functioning in college students with and without ADHD** **Neuropsychology, 31(2), 160-172**	Students (216/220; male:female ca. 1:1) Criterion: clinical diagnosis (interview, questionnaire)	0	Total score F=6.83 (<.001) MANOVA. Cohen's d small for HRT SE (.25) (min.) to .76 for CE	CPT2 Confidence index
Inkrementelle Validität Kinder und Jugendliche				
Chen et al., 2022 **Incremental Validity of Multi-Method and Multi-Informant Evaluations in the Clinical Diagnosis of Preschool ADHD** **J Atten Disord., 26(10), 1293-1303**	Children aged 5-7 years (38/32; clinical sample) Criterion: preliminary diagnosis	0	DBD-RS + K-CPT .87 → increment above RS 6%	K-CPT
Hollis et al., 2018 **The impact of a computerised test of attention and activity (QbTest) on diagnostic decision-making in children and young people with suspected attention deficit hyperactivity disorder: single-blind randomised controlled trial**	Children and adolescents aged 6-17 years (171/96) Criterion: DAWBA-Diagnosis system	++	Multicentre, randomized, single-blind study; study investigated whether knowledge of Ob-Test result had an impact on diagnostic accuracy and time taken. Results: no difference in diagnostic accuracy (comparison of diagnosis as usual with and without Ob-Test; criterion: DAWBA diagnosis); time taken to reach diagnosis slightly shorter (15 min) and investigators felt more confident about diagnosis; proportion of cases in which ADHD was ruled out was higher	Ob AQUA-Trial

J Child Psychol Psychiatry, 59(12), 1298-1308			Article does not specify proportion of ADHD diagnoses in the two study conditions	
Jarrett et al., 2018 **Evidence-Based Assessment of ADHD in Youth Using a Receiver Operating Characteristic Approach** **J Clin Child Adolesc Psychol., 47(5), 808-820**	Children and adolescents aged 5-17 years (n = 379); clinical sample Criterion: contamination	+	Increment HRT-SD ca. 6% above CBCL and TRF (calculation unclear)	CPT (HRT)
Tallberg et al., 2019 **Incremental clinical utility of continuous performance tests in childhood ADHD - an evidence-based assessment approach** **Scand J Psychol., 60(1), 26-35**	Children aged 9-14 years (80/38; clinical sample with and without ADHD) Criterion: n.a. retrospective study	+	(Bayesian inferential statistics) diagnosis: decision depends on questionnaire results; if E and L combined yield diagnostic certainty of >85% (= criterion), no test is required; test can increase accuracy if combined assessment of E and criterion does not meet threshold, which is the case when results are inconsistent. Do the same criteria apply for ruling out ADHD (probability of misdiagnosis > 15%)?	a) CPT-II confidence index
Inkrementelle Validität Erwachsene				
Bijlenga et al., 2019 **Objective assessment of attention-deficit/hyperactivity disorder in older adults compared with controls using the QbTest** **Int J Geriatr Psychiatry, 34(10), 1526-1533**	Adults aged 55-79 years (97/112) Criterion: Sample preliminary diagnosis (CG convenience sample)	0	Qb+: OCR 70%. Combined with CAARS or ASRS improves the hit rate 21%	Ob raw scores

Bottini et al., 2019 **When Measures Diverge: The Intersection of Psychometric Instruments and Clinical Judgment in Multimodal Adult Attention-Deficit/Hyperactivity Disorder Assessment** **Professional Psychology: Research and Practice, 50(6), 353-363**	Adults (*n* = 45) Criterion: contamination (retrospective, no CG)	Not applicable.	CAARS + TOVA: SE 50.0, SP 82.1 → Increase in specifity 11.7% through testing compared to quenstionnaires	PASAT, TOVA, TMT
Groom et al., 2016 **The incremental validity of a computerised assessment added to clinical rating scales to differentiate adult ADHD from autism spectrum disorder** **Psychiatry Res., 243, 168-73**	Adults ADHD (*n* = 37) vs. ASS (*n* = 25) Criterion: sample with preliminary diagnoses	0	The increase in Qb-total based on the CAARS+ Autism Self-Report is 9%. Before 2017	Ob total
Nikolas et al., 2019 **The role of neurocognitive tests in the assessment of adult attention-deficit/hyperactivity disorder** **Psychol Assess., 31(5):685-698**	Adults (ADHD 109/ Depressive 52/ Healthy 85); sample publicly recruited Criterion: people with relevant clinical diagnoses	0	TOVA increment via Fb was 2.2% in distinguishing ADHD from control group. A combination of interview and TOVA RT variability was able to correctly classify 87% of cases. Differentiation from depression was successful in 70.4% of cases using a combination of TOVA and a word-learning test	TOVA

Pettersson et al., 2018 **Diagnosing ADHD in Adults: An Examination of the Discriminative Validity of Neuropsychological Tests and Diagnostic Assessment Instruments** **J Atten Disord., 22(11), 1019-1031**	Adults (60/48), clinical sample Criterion: preliminary diagnosis	+	CPT increases specificity by 10.4 % to 81.3 compared with DIVA alone (72.9). Nagelkerke's R^2 increases from 0.365 to 0.671. The combination of Qb and CPT variables increases TQ by 4.6 % and specificity by 17 % compared to DIVA alone (logistic regression analysis)	CPT-II
Validitätsüberprüfungen zu deutschsprachigen Verfahren (auch vor 2017)				
Börnert-Ringleb et al., 2018 **Überprüfung der differentiellen Validität der Untertests Alertness, Go/Nogo und Flexibilität der Testbatterie zur Aufmerk-samkeitsprüfung (TAP) bei der Diagnose-stellung von Aufmerksamkeitsdefizit-/Hyper-aktivitätsstörungen im Jugendalter** **Empirische Sonderpädagogik 10(1), 85-99**	Adolescents aged 11-17 years (49/49) Criterion: preliminary diagnoses (parallel CG)	0	AUCs: Alertness: .48-.59 Flexibilität: .55-.58 Go/Nogo: .52-.65	TAP Alertness, Go/Nogo, Flexibility
Drechsler et al., 2009 **Zur klinischen Validität einer computergestützten Aufmerksamkeitste**	Clinical sample (50/50), CG no abnormalities Criterion: preliminary diagnoses	0	For 2 or more positive KITAP-UTs: SE 40%, SP 94%, PPV 0.77 For 6 UTs: AUC for Hy/Im 0.68 AUC for UA 0.76	KITAP

stbatterie für Kinder (KITAP) bei 7 bis 10-jährigen Kindern mit ADHS. **Kindheit und Entwicklung, 18(3), 153-161**				
Dreisörner, & Georgiadis, 2011 **Sensitivität und Spezifität computer-gestützter Verfahren zur Diagnostik von Aufmerksamkeitsdefizit-/Hyperaktivitäts-störung (ADHS) im Kindes- und Jugendalter. Die Testbatterie zur Unaufmerksamkeit sprüfung (TAP) und Testbatterie zur Aufmerksamkeits-prüfung für Kinder (KITAP)** **Empirische Sonderpädagogik 3(1), 3-19**	Children aged 8-10 years (24/24); clinical sample, CG no abnormalities Criterion: n.a.	0	TAP: Effect sizes d were significant for 9 out of 18 parameters (mostly >.8) KITAP: Effect sizes d were significant for 4 out of 18 parameters, and >.5 for 8 parameters AUCs: TAP flexibility, sustained attention, alertness (RZ-SD): .668–.826	KITAP and TAP
Hellwig-Brida et al., 2010 **Intelligenz- und Aufmerksamkeitsleistungen von Jungen mit ADHS [Components of intelligence and attention in boys with ADHD]** **Zeitschrift für Psychiatrie, Psychologie und**	Boys aged 6-10 (68/norm group); clinical sample Criterion: n.a. (questionnaire, clinical assessment)	Not applicable.	Effect sizes d Alterness (SD?) 1.25 Flexibilität (SD?) 1.01 Significant deviations from standard values were also observed in other parameters	KITAP

Psychotherapie, 58(4), 299–308				
Lenhard, & Lenhard, 2013 **ADHS-Test 6-12** **Göttingen: Hogrefe**	Children aged 6-12 years (43/323) Criterion: n.a. (clinical sample vs. norm sample)	Not applicable.	Boys: AUC 6%, test above questionnaire Girls: 2%, test above questionnaire	ADHD-Test 6-12
Renner et al., 2015 **Psychometrische Eigenschaften der "Testbatterie zur Aufmerksamkeitsprüfung für Kinder" (KITAP) in einer klinischen Stichprobe** **Diagnostica, 61(2), 63-75**	Children aged 6-10 years (32/183) Criterion: n.a. (clinical sample with and without ADHD)	Not applicable.	After Bonferroni-Holm correction barely any significant differences (only ommissions) MANOVA: ADHD vs. F83 and F91 only isolated instances of significance KITAP not suitable to distinguish between ADHD and other psychiatric disorders	KITAP

Anmerkung. *n* = Anzahl der Versuchspersonen. SG = sequence generation, CC = concealment, BP = blinding participants, BA = blinding assessors, ID = incomplete data, OR = outcome reporting, CE = carry over effects, SX = stopped early, UM = unvalidated measures, OI = other issue.

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1.3 Psychosoziale Interventionen

1.3.2 Psychosoziale Interventionen bei Kindern im Vorschulalter mit ADHS

1.3.2.1. Welche psychosozialen Interventionen sollten bei Kindern mit ADHS im Vorschulalter (ca. drei bis sechs Jahre) eingesetzt werden?

1.3.2.1. A

Berücksichtigte Endpunktkategorien: Meta-Analysen

Endpunktkategorien	MAs	*m*	Gesamtaussagesicherheit der Evidenz
ADHS Symptome gesamt (KL)	1	1	Sehr schwach/ schwach
ADHS Symptome gesamt (E)	1	2	
Kindliches Verhalten gesamt (E)	1	2	
Kindliches Verhalten gesamt (KL)	1	2	
Verhaltensprobleme (KU)	1	5	
Verhaltensprobleme (KL)	1	1	
Verhaltensprobleme (E)	1	2	
Erziehungsverhalten (KL)	1	1	
Erziehungsverhalten (E)	1	2	

Anmerkung. MAs = Anzahl der Meta-Analysen, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.

Berücksichtigte Endpunktkategorien: RCTs

Endpunktkategorien	RCTs	*m*	Gesamtaussagesicherheit der Evidenz
Aufmerksamkeit (E)	1	4	Sehr schwach/ schwach
Hyperaktivität (E)	1	4	
Verhaltensprobleme (E)	2	24	
Erziehungsverhalten (E)	2	44	
Elterlicher Stress (E)	1	4	

Anmerkung. RCTs = Anzahl der randomisierten kontrollierten Studien, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.

Summary of Findings Tabelle: Meta-Analysen

Referenz	Endpunkt	Aussagesicherheit (GRADE)	Effektstärke	Kommentare	Mess-instrument
ADHS Symptome gesamt. Kliniker*innenurteil					

Rimestad et al., 2019 **Population: Children with ADHD or ADHD symptoms, 2.5-6 years, preschool, no medication** **Intervention: Parent training, effect post-treatment and follow-up** **Comparison: Control conditions, waitlist, treatment as usual, minimal intervention**	**ADHD symptoms, Post-treatment**	Low ⊕⊕◯◯ (IC, IP)	*n* = 403, *k* = 6 *g* = .12 CI (-.12 - .36) **U**	Number of subjects not certain, calculated from information on sample size of individual studies themselves. Few details on bias. Most commonly used parent training program: Incredible Years Parent The New Forest Parent Training.	Independently assessed: CPRS, CPT, PDT, PSA, FP, FY
ADHS Symptome gesamt. Elternurteil					
Rimestad et al., 2019 **Population: Children with ADHD or ADHD symptoms, 2.5-6 years, preschool, no medication** **Intervention: Parent training, effect post-treatment and follow-up** **Comparison: Control conditions, waitlist, treatment as usual, minimal intervention**	**ADHD symptoms, Post-treatment**	Low ⊕⊕◯◯ (IC)	*n* = 1003, *k* = 15 *g* = .51 CI (.33 - .69) **I**	Number of subjects not certain, but calculated from information on sample size of individual studies themselves. Few details on bias. Most commonly used parent training program: Incredible Years Parent The New Forest Parent Training.	CPRS, PLAY PARK, WWP, PKSB, PACS, CBCL, ECBI, DBRS-I, DBRS-hi, BASC-PRS-h, PKBS-o/i, DSM-III
	ADHD symptoms, Follow-up	Moderate ⊕⊕⊕◯ (IP)	*n* = 705, *k* = 8 *g* = .07 CI (-.01 - .15) **U**	Number of subjects not certain, calculated from information on	CPRS, PLAY PARK, WWP, PKSB, PACS, CBCL, ECBI, DBRS-I, DBRS-hi, BASC-PRS-h,

				sample size of individual studies themselves. Few details on bias. Most commonly used parent training program: Incredible Years Parent The New Forest Parent Training	PKBS-o/i, DSM-III
Kindliches Verhalten gesamt. Elternurteil					
Mingebach et al., 2018 **Population: pre-school- and school-aged children with externalizing behavior problems** **Intervention: parent-based interventions for children with mental health disorders or externalizing behavior problems; mostly behavioral parent interventions** **Comparison: Control group or no control**	**Child behavior overall, Post measurements**	Very low ⊕◯◯◯ (BP, BA)	*n* = 58214, *k* = 20 *SMD* = .51 CI (.39 - .64) **I**	No further information on RoB	Multiple instruments combined
	Child behavior overall, Follow-up	Very low ⊕◯◯◯ (BP, BA)	*n* = 38543, *k* = 6 *SMD* = .51 CI (.31 - .71) **I**	No further information on RoB	Multiple instruments combined
Kindliches Verhalten gesamt. Kliniker*innenurteil					

Mingebach et al., 2018 **Population: pre-school- and school-aged children with externalizing behavior problems** **Intervention: parent-based interventions for children with mental health disorders or externalizing behavior problems; mostly behavioral parent interventions** **Comparison: Control group or no control**	**Child behavior overall, Post measurements**	Very low ⊕◯◯◯ (BP, OI)	*n* = 23426, *k* = 5 *SMD* = .62 CI (.18 - 1.06) **I**	No further information on RoB	Multiple instruments combined
	Child behavior overall, Follow up	Very low ⊕◯◯◯ (BP, OI)	*n* = 17618, *k* = 2 *SMD* = .59 CI (.24 - .94) **I**	No further information on RoB	Multiple instruments combined
Verhaltensprobleme. Kombiniertes Urteil					
Bennett et al., 2019 **Population: Children and adolescent, studies with mean age under 18 (no lower age limit) with impairing symptoms of depression, anxiety and/ or disruptive behavior** **Intervention: Self-help interventions including biblio-therapy and**	**Disruptive behavior, Self-help vs. control group**	Low ⊕⊕◯◯ (R, IC)	*n* = 2064, *k* = 17 *g* = .44 CI (.28 - .60) **I**	Including supported self-help, supported and unsupported self-help and nonsupported self-help vs. control; Parent-, Obeserver - and Self-report; studies with mixed samples up to 25 years included if mean age under 18	Multiple measuring instruments
	Disruptive behavior,	Low ⊕⊕◯◯ (R, IC)	*n* = n.a., *k* = 9 *g* = .62 CI (.34 - .90)	Parent-, Obeserver - and Self-report;	Multiple measuring instruments

computerized therapy, guided self-help with focus on self-help Comparison: any control group (waitlist, treatment as usual, placebo/ attention control) and other psychological treatment	**Supported self-help vs. CG**		**I**	studies with mixed samples up to 25 years included if mean age under 18	
	Disruptive behavior, Supported and unsupported self-help vs. CG	Moderate ⊕⊕⊕◯ (R)	*n* = n.a., *k* = 3 *g* = .49 CI (.27 - .70) **I**	Parent-, Obeserver - and Self-report; studies with mixed samples up to 25 years included if mean age under 18	Multiple measuring instruments
	Disruptive behavior, Nonsupported self-help vs. CG	Moderate ⊕⊕⊕◯ (R)	*n* = n.a., *k* = 5 *g* = .15 CI (.01 - .29) **I**	Parent-, Obeserver - and Self-report; studies with mixed samples up to 25 years included if mean age under 18	Multiple measuring instruments
	Disruptive behavior, Self-help vs. face-to-face therapy	Moderate ⊕⊕⊕◯ (R)	*n* = n.a., *k* = 6 *g* = -.28 CI (-.43 - -.13) **C**	Parent-, Obeserver - and Self-report; studies with mixed samples up to 25 years included if mean age under 18	Multiple measuring instruments
Verhaltensprobleme. Kliniker*innenurteil					
Rimestad et al., 2019 **Population: Children with ADHD or ADHD symptoms, 2.5-6 years, preschool, no medication Intervention: Parent training,**	**Conduct problems, Post-treatment**	Low ⊕⊕◯◯ (IC, IP)	*n* = 232, *k* = 5 *g* = .31 CI (-.07 - .69) **U**	Number of subjects not certain, calculated from information on sample size of individual studies themselves. Few details on bias. Most commonly used parent	FOS-RII, PDT, PSA

effect post-treatment and follow-up Comparison: Control conditions, waitlist, treatment as usual, minimal intervention				training program: Incredible Years Parent The New Forest Parent Training.	
Verhaltensprobleme. Elternurteil					
Rimestad et al., 2019 **Population: Children with ADHD or ADHD symptoms, 2.5-6 years, preschool, no medication Intervention: Parent training, effect post-treatment and follow-up Comparison: Control conditions, waitlist, treatment as usual, minimal intervention**	**Conduct problems, Post-treatment**	Low ⨁⨁◯◯ (IC)	*n* = 1003, *k* = 13 *g* = .44 CI (.17 - .70) **I**	Number of subjects not certain, calculated from information on sample size of individual studies themselves. Few details on bias. Most commonly used parent training program: Incredible Years Parent The New Forest Parent Training.	NYPRS, PKBS, PACS, CBCL, ECBI, DBRS-odd, PKBS-o/a, BCL, BPB, DSM-III
	Conduct problems, Follow-up	Moderate ⨁⨁⨁◯ (IP)	*n* = 705, *k* = 8 *g* = .07 CI (.01 - .15) **I**	Number of subjects not certain, but calculated from information on sample size of individual studies themselves. Few details on bias. Most commonly used parent training program: Incredible Years	NYPRS, PKBS, PACS, CBCL, ECBI, DBRS-odd, PKBS-o/a, BCL, BPB, DSM-III

				Parent The New Forest Parent Training.	
Erziehungsverhalten. Kliniker*innenurteil					
Rimestad et al., 2019 **Population: Children with ADHD or ADHD symptoms, 2.5-6 years, preschool, no medication** **Intervention: Parent training, effect post-treatment and follow-up** **Comparison: Control conditions, waitlist, treatment as usual, minimal intervention**	**Negative parenting, Post-treatment**	High ⨁⨁⨁⨁	*n* = 604, *k* = 9 *g* = .33 CI (.13 - .53) **I**	Number of subjects not certain, but calculated from information on sample size of individual studies themselves. Few details on bias. Most commonly used parent training program: Incredible Years Parent, The New Forest Parent Training.	GIPCI, FOS-RII, naturalistic observation, DPICS, PDT, PSA, EE
Erziehungsverhalten. Elternurteil					
Rimestad et al., 2019 **Population: Children with ADHD or ADHD symptoms, 2.5-6 years, preschool, no medication** **Intervention: Parent training, effect post-treatment and follow-up** **Comparison:**	**Negative parenting, Post-treatment**	Low ⨁⨁◯◯ (IC)	*n* = 692, *k* = 8 *g* = .63 CI (.32 - .93) **I**	Number of subjects not certain, but calculated from information on sample size of individual studies themselves. Few details on bias. Most commonly used parent training program: Incredible Years Parent, The New	PPI, PPS, PS

Control conditions, waitlist, treatment as usual, minimal intervention				Forest Parent Training.	
	Negative parenting, Follow-up	Moderate ⊕⊕⊕◯ (IP)	*n* = 357, *k* = 5 *g* = .12 CI (-.01 - .24) **U**	Number of subjects not certain, but calculated from information on sample size of individual studies themselves. Few details on bias. Most commonly used parent training program: Incredible Years Parent, The New Forest Parent Training.	PPI, PPS, PS

Anmerkung. *n* = Anzahl der Versuchspersonen, *k* = Anzahl der inkludierten Primärstudien. R = risk of bias, IC = inconsistency, ID = indirectness, IP = imprecision, P = publication bias.

Summary of Findings Tabelle: RCTs

Referenz	Endpunkt	Risk of Bias	Effektstärke	Kommentare	Mess-instrument
Aufmerksamkeit. Elternurteil					
Stattin et al., 2015 **Population: parents of 3-12 year old children** **Intervention: one of 4 parent trainings: behavioral programs (Comet, Cope, Incredible Years) or nonbehavioral program (Connect)** **Comparison: waitlist control**	**ADHD Inattention, Comet vs. CG**	Very high risk ● (BP, BA)	*n* = 310 *d* = .17 CI (.10 - .24) **I**		Swanson, Nolan, and Pelham Rating Scale (SNAP-IV) Inattention subscale
	ADHD Inattention, Cope vs. CG	Very high risk ● (BP, BA)	*n* = 326 *d* = .08 CI (.01 - .15) **I**		Swanson, Nolan, and Pelham Rating Scale (SNAP-IV) Inattention subscale

	ADHD Inattention, Incredible Years vs. CG	Very high risk ● (BP, BA)	*n* = 233 *d* = .18 CI (.09 - .26) **I**		Swanson, Nolan, and Pelham Rating Scale (SNAP-IV) Inattention subscale
	ADHD Inattention, Connect vs. CG	Very high risk ● (BP, BA)	*n* = 321 *d* = .01 CI (.00 - .08) **U**		Swanson, Nolan, and Pelham Rating Scale (SNAP-IV) Inattention subscale
Hyperaktivität. Elternurteil					
Stattin et al., 2015 **Population: parents of 3-12 year old children** **Intervention: one of 4 parent trainings: behavioral programs (Comet, Cope, Incredible Years) or nonbehavioral program (Connect)** **Comparison: waitlist control**	**ADHD Hyperacticity, Comet vs. CG**	Very high risk ● (BP, BA)	*n* = 310 *d* = .15 CI (n.a.) **I**		Swanson, Nolan, and Pelham Rating Scale (SNAP-IV) Hyperactivity subscale
	ADHD Hyperactivity, Cope vs. CG	Very high risk ● (BP, BA)	*n* = 326 *d* = .19 CI (.12 - .27) **I**		Swanson, Nolan, and Pelham Rating Scale (SNAP-IV) Hyperactivity subscale
	ADHD Hyperactivity, Incredible Years vs. CG	Very high risk ● (BP, BA)	*n* = 233 *d* = .22 CI (.14 - .30) **I**		Swanson, Nolan, and Pelham Rating Scale (SNAP-IV) Hyperactivity subscale
	ADHD Hyperactivity, Connect vs. CG	Very high risk ● (BP, BA)	*n* = 321 *d* = .10 CI (.02 - .18) **I**		Swanson, Nolan, and Pelham Rating Scale (SNAP-IV) Hyperactivity subscale
Verhaltensprobleme. Elternurteil					
Day, & Sanders, 2018 **Population: Parents**	**Frequency of disruptive behavior,**	Very high risk	*n* = 117 *d* = .22	All questionnaires	ECBI Intensity Subscale

of 2–8-year-old children with concerns about child's behavior and at least one socioeconomic or family risk factor Intervention: Self-directed TPOL (web-based variant of Triple P – Positive Parenting Program) Comparison: TPOL enhanced with practioner support [TPOLe], wait-list control	**WL vs. TPOL, pre-post**	● (BP, BA)	CI (-.14 - .58) **U**	online, no formal diagnosis required, different number of modules completed	
	Frequency of disruptive behavior, WL vs. TPOL, Pre-follow-up	Very high risk ● (BP, BA)	*n* = 117 *d* = .16 CI (-.21 - .52) **U**	All questionnaires online, no formal diagnosis required, different number of modules completed	ECBI Intensity Subscale
	Frequency of disruptive behavior, WL vs. TPOLe, Pre-post	Very high risk ● (BP, BA)	*n* = 126 *d* = .76 CI (.39 - 1.13) **I**	All questionnaires online, no formal diagnosis required, different number of modules completed	ECBI Intensity Subscale
	Frequency of disruptive behavior, WL vs. TPOLe, Pre-follow-up	Very high risk ● (BP, BA)	*n* = 126 *d* = .70 CI (.34 - 1.06) **I**	All questionnaires online, no formal diagnosis required, different number of modules completed	ECBI Intensity Subscale
	Frequency of disruptive behavior, TPOL vs. TPOLe, Pre-post	Very high risk ● (BP, BA)	*n* = 123 *d* = .50 CI (.14 - .86) **I**	All questionnaires online, no formal diagnosis required, different number of	ECBI Intensity Subscale

				modules completed	
	Frequency of disruptive behavior, TPOL vs. TPOLe, Pre-follow-up	Very high risk ● (BP, BA)	*n* = 123 *d* = .50 CI (.14 - .86) **I**	All questionnaires online, no formal diagnosis required, different number of modules completed	ECBI Intensity Subscale
	Disruptive child behaviors considered a problem, WL vs. TPOL, Pre-post	Very high risk ● (BP, BA)	*n* = 117 *d* = .66 CI (.29 - 1.04) **I**	All questionnaires online, no formal diagnosis required, different number of modules completed	ECBI Intensity Subscale
	Disruptive child behaviors considered a problem, WL vs. TPOL, Pre-follow-up	Very high risk ● (BP, BA)	*n* = 117 *d* = .52 CI (.15 - .89) **I**	All questionnaires online, no formal diagnosis required, different number of modules completed	ECBI Intensity Subscale
	Disruptive child behaviors considered a problem, WL vs. TPOLe, Pre-post	Very high risk ● (BP, BA)	*n* = 126 *d* = .93 CI (.56 - 1.31) **I**	All questionnaires online, no formal diagnosis required, different number of modules completed	ECBI Intensity Subscale

	Disruptive child behaviors considered a problem, WL vs. TPOLe, Pre-follow-up	Very high risk ● (BP, BA)	*n* = 126 *d* = 1.28 CI (.89 - 1.66) **I**	All questionnaires online, no formal diagnosis required, different number of modules completed	ECBI Intensity Subscale
	Disruptive child behaviors considered a problem, TPOL vs. TPOLe, Pre-post	Very high risk ● (BP, BA)	*n* = 123 *d* = .26 CI (.11 - .62) **I**	All questionnaires online, no formal diagnosis required, different number of modules completed	ECBI Intensity Subscale
	Disruptive child behaviors considered a problem, TPOL vs. TPOLe, Pre-follow-up	Very high risk ● (BP, BA)	*n* = 123 *d* = .75 CI (.38 - 1.12) **I**	All questionnaires online, no formal diagnosis required, different number of modules completed	ECBI Intensity Subscale
Stattin et al., 2015 **Population: Parents of 3-12 year old children** **Intervention: One of 4 parent trainings: behavioral programs (Comet, Cope, Incredible Years) or nonbehavioral program (Connect)** **Comparison: Waitlist control**	**ODD, Comet vs. CG**	Very high risk ● (BP, BA)	*n* = 310 *d* = .26 CI (.19 - .33) **I**		Swanson, Nolan, and Pelham Rating Scale (SNAP-IV) ODD subscale
	ODD, Cope vs. CG	Very high risk ● (BP, BA)	*n* = 326 *d* = .23 CI (.16 - .30) **I**		Swanson, Nolan, and Pelham Rating Scale (SNAP-IV) ODD subscale
	ODD,	Very high risk	*n* = 233 *d* = .25		Swanson, Nolan, and

Incredible Years vs. CG	● (BP, BA)	CI (.17 - .32)	I	Pelham Rating Scale (SNAP-IV) ODD subscale
ODD, Connect vs. CG	Very high risk ● (BP, BA)	*n* = 321 *d* = .07 CI (.01 - .14)	I	Swanson, Nolan, and Pelham Rating Scale (SNAP-IV) ODD subscale
Intensity of child's problems, Comet vs. CG	Very high risk ● (BP, BA)	*n* = 310 *d* = .63 CI (.53 - .71)	I	Swanson, Nolan, and Pelham Rating Scale (SNAP-IV) ODD subscale
Intensity of child's problems, Cope vs. CG	Very high risk ● (BP, BA)	*n* = 326 *d* = .44 CI (.36 - .53)	I	Swanson, Nolan, and Pelham Rating Scale (SNAP-IV) ODD subscale
Intensity of child's problems, Incredible Years vs. CG	Very high risk ● (BP, BA)	*n* = 233 *d* = .42 CI (.32 - .52)	I	Swanson, Nolan, and Pelham Rating Scale (SNAP-IV) ODD subscale
Intensity of child's problems, Connect vs. CG	Very high risk ● (BP, BA)	*n* = 321 *d* = .31 CI (.21 - .41)	I	Swanson, Nolan, and Pelham Rating Scale (SNAP-IV) ODD subscale
Problematic child behavior, Comet vs. CG	Very high risk ● (BP, BA)	*n* = 310 *d* = .49 CI (.46 - .51)	I	Swanson, Nolan, and Pelham Rating Scale (SNAP-IV) ODD subscale
Problematic child behavior, Cope vs. CG	Very high risk ● (BP, BA)	*n* = 326 *d* = .27 CI (.24 - .29)		Swanson, Nolan, and Pelham Rating Scale (SNAP-

			I		IV) ODD subscale
	Problematic child behavior, Incredible Years vs. CG	Very high risk ● (BP, BA)	*n* = 233 *d* = .27 CI (.23 - .29) **I**		Swanson, Nolan, and Pelham Rating Scale (SNAP-IV) ODD subscale
	Problematic child behavior, Connect vs. CG	Very high risk ● (BP, BA)	*n* = 321 *d* = .17 CI (.14 - .20) **I**		Swanson, Nolan, and Pelham Rating Scale (SNAP-IV) ODD subscale
Erziehungsverhalten. Elternurteil					
Day, & Sanders, 2018 **Population: Parents of 2–8-year-old children with concerns about child's behavior and at least one socioeconomic or family risk factor Intervention: Self-directed TPOL (web-based variant of Triple P – Positive Parenting Program) Comparison: TPOL enhanced with practioner support [TPOLe], wait-list control**	**Parenting practice – Laxness, WL vs. TPOL, Pre-post**	Very high risk ● (BP, BA)	*n* = 117 *d* = .26 CI (-.10 - .63) **U**	All questionnaires online, no formal diagnosis required, different number of modules completed	PS Laxness Subscale
	Parenting practice – Laxness, WL vs. TPOL, Pre-follow-up	Very high risk ● (BP, BA)	*n* = 117 *d* = .18 CI (-.19 - .54) **U**	All questionnaires online, no formal diagnosis required, different number of modules completed	PS Laxness Subscale
	Parenting practice – Laxness, WL vs. TPOLe, Pre-post	Very high risk ● (BP, BA)	*n* = 126 *d* = .43 CI (.08 - .78) **I**	All questionnaires online, no formal diagnosis required, different number of	PS Laxness Subscale

				modules completed	
	Parenting practice – Laxness, WL vs. TPOLe, Pre-follow-up	Very high risk ● (BP, BA)	*n* = 126 *d* = .51 CI (.16 - .87) **I**	All questionnaires online, no formal diagnosis required, different number of modules completed	PS Laxness Subscale
	Parenting practice – Laxness, TPOL vs. TPOLe, Pre-post	Very high risk ● (BP, BA)	*n* = 123 *d* = .15 CI (-.20 - .51) **U**	All questionnaires online, no formal diagnosis required, different number of modules completed	PS Laxness Subscale
	Parenting practice – Laxness, TPOL vs. TPOLe, Pre-follow-up	Very high risk ● (BP, BA)	*n* = 123 *d* = .32 CI (-.04 - .68) **U**	All questionnaires online, no formal diagnosis required, different number of modules completed	PS Laxness Subscale
	Parenting practice – Overreactivity , WL vs. TPOL, Pre-post	Very high risk ● (BP, BA)	*n* = 117 *d* = .24 CI (-.13 - .61) **U**	All questionnaires online, no formal diagnosis required, different number of modules completed	PS Overactivity Subscale

Parenting practice – Overreactivity, WL vs. TPOL, Pre-follow-up	Very high risk ● (BP, BA)	*n* = 117 *d* = .44 CI (.07 - .81) **I**	All questionnaires online, no formal diagnosis required, different number of modules completed	PS Overactivity Subscale
Parenting practice – Overreactivity, WL vs. TPOLe, Pre-post	Very high risk ● (BP, BA)	*n* = 126 *d* = .61 CI (.25 - .97) **I**	All questionnaires online, no formal diagnosis required, different number of modules completed	PS Overactivity Subscale
Parenting practice – Overreactivity, WL vs. TPOLe, Pre-follow-up	Very high risk ● (BP, BA)	*n* = 126 *d* = .82 CI (.45 - 1.18) **I**	All questionnaires online, no formal diagnosis required, different number of modules completed	PS Overactivity Subscale
Parenting practice – Overreactivity, TPOL vs. TPOLe, Pre-post	Very high risk ● (BP, BA)	*n* = 123 *d* = .39 CI (.03 - .75) **I**	All questionnaires online, no formal diagnosis required, different number of modules completed	PS Overactivity Subscale
Parenting practice – Overreactivity,	Very high risk ● (BP, BA)	*n* = 123 *d* = .40 CI (.04 - .76) **I**	All questionnaires online, no formal diagnosis	PS Overactivity Subscale

TPOL vs. TPOLe, Pre-follow-up				required, different number of modules completed	
Parenting practice – Hostility, WL vs. TPOL, Pre-post	Very high risk ● (BP, BA)	*n* = 117 *d* = .00 CI (-.36 - .36) **U**		All questionnaires online, no formal diagnosis required, different number of modules completed	PS Hostility Subscale
Parenting practice – Hostility, WL vs. TPOL, Pre-follow-up	Very high risk ● (BP, BA)	*n* = 117 *d* = .20 CI (-.16 - .57) **U**		All questionnaires online, no formal diagnosis required, different number of modules completed	PS Hostility Subscale
Parenting practice – Hostility, WL vs. TPOLe, Pre-post	Very high risk ● (BP, BA)	*n* = 126 *d* = .27 CI (-.08 - .62) **U**		All questionnaires online, no formal diagnosis required, different number of modules completed	PS Hostility Subscale
Parenting practice – Hostility, WL vs. TPOLe, Pre-follow-up	Very high risk ● (BP, BA)	*n* = 126 *d* = .48 CI (.13 - .83) **I**		All questionnaires online, no formal diagnosis required, different number of	PS Hostility Subscale

				modules completed	
	Parenting practice – Hostility, TPOL vs. TPOLe, Pre-post	Very high risk ● (BP, BA)	*n* = 123 *d* = .32 CI (-.03 - .67) **U**	All questionnaires online, no formal diagnosis required, different number of modules completed	PS Hostility Subscale
	Parenting practice – Hostility, TPOL vs. TPOLe, Pre-follow-up	Very high risk ● (BP, BA)	*n* = 123 *d* = .35 CI (-.01 - .70) **U**	All questionnaires online, no formal diagnosis required, different number of modules completed	PS Hostility Subscale
	Total parenting practice, WL vs. TPOL, Pre-post	Very high risk ● (BP, BA)	*n* = 117 *d* = .39 CI (.02 - .76) **I**	All questionnaires online, no formal diagnosis required, different number of modules completed	PS Total
	Total parenting practice, WL vs. TPOL, Pre-follow-up	Very high risk ● (BP, BA)	*n* = 117 *d* = .40 CI (.02 - .77) **I**	All questionnaires online, no formal diagnosis required, different number of modules completed	PS Total

	Total parenting practice, WL vs. TPOLe, Pre-post	Very high risk ● (BP, BA)	*n* = 126 *d* = .73 CI (.36 - 1.09) **I**	All questionnaires online, no formal diagnosis required, different number of modules completed	PS Total
	Total parenting practice, WL vs. TPOLe, Pre-follow-up	Very high risk ● (BP, BA)	*n* = 126 *d* = 1.06 CI (.69 - 1.43) **I**	All questionnaires online, no formal diagnosis required, different number of modules completed	PS Total
	Total parenting practice, TPOL vs. TPOLe, Pre-post	Very high risk ● (BP, BA)	*n* = 123 *d* = .36 CI (.00 - .72) **U**	All questionnaires online, no formal diagnosis required, different number of modules completed	PS Total
	Total parenting practice, TPOL vs. TPOLe, Pre-follow-up	Very high risk ● (BP, BA)	*n* = 123 *d* = .70 CI (.33 - 1.08) **I**	All questionnaires online, no formal diagnosis required, different number of modules completed	PS Total
Stattin et al., 2015 **Population: Parents of 3-12 year old**	**Angry outbursts, Comet vs. CG**	Very high risk ● (BP, BA)	*n* = 310 *d* = .30 CI (.25 - .35)		Angry Outbursts scale

children Intervention: One of 4 parent trainings: behavioral programs (Comet, Cope, Incredible Years) or nonbehavioral program (Connect) Comparison: Waitlist control				
	Angry outbursts, Cope vs. CG	Very high risk ● (BP, BA)	*n* = 326 *d* = .16 CI (.12 - .22) 	Angry Outbursts scale
	Angry outbursts, Incredible Years vs. CG	Very high risk ● (BP, BA)	*n* = 233 *d* = .12 CI (.06 - .18) 	Angry Outbursts scale
	Angry outbursts, Connect vs. CG	Very high risk ● (BP, BA)	*n* = 321 *d* = .10 CI (.05 - .15) 	Angry Outbursts scale
	Harsh treatment, Comet vs. CG	Very high risk ● (BP, BA)	*n* = 310 *d* = .58 CI (.52 - .53) 	Parents Practice Interview, Harsh Treatment subscale
	Harsh treatment, Cope vs. CG	Very high risk ● (BP, BA)	*n* = 326 *d* = .39 CI (.33 - .45) 	Parents Practice Interview, Harsh Treatment subscale
	Harsh treatment, Incredible Years vs. CG	Very high risk ● (BP, BA)	*n* = 233 *d* = .28 CI (.21 - .35) 	Parents Practice Interview, Harsh Treatment subscale
	Harsh treatment, Connect vs. CG	Very high risk ● (BP, BA)	*n* = 321 *d* = .18 CI (.11 - .25)	Parents Practice Interview, Harsh

			Treatment subscale
Attempted understanding, Comet vs. CG	Very high risk ● (BP, BA)	*n* = 310 *d* = .14 CI (.10 - .18) 	Attempted Understanding subscale
Attempted understanding, Cope vs. CG	Very high risk ● (BP, BA)	*n* = 326 *d* = .23 CI (.19 - .27) 	Attempted Understanding subscale
Attempted understanding, Incredible Years vs. CG	Very high risk ● (BP, BA)	*n* = 233 *d* = .09 CI (.05 - .13) 	Attempted Understanding subscale
Attempted understanding, Connect vs. CG	Very high risk ● (BP, BA)	*n* = 321 *d* = .27 CI (.24 - .31) 	Attempted Understanding subscale
Use of Rewards, Comet vs. CG	Very high risk ● (BP, BA)	*n* = 310 *d* = .30 CI (.17 - .44) 	Parents Practice Interview, Rewarding the Child subscale
Use of Rewards, Cope vs. CG	Very high risk ● (BP, BA)	*n* = 326 *d* = .25 CI (.11 - .39) 	Parents Practice Interview, Rewarding the Child subscale
Use of Rewards, Incredible Years vs. CG	Very high risk ● (BP, BA)	*n* = 233 *d* = .30 CI (.15 - .46)	Parents Practice Interview, Rewarding the Child subscale

			I	
	Use of Rewards, Connect vs. CG	Very high risk ● (BP, BA)	*n* = 321 *d* = .28 CI (.13 - .43) I	Parents Practice Interview, Rewarding the Child subscale
	Parental competence, Comet vs. CG	Very high risk ● (BP, BA)	*n* = 310 *d* = .69 CI (.62 - .76) I	Parents' Sense of Competence measure (PSOC)
	Parental competence, Cope vs. CG	Very high risk ● (BP, BA)	*n* = 326 *d* = .47 CI (.40 - .54) I	Parents' Sense of Competence measure (PSOC)
	Parental competence, Incredible Years vs. CG	Very high risk ● (BP, BA)	*n* = 233 *d* = .32 CI (.24 - .40) I	Parents' Sense of Competence measure (PSOC)
	Parental competence, Connect vs. CG	Very high risk ● (BP, BA)	*n* = 321 *d* = .35 CI (.28 - .42) I	Parents' Sense of Competence measure (PSOC)
Elterlicher Stress. Elternurteil				
Stattin et al., 2015 **Population: Parents of 3-12 year old children** **Intervention: One of 4 parent trainings: behavioral programs (Comet, Cope, Incredible Years) or**	**Parental Stress, Comet vs. CG**	Very high risk ● (BP, BA)	*n* = 310 *d* = .30 CI (.24 - .36) I	Caregiver Strain Questionnaire, objective strains subscale
	Parental Stress, Cope vs. CG	Very high risk ● (BP, BA)	*n* = 326 *d* = .10 CI (.03 - .17)	Caregiver Strain Questionnaire, objective

nonbehavioral program (Connect) Comparison: Waitlist control				strains subscale
	Parental Stress, Incredible Years vs. CG	Very high risk ● (BP, BA)	*n* = 233 *d* = .23 CI (.15 - .31) 	Caregiver Strain Questionnaire, objective strains subscale
	Parental Stress, Connect vs. CG	Very high risk ● (BP, BA)	*n* = 321 *d* = .13 CI (.05 - .21) 	Caregiver Strain Questionnaire, objective strains subscale

Anmerkung. *n* = Anzahl der Versuchspersonen. SG = sequence generation, CC = concealment, BP = blinding participants, BA = blinding assessors, ID = incomplete data, OR = outcome reporting, CE = carry over effects, SX = stopped early, UM = unvalidated measures, OI = other issue.

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1.3.2.1. C

Berücksichtigte Endpunktkategorien: Meta-Analysen

Endpunktkategorien	MAs	*m*	Gesamtaussagesicherheit der Evidenz
ADHS Symptome gesamt (KU)	1	1	Sehr schwach/ schwach
Verhaltensprobleme (KU)	2	2	
Prosoziales Verhalten (KU)	1	1	
Lehrer*innenverhalten (L)	1	3	

***Anmerkung*. MAs = Anzahl der Meta-Analysen, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.**

Summary of Findings Tabellen: Meta-Analysen

Referenz	Endpunkt	Aussagesicherheit (GRADE)	Effektstärke	Kommentare	Messinstrument
ADHS Symptome gesamt. Kombiniertes Urteil					
Aldabbagh R, et al., 2022 **Population: children with ADHD and externalizing behaviors, 2-13 years** **Intervention: teacher training** **Comparison: waiting list, treatment as usual, other treatment**	**ADHD symptoms**	Low ⊕⊕◯◯ (R)	*n* = 259, *k* = 5 *d* = .47 CI (.30 - .65) **I**	For ADHD outcome behavior, researchers grouped hyperactivity symptoms and inattention symptoms together if they were listed separately in a study.	SDQ, CTRS
Verhaltensprobleme. Kombiniertes Urteil					
Aldabbagh R, et al., 2022 **Population: children with ADHD and externalizing behaviors, 2-13 years** **Intervention: teacher training** **Comparison: waiting list, treatment as**	**Externalizing behavior**	Low ⊕⊕◯◯ (R)	*n* = 639, *k* = 12 *d* = .41 CI (.25 - .56) **I**	Externalizing behavior problems domain was heterogeneous and comprised studies that measured oppositional behavior, challenging behavior, and	SDQ, SESBI, CTRS, SSBS-2, TCIDOS, CTRF, TOCA-C, SCP, SSIS-RS, PBQ, ECBI, SESBI-R

usual, other treatment			conduct behavior.	
	Conduct problems	Very low ⊕◯◯◯ (R, IC)	*n* = 268, *k* = 5 *d* = .38 CI (.04 - .71) **I**	DPICS, TCIDOS, TPOT, CCOF
Prosocial behavior. Kombiniertes Urteil				
Aldabbagh R, et al., 2022 **Population: children with ADHD and externalizing behaviors, 2-13 years** **Intervention: teacher training** **Comparison: waiting list, treatment as usual, other treatment**	**Prosocial behavior**	Very low ⊕◯◯◯ (R, IC)	*n* = 502, *k* = 9 *d* = .46 CI (.28 - .64) **I**	PRO, SDQ, WMCSC, SSBS-2, TPOT, TOCA-A, SCP, SSIS
Lehrer*innenverhalten. Lehrer*innenurteil				
Aldabbagh R, et al., 2022 **Population: children with ADHD and externalizing behaviors, 2-13 years** **Intervention: teacher training** **Comparison: waiting list, treatment as usual, other treatment**	**Teachers warmth and closeness**	Very low ⊕◯◯◯ (R, IC)	*n* = 304, *k* = 6 *d* = .48 CI (.15 - .81) **I**	TPOT, STRS
	Teachers conflict	Low ⊕⊕◯◯ (R)	*n* = 262, *k* = 5 *d* = .19 CI (.05 - .34) **I**	STRS
	Teachers positive strategies	Very low ⊕◯◯◯ (R, IC)	*n* = 231, *k* = 8 *d* = .71 CI (.29 - 1.14) **I**	MOOSES, DPICS, TCIDOS, CMSQ, TPOT, CLASS, OREVS

Anmerkung. *n* = Anzahl der Versuchspersonen, *k* = Anzahl der inkludierten Primärstudien. R = risk of bias, IC = inconsistency, ID = indirectness, IP = imprecision, P = publication bias.

Referenzen

Aldabbagh, R., Glazebrook, C., Sayal, K. & others. (2024). Systematic review and meta-analysis of the effectiveness of teacher-delivered interventions for externalizing behaviors. *Journal of Behavioral Education, 33*(3), 233–274.

1.3.2.1. D

Berücksichtigte Endpunktkategorien: Meta-Analysen

Endpunktkategorien	MAs	*m*	Gesamtaussagesicherheit der Evidenz
Verhaltensprobleme (U)	1	4	Sehr schwach/ schwach

Anmerkung. MAs = Anzahl der Meta-Analysen, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.

Summary of Findings Tabelle: Meta-Analysen

Referenz	Endpunkt	Aussagesicherheit (GRADE)	Effektstärke	Kommentare	Mess-instrument
Verhaltensprobleme. Unbekanntes Urteil					
Parker et al. (2021) **Population: children (2-12 years) treated for disruptive behaviors/ high scores on behavior problem measures Intervention: Child centered play therapy (CCPT) Comparison: no treatment, treatment as usual, alternative treatment**	**Externalizing behaviors, CCPT vs. no treatment**	Low ⊕⊕◯◯ (R)	*n* = 504, *k* = 14 *g* = .34 CI (-.52 - -.17) **I**	Studies included if using formalized assessments of externalizing behaviors; no info on sequence generation + concealment	n.a.
	Externalizing behaviors, CCPT vs. alternative treatment	Low ⊕⊕◯◯ (R)	*n* = 284, *k* = 7 *g* = .56 CI (-.84 - -.28) **I**	Studies included if using formalized assessments of externalizing behaviors; to prevent publication bias: funnel plots, fail safe N and trim-and-fill statistics	n.a.
	Overall problem behaviors, CCPT vs. no treatment	Very low ⊕◯◯◯ (R, P)	*n* = 303, *k* = 10 *g* = .48 CI (-.71 - -.24) **I**	Studies included if measure of all problem behaviors (externalizing, internalizing, aggressive); to	n.a.

			prevent publication bias: funnel plots, fail safe N and trim-and-fill statistics	
Aggressive behaviors, CCPT vs. no treatment	Very low ⊕◯◯◯ (R, IP)	*n* = 156, *k* = 4 *g* = .26 CI (-.57 - .05) **U**	Studies included if results reported of formalized assessment of outcome variable; to prevent publication bias: funnel plots, fail safe N and trim-and-fill statistics	n.a.

Anmerkung. *n* = Anzahl der Versuchspersonen, *k* = Anzahl der inkludierten Primärstudien. R = risk of bias, IC = inconsistency, ID = indirectness, IP = imprecision, P = publication bias.

Referenzen

Parker, M. M., et al. (2021). Exploring the impact of child-centered play therapy for children exhibiting behavioral problems: A meta-analysis. *International Journal of Play Therapy 30(4),* 259-271.

1.3.3 Psychosoziale Interventionen bei Kindern und Jugendlichen im Schulalter mit ADHS

1.3.3.1. Welche psychosozialen Interventionen sollten bei Kindern im Schulalter und bei Jugendlichen mit ADHS und leichter bis moderater Funktions-, Aktivitäts- und Teilhabebeeinträchtigung durchgeführt werden?

1.3.3.1. A

Berücksichtigte Endpunktkategorien: Meta-Analysen

Endpunktkategorien	MAs	*m*	Gesamtaussagesicherheit der Evidenz
ADHS Symptome gesamt (KU)	4	5	Moderat/ schwach/ sehr schwach
ADHS Symptome gesamt (E)	2	2	
ADHS Symptome gesamt (L)	1	1	
ADHS Symptome gesamt (KL)	1	1	
Aufmerksamkeit (KU)	1	1	
Hyperaktivität/Impulsivität (KU)	1	1	
ADHS Symptomverbesserung (KL)	1	1	
Verhaltensprobleme (KU)	2	2	
Verhaltensprobleme (E)	2	2	
Verhaltensprobleme (L)	1	1	
Verhaltensprobleme (KL)	1	1	
Emotionale Probleme (E)	1	1	
Funktionalität (E)	2	2	
Funktionalität (L)	1	1	
Funktionalität (KL)	1	1	
Lebensqualität (E)	1	1	
ADHS Wissen (KU)	1	1	
ADHS Wissen (S)	1	1	
Elterliche mentale Gesundheit (E)	3	5	
Erziehungsverhalten (KU)	1	2	
Erziehungsverhalten (E)	3	10	
Erziehungsverhalten (KL)	1	1	
Eltern-Kind-Beziehung (KU)	1	1	

Anmerkung. MAs = Anzahl der Meta-Analysen, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.

Summary of Findings Tabelle: Meta-Analysen

Referenz	Endpunkt	Aussagesicherheit (GRADE)	Effektstärke	Kommentare	Mess-instrument
ADHS Symptome gesamt. Kombiniertes Urteil					

Dahl et al., 2020 **Population:** youth (ages 5–17) diagnosed with ADHD **Intervention:** psychoeducation-based interventions – either in combination with another treatment modality or on its own – delivered to the parents or teachers of children/adolescents **Comparison:** Individual counseling, parent support, TAU, no control group, placebo pill and psychoeducation	**ADHD symptoms**	Low ⊕⊕◯◯ (R)	*n* = 956, *k* = 7 *g* = .787 CI (.457 - 1.116) **I**	Parent- and teacher-ratings; psychoeducation interventions: any professionally-delivered treatment modality that integrated both psychotherapeutic and educational material into didactic sessions	ADHD-RS-IV, ADHD symptoms (Symptom Checklist), Conners' Rating Scales, Conners' Global Index
Hornstra et al., 2023 **Population:** parents of children and adolescents with ADHD **Intervention:** Individual parent training **Comparison:** group parent training	**ADHD total symptoms, Individual BPT vs. group BPT**	Not applicable due to missing information	*n* = n.a., *k* = 26 *β* = .27 CI (.00 - .53) **I**	β1 indicates change in standardized mean difference when technique increases with one unit	n.a.
Tourjman et al., 2022 **Population:** children with ADHD already medicatied or no medication **Intervention:** NFPP, IY, The Parenting Your Hyperactive Preschooler program, Face to Face (F2F), Barkley's parent training group, Triple P program Mindful parenting training + pharmacotherapy	**Core ADHD symptoms**	Very low ⊕◯◯◯ (R, IC, P)	*n* = 907, *k* = 7 *SMD* = .91 CI (.54 - 1.28) **I**		CBC, BASC, CPRS, PACS, PKBS, DBRS, ERC, Parenting Scale, CCNES, AAPCI, SNAP-IV, ,etc...

(methylphenidate or risperidone) **Comparison:** wait list or active controls (Non-standard care control excluded)					
Yang et al., 2021 **Population:** children with ADHD (5 till 17 years) **Intervention:** parent training or parent training combined with psychostimulants **Comparison:** psychostimulants	**ADHD symptoms, Parent-training vs. stimulants**	Very low ⨁◯◯◯ (R, IP, P)	*n* = n.a., *k* = n.a. *g* = -.03 CI (-.33 - .27) **U**	Not specified which parent trainings used; based on 107 studies (reported in 33 papers, n=9883), but unclear how many studies included in outcome; within and between group effects considered	Conners rating scale, ADHD rating scale, Daily parent rating of evening and morning behavior scale, Disruptive behavior disorder rating scale, Conduct disorder score, Irritability Scale, etc.
	ADHD symptoms, Parent training and psychostimulants vs. stimulants	Very low ⨁◯◯◯ (R, IP, P)	*n* = n.a., *k* = n.a. *g* = -.26 CI (-.01 - .60) **U**	Not specified which parent trainings used; based on 107 studies (reported in 33 papers, n=9883), but unclear how many studies included in outcome; within and between group effects considered	Conners rating scale, ADHD rating scale, Daily parent rating of evening and morning behavior scale, Disruptive behavior disorder rating scale, Conduct disorder score, Irritability Scale, etc. …
ADHS Symptome gesamt. Elternurteil					
Fabiano et al., 2021 **Population:** children and adolescence with ADHD/ ODD, max. 18 years **Intervention:** behavioral Parent Training	**ADHD symptoms**	Low ⨁⨁◯◯ (IC, P)	*n* = n.a., *k* = 14 *d* = .32 CI (.12 - .52) **I**	Allocation to primary studies not possible	n.a.

Comparison: different control groups					
Leijten et al., 2018 **Population:** children with conduct problems, 1-12 years **Intervention:** Incredible Years parenting program **Comparison:** control condition, waitlist	**ADHD symptoms**	Moderate ⊕⊕⊕◯ (P)	*n* = 1532, *k* = 11 *SMD* = -.30 CI (-.44 - -.17) **I**		SDQ (1 study: PACS converted in SDQ)
ADHS Symptome gesamt. Lehrer*innenurteil					
Fabiano et al., 2021 **Population:** children and adolescence with ADHD/ ODD, max. 18 years **Intervention:** behavioral Parent Training **Comparison:** different control groups	**ADHD symptoms**	Very low ⊕◯◯◯ (IC, IP, P)	*n* = n.a., *k* = 6 *d* = -.12 CI (-.41 - .17) **U**	Allocation to primary studies not possible	n.a.
ADHS Symptome gesamt. Kliniker*innenurteil					
Fabiano et al., 2021 **Population:** children and adolescence with ADHD/ ODD, max. 18 years **Intervention:** behavioral Parent Training **Comparison:** different control groups	**ADHD symptoms**	Low ⊕⊕◯◯ (IP, P)	*n* = n.a., *k* = 2 *d* = .01 CI (-.15 - .17) **U**	Allocation to primary studies not possible	n.a.
Aufmerksamkeit. Kombiniertes Urteil					

Hornstra et al., 2023 **Population:** parents of children and adolescents with ADHD **Intervention:** Individual parent training **Comparison:** group parent training	**Inattention, Individual BPT vs. group BPT**	Not applicable due to missing information	*n* = n.a., *k* = 17 *β* = .29 CI (-.11 - .69) **U**	β1 indicates change in standardized mean difference when technique increases with one unit	n.a.
Hyperaktivität/Impulsivität. Kombiniertes Urteil					
Hornstra et al., 2023 **Population:** parents of children and adolescents with ADHD **Intervention:** Individual parent training **Comparison:** group parent training	**Hyp./Imp., Individual BPT vs. group BPT**	Not applicable due to missing information	*n* = n.a., *k* = 17 *β* = .55 CI (.10 - 1.00) **I**	β1 indicates change in standardized mean difference when technique increases with one unit	n.a.
Symptomverbesserung. Kliniker*innenurteil					
Dahl et al., 2020 **Population:** youth (ages 5–17) diagnosed with ADHD **Intervention:** psychoeducation-based interventions – either in combination with another treatment modality or on its own – delivered to the parents or teachers of children/adolescents **Comparison:** Individual counseling, parent support, TAU, no control group, placebo pill and psychoeducation	**Global symptom improvement**	Moderate ⊕⊕⊕◯ (R)	*n* = 168, *k* = 2 *g* = .578 CI (.272 - .885) **I**		CGI, CGI-I
Verhaltensprobleme. Kombiniertes Urteil					

Dahl et al., 2020 **Population:** youth (ages 5–17) diagnosed with ADHD **Intervention:** psychoeducation-based interventions – either in combination with another treatment modality or on its own – delivered to the parents or teachers of children/adolescents **Comparison:** Individual counseling, parent support, TAU, no control group, placebo pill and psychoeducation	**Behavioral problems**	Low ⊕⊕◯◯ (R)	*n* = 568, *k* = 5 *g* = .466 CI (.158 - .774) **I**	Parent- and teacher-ratings	CBCL, SDQ, EPC, SPI, FTF
Hornstra et al., 2023 **Population:** parents of children and adolescents with ADHD **Intervention:** Individual parent training **Comparison:** group parent training	**Behavioral problems, Individual BPT vs. group BPT**	Not applicable due to missing information	*n* = n.a., *k* = 21 *β* = -.09 CI (-.35 - .18) **U**	β1 indicates change in standardized mean difference when technique increases with one unit	n.a.
Verhaltensprobleme. Elternurteil					
Fabiano et al., 2021 **Population:** children and adolescence with ADHD/ ODD, max. 18 years **Intervention:** behavioral Parent Training **Comparison:** different control groups	**Externalizing behavior problems**	Very low ⊕◯◯◯ (IC, P)	*n* = n.a., *k* = 14 *d* = .49 CI (.24 - .74) **I**	Allocation to primary studies not possible	n.a.

Leijten et al., 2018 **Population:** children with conduct problems, 1-12 years **Intervention:** Incredible Years parenting program **Comparison:** control condition, waitlist	**Conduct problems**	Moderate ⊕⊕⊕◯ (P)	*n* = 1622, *k* = 13 *SMD* = -.35 CI (-.51 - -.19) **I**	Ten studies (prevention or treatment trials) 70% of the children scored above clinical cut-off on ECBI, four studies (selective prevention trials for high-risk families) 30% of children scored above	ECBI (for 2 studies PACS was converted in ECBI)
Verhaltensprobleme. Lehrer*innenurteil					
Fabiano et al., 2021 **Population:** children and adolescence with ADHD/ ODD, max. 18 years **Intervention:** behavioral Parent Training **Comparison:** different control groups	**Externalizing behavior problems**	Moderate ⊕⊕⊕◯ (P)	*n* = n.a., *k* = 4 *d* = -.18 CI (-.32 - -.04) **C**	Allocation to primary studies not possible	n.a
Verhaltensprobleme. Kliniker*innenurteil					
Fabiano et al., 2021 **Population:** children and adolescence with ADHD/ ODD, max. 18 years **Intervention:** behavioral Parent Training **Comparison:** different control groups	**Externalizing behavior problems**	Very low ⊕◯◯◯ (IC, IP, P)	*n* = n.a., *k* = 8 *d* = .04 CI (-.23 - .31) **U**	Allocation to primary studies not possible	n.a.
Emotionale Probleme. Elternurteil					

Leijten et al., 2018 **Population:** children with conduct problems, 1-12 years **Intervention:** Incredible Years parenting program **Comparison:** control condition, waitlist	**Emotional problems**	Low ⊕⊕◯◯ (IP, P)	*n* = 1340, *k* = 10 *SMD* = -.06 CI (-.18 - .06) **U**		SDQ (for 2 studies CBCL converted in SDQ)
Funktionalität. Elternurteil					
Dahl et al., 2020 **Population:** youth (ages 5–17) diagnosed with ADHD **Intervention:** psychoeducation-based interventions – either in combination with another treatment modality or on its own – delivered to the parents or teachers of children/adolescents **Comparison:** Individual counseling, parent support, TAU, no control group, placebo pill and psychoeducation	**Global functioning**	Very low ⊕◯◯◯ (R, IP)	*n* = 387, *k* = 3 *g* = .397 CI (-.01 - .808) **U**		CGAS, Weiss Functional Impairment Rating Scale, WFIRS-P
Fabiano et al., 2021 **Population:** children and adolescence with ADHD/ ODD, max. 18 years **Intervention:** behavioral Parent Training **Comparison:** different control groups	**Impairment**	Very low ⊕◯◯◯ (IC, IP, P)	*n* = n.a., *k* = 6 *d* = .00 CI (-.16 - .16) **U**	Allocation to primary studies not possible	n.a.
Funktionalität. Lehrer*innenurteil					

Fabiano et al., 2021 **Population:** children and adolescence with ADHD/ ODD, max. 18 years **Intervention:** behavioral Parent Training **Comparison:** different control groups	**Impairment**	Very low ⊕◯◯◯ (IC, IP, P)	*n* = n.a., *k* = 4 *d* = .02 CI (-.27 - .31) **U**	Allocation to primary studies not possible	n.a.
Funktionalität. Kliniker*innenurteil					
Fabiano et al., 2021 **Population:** children and adolescence with ADHD/ ODD, max. 18 years **Intervention:** behavioral Parent Training **Comparison:** different control groups	**Impairment**	Very low ⊕◯◯◯ (IC, IP, P)	*n* = n.a., *k* = 3 *d* = .41 CI (-.16 - .98) **U**	Allocation to primary studies not possible	n.a.
Lebensqualität. Elternurteil					
Dahl et al., 2020 **Population:** youth (ages 5–17) diagnosed with ADHD **Intervention:** psychoeducation-based interventions – either in combination with another treatment modality or on its own – delivered to the parents or teachers of children/adolescents **Comparison:** Individual counseling, parent support, TAU, no control group, placebo pill and psychoeducation	**Quality of life**	Moderate ⊕⊕⊕◯ (IP)	*n* = 180, *k* = 2 *g* = .119 CI (-.174 - .412) **U**		EQ-5D, CHIP-CE

ADHS Wissen. Kombiniertes Urteil					
Dahl et al., 2020 **Population:** youth (ages 5–17) diagnosed with ADHD **Intervention:** psychoeducation-based interventions – either in combination with another treatment modality or on its own – delivered to the parents or teachers of children/adolescents **Comparison:** Individual counseling, parent support, TAU, no control group, placebo pill and psychoeducation	**Parent-teacher's knowledge of ADHD**	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 154, *k* = 3 *g* = 1.037 CI (-.195 - 2.269) **U**	Validation of questionnaire unclear; parent-teacher-ratings	Questionnaire designed by authors in 3 studies
ADHS Wissen. Selbsturteil					
Dahl et al., 2020 **Population:** youth (ages 5–17) diagnosed with ADHD **Intervention:** psychoeducation-based interventions – either in combination with another treatment modality or on its own – delivered to the parents or teachers of children/adolescents **Comparison:** Individual counseling, parent support, TAU, no control group, placebo pill and psychoeducation	**Child's knowledge of ADHD, Within group effect**	Very low ⊕◯◯◯ (R)	*n* = 40, *k* = 2 *g* = .721 CI (.370 - 1.072) **I**	2 included studies: pre-post design without CG; validation of questionnaire in one study unclear	Children's ADHD Knowledge & Opinions Questionnaire; Questionnaire designed by authors in 1 study
Elterliche mentale Gesundheit. Elternurteil					

Dahl et al., 2020 **Population:** youth (ages 5–17) diagnosed with ADHD **Intervention:** psychoeducation-based interventions – either in combination with another treatment modality or on its own – delivered to the parents or teachers of children/adolescents **Comparison:** Individual counseling, parent support, TAU, no control group, placebo pill and psychoeducation	**Parenting stress**	Moderate ⊕⊕⊕◯ (IP)	*n* = 249, *k* = 3 *g* = .209 CI (-.039 - .458) **U**		NCSQ, PSI-SF
Dekkers et al., 2022 **Population:** children and adolescence with ADHD, < 18 years, no medication as part of intervention **Intervention**: behavioral parent intervention (single/group) **Comparison:** active control, treatment as usual, no treatment/ waitlist	**Parental mental health**	Low ⊕⊕◯◯ (R, IC)	*n* = 1155, *k* = 20 *g* = .41 CI (.20 - .61) **I**	Parental mental health included parenting stress and several indices of parental psychopathology (eg, depression, anxiety, ADHD). No trim & fill considered, as funnel plot not asymmetric.	BDI, PSI, CSQ, GHQ, AARS, DASS, SNQ
Leijten et al., 2018 **Population:** children with conduct problems, 1-12 years **Intervention:** Incredible Years parenting program	**Parental mental health: depression**	Low ⊕⊕◯◯ (IP, P)	*n* = 1359, *k* = 11 *SMD* = -.08 CI (-.17 - .01) **U**		BDI (3 studies converted from Brief symptom inventory and General health questionnaire in BDI)

Comparison: control condition, waitlist	**Parental mental health: stress**	Low ⊕⊕◯◯ (IP, P)	*n* = 542, *k* = 5 *SMD* = -.18 CI (-.44 - .07) **U**		Parenting stress index
	Parental mental health: self-efficacy	Low ⊕⊕◯◯ (IP, P)	*n* = 417, *k* = 4 *SMD* = -.32 CI (-.77 - .13) **U**		Parental sense of competence scale
Erziehungsverhalten. Kombiniertes Urteil					
Dekkers et al., 2022 **Population:** children and adolescence with ADHD, < 18 years, no medication as part of intervention **Intervention**: behavioral parent intervention (single/group) **Comparison:** active control, treatment as usual, no treatment/ waitlist	**Positive parenting**	Low ⊕⊕◯◯ (IC)	*n* = 1470, *k* = 15 *g* = .60 CI (.39 - .81) **I**	No trim & fill considered, as funnel plot not asymmetric. Authors' note: Study should be seen as hypothesis-generating, not confirmation of effectiveness of parent training. ES not significantly different for probably blinded (SMD = 0.58) and unblinded measures (SMD = 0.63) on positive parenting	PPI, DPICS, GIPCI, CCNES, APQ, PCRQ, PPI, FIQ, PAMS, Observation
	Negative parenting	Very low ⊕◯◯◯ (R, IC)	*n* = 946, *k* = 13 *g* = .35 CI (.12 - .59) **I**	Robust ES for all 5 outcome domains; ES lower when parent training compared with active control conditions relative to waitlists, but only ES for negative parenting dropped to non-significant when	APQ, PCRQ, PCRS, DPICS, PS, CCNES, Observation

				including only studies with active control conditions. ES not significantly different for probably blinded (SMD = 0.68) and unblinded measures (SMD = 0.54) on negative parenting	
Erziehungsverhalten. Elternurteil					
Dekkers et al., 2022 **Population:** children and adolescence with ADHD, < 18 years, no medication as part of intervention **Intervention**: behavioral parent intervention (single/group) **Comparison:** active control, treatment as usual, no treatment/ waitlist	**Parenting sense of competence**	Low ⊕⊕◯◯ (R, IC)	*n* = 1239, *k* = 14 *g* = .54 CI (.36 - .72) **I**		PSOC, PCEQ, PES, PSCS, PSI, PSBC
Fabiano et al., 2021 **Population:** children and adolescence with ADHD/ ODD, max. 18 years **Intervention:** behavioral Parent Training **Comparison:** different control groups	**Parenting behaviors**	Very low ⊕◯◯◯ (IC, P)	*n* = n.a., *k* = 6 *d* = .70 CI (.44 - .96) **I**	Allocation to primary studies not possible	n.a.
	Parenting effectiveness/stress	Low ⊕⊕◯◯ (IC, P)	*n* = n.a., *k* = 12 *d* = .51 CI (.35 - .67) **I**	Allocation to primary studies not possible	n.a.

Leijten et al., 2018 **Population:** children with conduct problems, 1-12 years **Intervention:** Incredible Years parenting program **Comparison:** control condition, waitlist	**Positive parenting: praise**	Moderate ⊕⊕⊕◯ (P)	*n* = 630, *k* = 6 *SMD* = .26 CI (.01 - .51) **I**	To minimize missing data biases due to large amounts of missing data for some pooled outcome variables, multilevel modeling (random effect modeling) used	PPI, APQ, PS, interview, multiple parenting measures
	Positive parenting: tangible rewards	Low ⊕⊕◯◯ (IP, P)	*n* = 625, *k* = 6 *SMD* = .15 CI (-.16 - .45) **U**		PPI, APQ, PS, interview, multiple parenting measures
	Positive parenting: monitoring	Low ⊕⊕◯◯ (IP, P)	*n* = 1088, *k* = 9 *SMD* = .05 CI (-.08 - .18) **U**		PPI, APQ, PS, interview, multiple parenting measures
	Negative parenting: corporal punishment	Moderate ⊕⊕⊕◯ (P)	*n* = 1393, *k* = 10 *SMD* = -.22 CI (-.42 - -.01) **I**		PPI, APQ, PS, interview, multiple parenting measures
	Negative parenting: threatening	Moderate ⊕⊕⊕◯ (P)	*n* = 999, *k* = 9 *SMD* = -.21 CI (-.36 - -.06) **I**		PPI, APQ, PS, interview, multiple parenting measures
	Negative Parenting: laxness	Low ⊕⊕◯◯ (IP, P)	*n* = 978, *k* = 9 *SMD* = -.15 CI (-.37 - .07) **U**		PPI, APQ, PS, interview, multiple parenting measures

	Negative parenting: shouting	Moderate ⊕⊕⊕◯ (P)	*n* = 967, *k* = 15 *SMD* = -.31 CI (-.61 - -.01) **I**		PPI, APQ, PS, interview, multiple parenting measures
Erziehungsverhalten. Kliniker*innenurteil					
Fabiano et al., 2021 **Population:** children and adolescence with ADHD/ ODD, max. 18 years **Intervention:** behavioral Parent Training **Comparison:** different control groups	**Parenting behaviors**	Low ⊕⊕◯◯ (IC, P)	*n* = n.a., *k* = 6 *d* = .41 CI (.19 - .63) **I**	Allocation to primary studies not possible	n.a.
Eltern-Kind-Beziehung. Kombiniertes Urteil					
Dekkers et al., 2022 **Population:** children and adolescence with ADHD, < 18 years, no medication as part of intervention **Intervention**: behavioral parent intervention (single/group) **Comparison:** active control, treatment as usual, no treatment/ waitlist	**Quality of parent-child relationship**	Very low ⊕◯◯◯ (R, IC)	*n* = 727, *k* = 11 *g* = .37 CI (.07 - .67) **I**	Significantly different for probably blinded (SMD = 0.53) and unblinded measures (SMD = 0.54) of child-parent-relationship.	GIPCI, PSI, PPES, PBI, IRS, PSDQ, PCRQ, CBQ, PFMSS, Pasta Task, Observation

Anmerkung. *n* = Anzahl der Versuchspersonen, *k* = Anzahl der inkludierten Primärstudien. R = risk of bias, IC = inconsistency, ID = indirectness, IP = imprecision, P = publication bias.

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1.3.3.1. B

Berücksichtigte Endpunktkategorien: Meta-Analysen

Endpunktkategorien	MAs	*m*	Gesamtaussagesicherheit der Evidenz
ADHS Symptome gesamt (KU)	2	3	Schwach/ sehr schwach
ADHS Symptome gesamt (E)	1	1	
ADHS Symptome gesamt (L)	3	4	
Verhaltensprobleme (KU)	1	1	
Verhaltensprobleme (L)	2	6	
Verhaltensprobleme (KL)	2	2	
Verhaltensprobleme (U)	1	1	
Prosoziales Verhalten (KU)	1	1	
Beeinträchtigung (E)	1	1	
Beeinträchtigung (L)	1	1	
Beeinträchtigung (KL)	1	1	
Akademisches Engagement/Motivation	1	1	
Lehrer*innenverhalten (L)	2	6	

Anmerkung. MAs = Anzahl der Meta-Analysen, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.

Summary of Findings Tabelle: Meta-Analysen

Referenz	Endpunkt	Aussagesicherheit (GRADE)	Effektstärke	Kommentare	Mess-instrument
ADHS Symptome gesamt. Kombiniertes Urteil					
Aldabbagh et al., 2022 **Population:** children with ADHD and externalizing behaviors, 2-13 years **Intervention:** teacher training **Comparison:** waiting list, treatment as usual, other treatment	**ADHD symptoms**	Low ⊕⊕◯◯ (R)	*n* = 259, *k* = 5 *d* = .47 CI (.30 - .65) **I**	Parent- and teacher-ratings; researchers grouped hyperactivity symptoms and inattention symptoms together if listed separately in a study.	SDQ, CTRS
Ward et al., 2022. **Population:** children and adolescence with ADHD or identified as displaying ADHD-type behaviors	**ADHD symptoms in pupils, Between-subjects, Post-test**	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 422, *k* = 5 *SMD* = .71 CI (-.11 - 1.52) **U**	Variety of measurement including vignettes, self-report questionnaire and	CTRS-R, YCI, COC, CBTC, TRF, K-ARS, BOSS, Conner's 3 teacher, non-blinded observations,

Intervention: teacher training/ school intervention **Comparison:** waitlist control, alternative treatment, control group.				blinded observations	blinded observations
	ADHD symptoms in pupils, Within-subjects, Post-test	Very low ⊕◯◯◯ (R, IC)	*n* = 275, *k* = 7 *SMD* = .78 CI (.37 - 1.18) **I**	Variety of measurement including vignettes, self-report questionnaire and blinded observations	CTRS-R, YCI, COC, CBTC, TRF, K-ARS, BOSS, Conner's 3 teacher, non-blinded observations, blinded observations
ADHS Symptome gesamt. Elternurteil					
Fabiano et al., 2021 **Population:** children and adolescence with ADHD/ ODD, max. 18 years **Intervention:** Behavioral Classroom Management **Comparison:** control group, between group study design	**ADHD symptoms**	Moderate ⊕⊕⊕◯ (P)	*n* = n.a., *k* = 3 *d* = .35 CI (.00 - .70) **I**	Assignment to primary studies not possible.	n.a.
ADHS Symptome gesamt. Lehrer*innenurteil					
Fabiano et al., 2021 **Population:** children and adolescence with ADHD/ ODD, max. 18 years **Intervention:** behavioral classroom management **Comparison:** control group, between group study design	**ADHD symptoms**	Moderate ⊕⊕⊕◯ (P)	*n* = n.a., *k* = 3 *d* = .66 CI (.35 - .97) **I**	Assignment to primary studies not possible.	n.a.

Veenman et al., 2018 **Population:** children with ADHD and ODD/CD symptoms, 6-12 years **Intervention:** behavioral teacher/ classroom program **Comparison:** waitlist, treatment as usual, other intervention	**ADHD symptoms, Clinical, at-risk, and community samples**	Low ⊕⊕◯◯ (ID, P)	*n* = 13313, *k* = 9 *d* = -.19 CI (-.35 - -.02) **I**	Symptoms of ODD and CD taken together. Behavioral programs defined as programs using behavioral techniques on a daily basis; comprehensive treatment programs included that used behavioral classroom program as one main element	DBD, CRS, ADS-IV, ADHD-RS, SNAP, TOCA
Ward et al., 2022. **Population:** children and adolescence with ADHD or identified as displaying ADHD-type behaviors **Intervention:** teacher training/ school intervention **Comparison:** waitlist control, alternative treatment, control group.	**ADHD symptoms in pupils, Between subjects, Follow-up**	Moderate ⊕⊕⊕◯ (R)	*n* = 180, *k* = 2 *SMD* = .50 CI (.14 - .87) **I**		TRF, Conners
	ADHD symptoms in pupils, Within subjects, Follow-up	Moderate ⊕⊕⊕◯ (R)	*n* = 138, *k* = 3 *SMD* = .39 CI (.15 - .62) **I**		TRF, Conners-T, DSM-IV, TR symptom list
Verhaltensprobleme. Kombiniertes Urteil					
Aldabbagh et al., 2022 **Population:** children with ADHD and externalizing behaviors, 2-13 years **Intervention:** teacher training **Comparison:** waiting list, treatment as usual, other treatment	**Externalizing behavior**	Low ⊕⊕◯◯ (R)	*n* = 639, *k* = 12 *d* = .41 CI (.25 - .56) **I**	Parent- and teacher-ratings; externalizing behavior problems domain was heterogeneous and comprised studies that measured oppositional behavior, challenging behavior, and conduct behavior	SDQ, SESBI, CTRS, SSBS-2, TCIDOS, CTRF, TOCA-C, SCP, SSIS-RS, PBQ, ECBI, SESBI-R

Verhaltensprobleme. Lehrer*innenurteil					
Fabiano et al., 2021 **Population:** children and adolescence with ADHD/ ODD, max. 18 years **Intervention:** behavioral classroom management **Comparison:** control group, between group study design	**Externalizing behavior problems**	Moderate ⊕⊕⊕◯ (P)	*n* = n.a., *k* = 1 *d* = .26 CI (.26 - .26) **I**	Assignment to primary studies not possible.	n.a.
Veenman et al., 2018 **Population:** children with ADHD and ODD/CD symptoms, 6-12 years **Intervention:** behavioral teacher/ classroom program **Comparison:** waitlist, treatment as usual, other intervention	**Disruptive behavior, Clinical, at-risk and community samples**	Very low ⊕◯◯◯ (R, IC, ID, IP)	*n* = 18074, *k* = 17 *d* = -.20 CI (-.29 - -.10) **I**	Behavioral programs defined as programs using behavioral techniques on a daily basis; comprehensive treatment programs included that used behavioral classroom program as one main element	CRS, SDQ, PBSI, SNAP, TOCA, BASC, ADHD-RS, TRF, DBD
	Disruptive behavior, Clinical sample	Moderate ⊕⊕⊕◯ (ID)	*n* = 828, *k* = 7 *d* = -.19 CI (-.35 - -.04) **I**	Clinical sample: > 85% met diagnostic criteria; behavioral programs defined as programs using behavioral techniques on a daily basis; comprehensive treatment programs included that used behavioral classroom program as one main element	CRS, SDQ, PBSI, SNAP, TOCA, BASC, ADHD-RS, TRF, DBD, ADS-IV

Disruptive behavior, At-risk sample	Low ⊕⊕◯◯ (IC, ID)	*n* = 1081, *k* = 6 *d* = -.26 CI (-.42 - -.09) **I**	At-risk samples consisted of participants with elevated levels of disruptive behavior problems at school; behavioral programs defined as programs using behavioral techniques on a daily basis; comprehensive treatment programs included that used behavioral classroom program as one main element	CRS, SDQ, PBSI, SNAP, TOCA, BASC, ADHD-RS, TRF, DBD, ADS-IV
Disruptive behavior, Community sample	Very low ⊕◯◯◯ (IC, ID, P)	*n* = 16138, *k* = 5 *d* = -.15 CI (-.30 - -.01) **I**	Behavioral programs defined as programs using behavioral techniques on a daily basis; comprehensive treatment programs included that used behavioral classroom program as one main element	CRS, SDQ, PBSI, SNAP, TOCA, BASC, ADHD-RS, TRF, DBD, ADS-IV
ODD/CD symptoms, Clinical, at-risk and community sample	Low ⊕⊕◯◯ (ID, P)	*n* = 16743, *k* = 10 *d* = -.15 CI (-.23 - -.06) **I**	Symptoms of ODD and CD taken together; behavioral programs defined as programs using behavioral techniques on a daily basis; comprehensive treatment programs included that	TOCA, DBD, TRF, PBSI, SNAP, CRS

				used behavioral classroom program as one main element	
Verhaltensprobleme. Kliniker*innenurteil					
Fabiano et al., 2021 **Population:** children and adolescence with ADHD/ ODD, max. 18 years **Intervention:** behavioral classroom management **Comparison:** control group, between group study design	**Externalizing behavior problems**	Moderate ⊕⊕⊕◯ (P)	*n* = n.a., *k* = 1 *d* = 1.12 CI (.49 - 1.75) **I**	Assignment to primary studies not possible.	n.a.
Veenman et al., 2018 **Population:** children with ADHD and ODD/CD symptoms, 6-12 years **Intervention:** behavioral teacher/ classroom program **Comparison:** waitlist, treatment as usual, other intervention	**Disruptive behavior, Clinical, at-risk and community samples**	Very low ⊕◯◯◯ (R, IC, ID, IP)	*n* = 907, *k* = 4 *d* = -.48 CI (-1.11 - -.15) **U**		Observation
Verhaltensprobleme. Unbekanntes Urteil					
Aldabbagh et al., 2022 **Population:** children with ADHD and externalizing behaviors, 2-13 years **Intervention:** teacher training **Comparison:** waiting list, treatment as usual, other treatment	**Conduct problems**	Very low ⊕◯◯◯ (R, IC)	*n* = 268, *k* = 5 *d* = .38 CI (.04 - .71) **I**		DPICS, TCIDOS, TPOT, CCOF
Prosoziales Verhalten. Kombiniertes Urteil					

Aldabbagh et al., 2022 **Population:** children with ADHD and externalizing behaviors, 2-13 years **Intervention:** teacher training **Comparison:** waiting list, treatment as usual, other treatment	**Prosocial behavior**	Very low ⊕◯◯◯ (R, IC)	*n* = 502, *k* = 9 *d* = .46 CI (.28 - .64) **I**	Included studies measured peer relationships, prosocial skills and social behavior	PRO, SDQ, WMCSC, SSBS-2, TPOT, TOCA-A, SCP, SSIS
Beeinträchtigungen. Elternurteil					
Fabiano et al., 2021 **Population:** children and adolescence with ADHD/ ODD, max. 18 years **Intervention:** behavioral classroom management **Comparison:** control group, between group study design	**Impairment**	Moderate ⊕⊕⊕◯ (P)	*n* = n.a., *k* = 1 *d* = .15 CI (.03 - .28) **I**	Assignment to primary studies not possible.	n.a.
Beeinträchtigungen. Lehrer*innenurteil					
Fabiano et al., 2021 **Population:** children and adolescence with ADHD/ ODD, max. 18 years **Intervention:** behavioral classroom management **Comparison:** control group, between group study design	**Impairment**	Very low ⊕◯◯◯ (IC, IP, P)	*n* = n.a., *k* = 2 *d* = .72 CI (-.10 - 1.54) **U**	Assignment to primary studies not possible.	n.a.
Beeinträchtigungen. Kliniker*innenurteil (Obs)					
Fabiano et al., 2021 **Population:** children and adolescence with ADHD/ ODD, max. 18 years	**Impairment**	Very low ⊕◯◯◯ (IC, IP, P)	*n* = n.a., *k* = 1 *d* = .18 CI (-1.66 - 2.02) **U**	Assignment to primary studies not possible.	n.a.

Intervention: behavioral classroom management **Comparison:** control group, between group study design					
Akademisches Engagement/Motivation					
Veenman et al., 2018 **Population:** children with ADHD and ODD/CD symptoms, 6-12 years **Intervention:** behavioral teacher/ classroom program **Comparison:** waitlist, treatment as usual, other intervention	**On-task behavior, Clinical, at-risk and community samples**	Very low ⨁◯◯◯ (R, IC, ID)	*n* = 1658, *k* = 6 *d* = .39 CI (.21 - .57) **I**	On-task behavior defined as academic engagement time (AET); percentage of AET during interval of 15 min	Observation
Lehrer*innenverhalten. Lehrer*innenurteil					
Aldabbagh et al., 2022 **Population:** children with ADHD and externalizing behaviors, 2-13 years **Intervention:** teacher training **Comparison:** waiting list, treatment as usual, other treatment	**Teacher's warmth and closeness**	Very low ⨁◯◯◯ (R, IC)	*n* = 304, *k* = 6 *d* = .48 CI (.15 - .81) **I**		TPOT, STRS
	Teacher's conflict	Low ⨁⨁◯◯ (R)	*n* = 262, *k* = 5 *d* = .19 CI (.05 - .34) **I**		STRS
	Teacher's positive strategies	Very low ⨁◯◯◯ (R, IC)	*n* = 231, *k* = 8 *d* = .71 CI (.29 - 1.14) **I**		MOOSES, DPICS, TCIDOS, CMSQ, TPOT, CLASS, OREVS

Ward et al., 2022. **Population:** children and adolescence with ADHD or identified as displaying ADHD-type behaviors **Intervention:** teacher training/ school intervention **Comparison:** waitlist control, alternative treatment, control group.	**Teacher ADHD knowledge, Between subjects, Post-test**	Very low ⊕◯◯◯ (R, IC)	*n* = 753, *k* = 6 *SMD* = 1.56 CI (.52 - 2.95) **I**	Variety of measurement including vignettes, self-report questionnaire and blinded observations; data at FU for teacher knowledge between-group	Study own self-report questionnaires, KADDS, SRAQ teacher
	Teacher ADHD knowledge, Within subjects, Post-test	Very low ⊕◯◯◯ (R, ID, P)	*n* = 957, *k* = 16 *SMD* = 1.96 CI (1.48 - 2.43) **I**	Variety of measurement including vignettes, self-report questionnaire and blinded observations	Study own self-report questionnaires, KADDS, SRAQ teacher
	Teacher ADHD knowledge, Within subjects, Follow-up	Very low ⊕◯◯◯ (R, IC)	*n* = 330, *k* = 5 *SMD* = -1.21 CI (-2.02 - -.41) **C**	Variety of measurement including vignettes, self-report questionnaire and blinded observations	KADDS, SRAQ, own questionnaire

Anmerkung. *n* = Anzahl der Versuchspersonen, *k* = Anzahl der inkludierten Primärstudien. R = risk of bias, IC = inconsistency, ID = indirectness, IP = imprecision, P = publication bias.

Referenzen

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Berücksichtigte Endpunktkategorien: Meta-Analysen

Endpunktkategorien	MAs	*m*	Gesamtaussagesicherheit der Evidenz
Aufmerksamkeit (KU)	1	2	Schwach - Moderat
Aufmerksamkeit (E)	2	4	
Aufmerksamkeit (L)	1	1	
Hyperaktivität/Impulsivität (KU)	1	2	
Hyperaktivität/Impulsivität (E)	1	3	
Funktionalität (E)	3	5	
Funktionalität (L)	2	2	
Verhalten (E)	1	3	
Metakognition (E)	1	3	

Anmerkung. MAs = Anzahl der Meta-Analysen, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.

Berücksichtigte Endpunktkategorien: RCTs

Endpunktkategorien	RCTS	*m*	Gesamtaussagesicherheit der Evidenz
Allgemeine Symptome (E)	1	2	Schwach - Moderat
Allgemeine Symptome (L)	1	2	
ADHS Symptome gesamt (E)	2	6	
ADHS Symptome gesamt (L)	2	6	
Aufmerksamkeit (E)	3	7	
Aufmerksamkeit (L)	2	6	
Hyperaktivität/Impulsivität (E)	1	1	
Verhaltensprobleme (E)	3	20	
Verhaltensprobleme (L)	2	18	
Verhaltensprobleme (K)	1	6	
Internalisierende Symptome (E)	2	6	
Internalisierende Symptome (L)	2	6	
Organisationale Fähigkeiten (E)	3	12	
Organisationale Fähigkeiten (L)	1	9	
Hausaufgabenprobleme (E)	2	10	
Hausaufgabenprobleme (L)	1	3	
Andere funktionale Beeinträchtigungen	2	13	
Symptome der Langsamkeit, exzessiven Tagträumens und Schläfrigkeit (SCT)	1	4	

Anmerkung. RCTs = Anzahl der randomisierten kontrollierten Studien, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.

Summary of Findings Tabelle: Meta-Analysen

Referenz	Endpunkt	Aussagesicherheit (GRADE)	Effektstärke	Kommentare	Mess-instrument
Aufmerksamkeit. Kombiniertes Urteil					
Chen et al., 2021 **Population:** children and adolescents with ADHD (3 and 18 years and probably medicated) **Intervention:** cognitive training or executive function training targeting domains of neuropsychological deficit **Comparison:** control: TAU; waiting list, active/placebo/sham (i.e., involving other computer based activities), or alternative training programs	**Inattention symptoms, Working memory training**	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 303, *k* = 6 *g* = .04 CI (-.23 - .32) **U**	Parent- and clinician-rated	ADHD-RS, BRIEF, DBDR, Conners 3-P, CRS-P
	Inattention symptoms, Multiple cognitive training	Very low ⊕◯◯◯ (R, IC)	*n* = 381, *k* = 8 *g* = -.51 CI (-.72 - -.29) **I**	Parent- and clinician-rated	Conners 3-P, CRS-R, DBDRS, SNAP-IV, ADHD-RS
Aufmerksamkeit. Elternurteil					
Bikic et al., 2017 **Population:** children and adolescents with ADHD (5–18 years) **Intervention:** organizational skills training (OST) delivered by humans in face-to-face **Comparison:** parent education, waitlist, treatment as usual (TAU)	**Inattention**	Very low ⊕◯◯◯ (R, IC)	*n* = 893, *k* = 10 *g* = .56 CI (.38 - .74) **I**	Visual analysis of funnel plot and Trim and Fill method suggests obtained point estimate is lower than "true" ES. Differences in format intervention: 2 individuals, 1 group+ individual and rest in group.	n.a.

				Same about randomized trials included.	
Chen et al., 2021 **Population:** children and adolescents with ADHD (3 and 18 years and probably medicated) **Intervention:** cognitive training or executive function training targeting domains of neuropsychological deficit **Comparison:** control: TAU; waiting list, active/placebo/sham (i.e., involving other computer based activities), or alternative training programs	**Inattention, Attention intervention**	Low ⨁⨁◯◯ (R, IP)	*n* = 105, *k* = 1 *g* = -1.46 CI (-1.90 - -1.03) **I**		SNAP-IV, BRIEF
	Inattention symptoms, Working memory training	Very low ⨁◯◯◯ (R, IC, IP)	*n* = 256, *k* = 5 *g* = .03 CI (-.30 - .37) **U**		ADHD-RS, BRIEF, DBDR, Conners 3-P, CRS-R
	Inattention symptoms, Multiple cognitive training	Very low ⨁◯◯◯ (R, IC)	*n* = 322, *k* = 7 *g* = -.48 CI (-.70 - -.26) **I**		CRS-R, BRIEF, Conners 3-P, ADHD-RS, BRIEF, DBDRS, SNAP-IV, CPRS-R
Aufmerksamkeit. Lehrer*innenurteil					
Bikic et al., 2017 **Population:** children and adolescents with ADHD (5–18 years) **Intervention:** organizational skills training (OST) delivered by humans in face-to-face **Comparison:** parent education, waitlist, treatment as usual (TAU)	**Inattention**	Very low ⨁◯◯◯ (R, IC)	*n* = 590, *k* = 6 *g* = .26 CI (.01 - .52) **I**	Differences in format intervention: 2 individuals, 1 group+ individual and rest in group; same about randomized trials included	DBD-Inattention subscale (k=4), SNAP-Inattention scale (k=1), or CSI-Inattention scale (k=1)
Hyperaktivität/Impulsivität. Kombiniertes Urteil					

Chen et al., 2021 **Population:** children and adolescents with ADHD (3 and 18 years and probably medicated) **Intervention:** cognitive training or executive function training targeting domains of neuropsychological deficit **Comparison:** control: TAU; waiting list, active/placebo/sham (i.e., involving other computer based activities), or alternative training programs	**Hyperactivity/impulsivity symptoms, Working memory training**	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 303, *k* = 6 *g* = .13 CI (-.17 - .43) **U**	Parent- and clinician-rated	ADHD-RS, BRIEF, DBDR, Conners 3-P, CRS-R
	Hyperactivity/impulsivity symptoms, Multiple cognitive training	Very low ⊕◯◯◯ (R, IC)	*n* = 381, *k* = 8 *g* = -.31 CI (-.52 - -.09) **I**	Parent- and clinician-rated	ADHD-RS, BRIEF, DBDR, Conners 3-P, CRS-R, SNAP-IV
Hyperaktivität/Impulsivität. Elternurteil					
Chen et al., 2021 **Population:** children and adolescents with ADHD (3 and 18 years and probably medicated) **Intervention:** cognitive training or executive function training targeting domains of neuropsychological deficit **Comparison:** control: TAU; waiting list, active/placebo/sham (i.e., involving other computer based activities), or alternative training programs	**Hyperactivity/impulsivity symptoms, Attention intervention**	Very low ⊕◯◯◯ (R, IP)	*n* = 105, *k* = 1 *g* = -.57 CI (-.99 - -.15) **I**		SNAP-IV, BRIEF
	Hyperactivity/impulsivity symptoms, Working memory training	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 256, *k* = 5 *g* = .06 CI (-.27 - .39) **U**		ADHD-RS, BRIEF, DBDR, Conners 3-P, CRS-R
	Hyperactivity/impulsivity symptoms, Multiple cognitive training	Very low ⊕◯◯◯ (R, IC,)	*n* = 362, *k* = 7 *g* = -.29 CI (-.51 - -.08) **I**		CRS-R, BRIEF, ADHD-RS, Conners 3-P, SNAP-I, DBDRS, CPRS-R
Funktionalität. Elternurteil					

Chen et al., 2021 **Population:** children and adolescents with ADHD (3 and 18 years and probably medicated) **Intervention:** cognitive training or executive function training targeting domains of neuropsychological deficit **Comparison:** control: TAU; waiting list, active/placebo/sham (i.e., involving other computer based activities), or alternative training programs	**Global executive composite (GEC), Attention training**	Very low ⊕◯◯◯ (R, IP)	*n* = 105, *k* = 1 *g* = -.82 CI (-1.22 - -.42) **I**		BRIEF
	Global executive composite (GEC), Working memory training	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 244, *k* = 5 *g* = .09 CI (-.16 - .34) **U**		BRIEF
	Global executive composite (GEC), Multiple cognitive training	Low ⊕⊕◯◯ (R)	*n* = 399, *k* = 7 *g* = -.50 CI (-.71 - -.29) **I**		BRIEF
Bikic et al., 2017 **Population:** children and adolescents with ADHD (5–18 years) **Intervention:** organizational skills training (OST) delivered by humans in face-to-face **Comparison:** parent education, waitlist, treatment as usual (TAU)	**Organizational skills**	Very low ⊕◯◯◯ (R, IC)	*n* = 697, *k* = 6 *g* = .83 CI (.32 - 1.34) **I**	Differences in format intervention: 2 individuals, 1 group+ individual and rest in group. RCTs and non-RCTs included	Children's Organizational Skills Scale (COSS), Homework Problem Checklist (HPC)-Materials Management Scale
Powell et al., 2022 **Population:** children and adolescents with ADHD (<=18 years) **Intervention:** psychoeducational intervention focused on social skill development (undertaken in	**Social skills**	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 423, *k* = 5 *SMD* = .39 CI (.19 - .59) **I**	Only RCTs included	SSRS, SSIS, SCS

parents, child or teachers) **Comparison:** "pure" control group diagnosed with ADHD					
Funktionalität. Lehrer*innenurteil					
Bikic et al., 2017 **Population:** children and adolescents with ADHD (5–18 years) **Intervention:** organizational skills training (OST) delivered by humans in face-to-face **Comparison:** parent education, waitlist, treatment as usual (TAU)	**Organizational skills**	Very low ⊕◯◯◯ (R, IC)	*n* = 445, *k* = 4 *g* = .54 CI (.17 - .91) **I**	Differences in format intervention: 2 individuals, 1 group+ individual and rest in group. Same about randomized trials included.	DPICS, TCIDOS, TPOT, CCOF
Powell et al., 2022 **Population:** children and adolescents with ADHD (<=18 years) **Intervention:** psychoeducational intervention focused on social skill development (undertaken in parents, child or teachers) **Comparison:** "pure" control group diagnosed with ADHD	**Social skills**	Very low ⊕◯◯◯ (R, IP)	*n* = 329, *k* = 4 *SMD* = .32 CI (.10 - .54) **I**	Only RCTs included	SSRS, SSIS, SCS
Verhalten. Elternurteil					
Chen et al., 2021 **Population:** children and adolescents with ADHD (3 and 18	**Behavioral regulation index (BRI), Attention training**	Very low ⊕◯◯◯ (R, IP)	*n* = 105, *k* = 1 *g* = -.50 CI (-.88 - -.10)		BRIEF

years and probably medicated) **Intervention:** cognitive training or executive function training targeting domains of neuropsychological deficit **Comparison:** control: TAU; waiting list, active/placebo/sham (i.e., involving other computer based activities), or alternative training programs			**I**		
	Behavioral regulation index (BRI), Working memory training	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 146, *k* = 3 *g* = .05 CI (-.27 - .37) **U**		BRIEF
	Behavioral regulation index (BRI), Multiple cognitive training	Moderate ⊕⊕⊕◯ (IP)	*n* = 150, *k* = 2 *g* = -.21 CI (-.58 - .16) **U**		BRIEF
Metakognition. Elternurteil					
Chen et al., 2021 **Population:** children and adolescents with ADHD (3 and 18 years and probably medicated) **Intervention:** cognitive training or executive function training targeting domains of neuropsychological deficit **Comparison:** control: TAU; waiting list, active/placebo/sham (i.e., involving other computer based activities), or alternative training programs	**Metacognition index (MI), Attention training**	Very low ⊕◯◯◯ (R, IP)	*n* = 105, *k* = 1 *g* = -.90 CI (-1.30 - -.50) **I**		BRIEF
	Metacognition index (MI), Working memory training	Very low ⊕◯◯◯ (R, IP)	*n* = 168, *k* = 3 *g* = .25 CI (-.04 - .55) **U**		BRIEF
	Metacognition index (MI), Multiple cognitive training	Low ⊕⊕◯◯ (R)	*n* = 190, *k* = 3 *g* = -.51 CI (-.83 - -.19) **I**	No significant effects on metacognition index but subgroup analysis similarly revealed significant effect for multiple cognitive	BRIEF

training; p-value not reported

Anmerkung. *n* = Anzahl der Versuchspersonen, *k* = Anzahl der inkludierten Primärstudien. R = risk of bias, IC = inconsistency, ID = indirectness, IP = imprecision, P = publication bias.

Summary of Findings Tabelle: RCTs

Referenz	Endpunkt	Risk of Bias	Effektstärke	Kommentare	Mess-instrument
Allgemeine Symptome. Elternurteil					
Döpfner et al., 2004 **Population: children with ADHD (6-10 years) Intervention: I: PE (multimodal). II: MED+PE or BT+PE. III: MED+PE+BT or BT or BT+PE. IV: MED+PE+BT or BT or MED+PE Comparison: no control group**	**Total symptoms, Within group, Phase 2 + 3 (PE/BT)**	Very high risk ● (CC, BP, BA)	*n* = 37 *d* = 1.0 CI (n.a.) **I**	Clinical implication based on p-value	PSC
	Total symptoms, Within group, Phase 2 + 3 (MED + PE/BT)	Very high risk ● (CC, BP, BA)	*n* = 38 *d* = .9 CI (n.a.) **I**	Clinical implication based on p-value	PSC
Allgemeine Symptome. Lehrer*innenurteil					
Döpfner et al., 2004 **Population: children with ADHD (6-10 years) Intervention: I: PE (multimodal). II: MED+PE or BT+PE. III: MED+PE+BT or BT or BT+PE. IV: MED+PE+BT or BT or MED+PE Comparison: no control group**	**Total symptoms, Within group, Phase 2 + 3 (PE/BT)**	Very high risk ● (CC, BP, BA)	*n* = 37 *d* = .8 CI (n.a.) **I**	Clinical implication based on p-value	TSC
	Total symptoms, Within group, Phase 2 + 3 (MED + PE/BT)	Very high risk ● (CC, BP, BA)	*n* = 38 *d* = 1.8 CI (n.a.) **I**	Clinical implication based on p-value	TSC
ADHS Symptome gesamt. Elternurteil					

Döpfner et al., 2004 **Population: children with ADHD (6-10 years) Intervention: I: PE (multimodal). II: MED+PE or BT+PE. III: MED+PE+BT or BT or BT+PE. IV: MED+PE+BT or BT or MED+PE Comparison: no control group**	**ADHD symptoms, Within group, Phase I**	Very high risk ● (CC, BP, BA)	*n* = 75 *d* = 1.0 CI (n.a.) **I**	Clinical implication based on p-value	PSC-ADHD
	ADHD symptoms, Within group, Phase 2 + 3 (PE/BT)	Very high risk ● (CC, BP, BA)	*n* = 37 *d* = 1.1 CI (n.a.) **I**	Clinical implication based on p-value	PSC-ADHD
	ADHD symptoms, Within group, Phase 2 + 3 (MED + PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 38 *d* = 1.0 CI (n.a.) **I**	Clinical implication based on p-value	PSC-ADHD
Döpfner et al., 2014 **Population: 6-10 year olds in 1.-4. Grade with nonverbal IQ ≥ 80 meeting the DSM-III-R or ICD-10 criteria for ADHD Intervention: I: PE (multimodal). II: MED+PE or BT+PE: III: MED+PE+BT or BT or**	**ADHD symptoms, Within group Post-FU**	Very high risk ● (CC, BP, BA)	*n* = 34 *d* = .18 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; Clinical implication based on p-value	FBB-ADHS

BT+PE. FU: MED+PE+BT or BT or MED+PE Comparison: no control	**ADHD symptoms, Within group, Post-FU**	Very high risk ● (CC, BP, BA)	*n* = 32 *d* = .10 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; Clinical implication based on p-value	FBB-ADHS
	ADHD symptoms, Within group, Post-FU	Very high risk ● (CC, BP, BA)	*n* = 66 *d* = .14 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; Clinical implication based on p-value	FBB-ADHS
ADHS Symptome gesamt. Lehrer*innenurteil					
Döpfner et al., 2004 **Population: children with ADHD (6-10 years) Intervention: I: PE (multimodal). II: MED+PE or BT+PE. III: MED+PE+BT or BT or BT+PE. IV: MED+PE+BT or BT or MED+PE Comparison: no control group**	**ADHD symptoms, Within whole group, Phase I**	Very high risk ● (CC, BP, BA)	*n* = 75 *d* = 1.2 CI (n.a.) **I**	Clinical implication based on p-value	TSC-ADHD
	ADHD symptoms, Within group, Phase 2 + 3 (PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 37 *d* = 1.0 CI (n.a.) **I**	Clinical implication based on p-value	TSC-ADHD
	ADHD symptoms, Within group, Phase 2 + 3 (MED + PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 38 d = 2.0 CI (n.a.) **I**	Clinical implication based on p-value	TSC-ADHD
Döpfner et al., 2014 **Population: 6-10 year olds in 1.-4. Grade with nonverbal IQ ≥ 80 meeting the DSM-III-R**	**ADHD symptoms, Within group (no medication at FU), Post-FU**	Very high risk ● (CC, BP, BA)	*n* = 25 *d* = .18 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up,	FBB-ADHS

or ICD-10 criteria for ADHD Intervention: I: PE (multimodal). II: MED+PE or BT+PE: III: MED+PE+BT or BT or BT+PE. FU: MED+PE+BT or BT or MED+PE Comparison: no control				indicating treatment effects were maintained; Clinical implication based on p-value	
	ADHD symptoms, Within group (medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 28 *d* = -.61 CI (n.a.) **U**	Clinical implication based on p-value	FBB-ADHS
	ADHD symptoms, Within group (medication and no medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 53 *d* = -.31 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; Clinical implication based on p-value	FBB-ADHS
Aufmerksamkeit. Elternurteil					
Curtis et al., 2021 Population: children 8-12 years with (ADHD) combined type Intervention: structured Dyadic Behavior Therapy (SDBT) Comparison: Child-Centered Dyadic Therapy (CCDT), nondirective, experiential psychotherapy without contingency management methods	**Inattention, Between group, Posttreatment**	Very high risk ● (CC, BP)	*n* = 39 *ES* = .24 CI (n.a.) **I**	Clinical implication based on p-value	Parent ratings on DBRS
Döpfner et al., 2004 Population: children with ADHD (6-10 years) Intervention: I: PE (multimodal). II:	**Attention problems, Within whole group, Phase I**	Very high risk ● (CC, BP, BA)	*n* = 75 *d* = .9 CI (n.a.) **I**	Clinical implication based on p-value	CBCL Attention

MED+PE or BT+PE. III: MED+PE+BT or BT or BT+PE. IV: MED+PE+BT or BT or MED+PE Comparison: no control group	**Attention problems, Within group, Phase 2 + 3 (PE/ BT)**	Very high risk ● (CC, BP, BA)	*n* = 37 *d* = 1.0 CI (n.a.) **I**	Clinical implication based on p-value	CBCL Attention
	Attention problems, Within group, Phase 2 + 3 (MED + PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 38 d = .8 CI (n.a.) **I**	Clinical implication based on p-value	CBCL Attention
Döpfner et al., 2014 **Population: 6-10 year olds in 1.-4. Grade with nonverbal IQ ≥ 80 meeting the DSM-III-R or ICD-10 criteria for ADHD Intervention: I: PE (multimodal). II: MED+PE or BT+PE: III: MED+PE+BT or BT or BT+PE. FU: MED+PE+BT or BT or MED+PE Comparison: no control**	**Attention problems, Within group (no medication at FU), Post-FU**	Very high risk ● (CC, BP, BA)	*n* = 34 *d* = -.02 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	CBCL Attention
	Attention problems, Within group (medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 32 *d* = .06 CI (n.a.) **U**	Clinical implication based on p-value	CBCL Attention
	Attention problems, Within group (medication and no medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 66 *d* = .02 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	CBCL Attention
Aufmerksamkeit. Lehrer*innenurteil					
Döpfner et al., 2004 **Population: children with ADHD (6-10 years) Intervention: I: PE (multimodal). II:**	**Attention problems, Within whole group, Phase I**	Very high risk ● (CC, BP, BA)	*n* = 75 *d* = 1.1 CI (n.a.) **I**	Clinical implication based on p-value	TRF Attention Problems

MED+PE or BT+PE. III: MED+PE+BT or BT or BT+PE. IV: MED+PE+BT or BT or MED+PE Comparison: no control group	**Attention problems, Within group, Phase 2 + 3 (PE/ BT)**	Very high risk ● (CC, BP, BA)	*n* = 37 *d* = .7 CI (n.a.) **I**	Clinical implication based on p-value	TRF Attention
	Attention problems, Within group, Phase 2 + 3 (MED + PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 38 d = 1.2 CI (n.a.) **I**	Clinical implication based on p-value	TRF Attention
Döpfner et al., 2014 **Population: 6-10 year olds in 1.-4. Grade with nonverbal IQ ≥ 80 meeting the DSM-III-R or ICD-10 criteria for ADHD Intervention: I: PE (multimodal). II: MED+PE or BT+PE: III: MED+PE+BT or BT or BT+PE. FU: MED+PE+BT or BT or MED+PE Comparison: no control**	**Attention problems, Within group (no medication at FU), Post-FU**	Very high risk ● (CC, BP, BA)	*n* = 25 *d* = .22 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	TRF Attention
	Attention problems, Within group (medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 28 *d* = -.42 CI (n.a.) **U**	Clinical implication based on p-value	TRF Attention
	Attention problems, Within group (medication and no medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 53 *d* = -.14 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	TRF Attention
Hyperaktivität/Impulsivität. Elternurteil					
Curtis et al., 2021 **Population: children 8-12 years with (ADHD) combined type Intervention: structured Dyadic Behavior Therapy (SDBT)**	**Hyperactivity/impulsivity, Between group, Posttreatment**	Very high risk ● (CC, BP)	*n* = 39 *ES* = .38 CI (n.a.) **I**	Clinical implication based on p-value	Parent ratings on DBRS

Comparison: Child-Centered Dyadic Therapy (CCDT), nondirective, experiential psychotherapy without contingency management methods					
Verhaltensprobleme. Elternurteil					
Curtis et al., 2021 **Population: children 8-12 years with (ADHD) combined type** **Intervention: structured Dyadic Behavior Therapy (SDBT)** **Comparison: Child-Centered Dyadic Therapy (CCDT), nondirective, experiential psychotherapy without contingency management methods**	**Behavioral symptoms (overall), Between group, Posttreatment**	Very high risk ● (CC, BP)	*n* = 39 *ES* = .39 CI (n.a.) **I**	Study design: With regard to small sample size, sufficient statistical power achieved to assess differences between two groups in pilot study; clinical implication based on p-value	Parent ratings on DBRS
	Oppositionality, Between group, Posttreatment	Very high risk ● (CC, BP)	*n* = 39 *ES* = .24 CI (n.a.) **I**	Clinical implication based on p-value	Parent ratings on DBRS
Döpfner et al., 2004 **Population: children with ADHD (6-10 years)** **Intervention: I: PE (multimodal). II: MED+PE or BT+PE. III: MED+PE+BT or BT or BT+PE. IV: MED+PE+BT or BT or MED+PE** **Comparison: no control group**	**ODD/CS symptoms, Within whole group, Phase I**	Very high risk ● (CC, BP, BA)	*n* = 75 *d* = .5 CI (n.a.) **I**	Clinical implication based on p-value	PSC-ODD/CD
	ODD symptoms, Within group, Phase 2 + 3 (PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 37 *d* = .7 CI (n.a.) **I**	Clinical implication based on p-value	PSC-ODD/CD
	ODD symptoms, Within group, Phase 2 + 3 (MED + PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 38 *d* = .4 CI (n.a.) **U**	Clinical implication based on p-value	PSC-ODD/CD

	Behavior problems, Within whole group, Phase I	Very high risk ● (CC, BP, BA)	*n* = 75 *d* = 1.0 CI (n.a.) **I**	Clinical implication based on p-value	IPC-P
	Behavior problems, Within group, Phase 2 + 3 (PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 37 *d* = 1.0 CI (n.a.) **I**	Clinical implication based on p-value	IPC-P
	Behavior problems, Within group, Phase 2 + 3 (MED + PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 38 *d* = 1.1 CI (n.a.) **I**	Clinical implication based on p-value	IPC-P
	Externalizing, Within whole group, Phase I	Very high risk ● (CC, BP, BA)	*n* = 75 *d* = 1.0 CI (n.a.) **I**	Clinical implication based on p-value	CBCL Externalizing Problems
	Externalizing, Within group, Phase 2 + 3 (PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 37 *d* = 1.1 CI (n.a.) **I**	Clinical implication based on p-value	CBCL Externalizing
	Externalizing, Within group, Phase 2 + 3 (MED + PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 38 *d* = .8 CI (n.a.) **I**	Clinical implication based on p-value	CBCL Externalizing
Döpfner et al., 2014 **Population: 6-10 year olds in 1.-4. Grade with nonverbal IQ ≥ 80 meeting the DSM-III-R or ICD-10 criteria for ADHD** **Intervention: I: PE (multimodal). II: MED+PE or BT+PE: III:**	**ODD symptoms, Within group (no medication at FU), Post-FU**	Very high risk ● (CC, BP, BA)	*n* = 34 *d* = -.2 CI (n.a.) **U**	Clinical implication based on p-value	FBB-SSV
	ODD symptoms, Within group (medication at FU),	Very high risk ● (CC, BP, BA)	*n* = 32 *d* = -.11 CI (n.a.)	No remaining variables changed significantly between posttest	FBB-SSV

MED+PE+BT or BT or BT+PE. FU: MED+PE+BT or BT or MED+PE Comparison: no control	**Post-FU**		**U**	and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	
	ODD symptoms, Within group (medication and no medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 66 *d* = -.16 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	FBB-SSV
	Total child behavior, Within group (no medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 34 *d* = .03 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	CBCL
	Total child behavior, Within group (medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 32 *d* = .01 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	CBCL
	Total child behavior, Within group (medication and no medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 66 *d* = .02 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained;	CBCL

				clinical implication based on p-value	
	Externalizing behavior, Within group (no medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 34 *d* = .01 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	CBCL Externalizing
	Externalizing behavior, Within group (medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 32 *d* = .03 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	CBCL Externalizing
	Externalizing behavior, Within group (medication and no medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 66 *d* = .02 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	CBCL Externalizing
Verhaltensprobleme. Lehrer*innenurteil					
Döpfner et al., 2004 **Population: children with ADHD (6-10 years) Intervention: I: PE (multimodal). II: MED+PE or BT+PE. III: MED+PE+BT or BT or BT+PE. IV: MED+PE+BT or BT or MED+PE**	**ODD/CS symptoms, Within whole group, Phase I**	Very high risk ● (CC, BP, BA)	*n* = 75 *d* = .7 CI (n.a.) **I**	Clinical implication based on p-value	TSC-ODD
	ODD symptoms, Within group, Phase 2 + 3 (PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 37 *d* = .3 CI (n.a.)	Clinical implication based on p-value	TSC-ODD/CD

Comparison: no control group			I		
	ODD symptoms, Within group, Phase 2 + 3 (MED + PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 38 *d* = 1.0 CI (n.a.) I	Clinical implication based on p-value	TSC-ODD/CD
	Behavior problems, Within whole group, Phase I	Very high risk ● (CC, BP, BA)	*n* = 75 *d* = 1.1 CI (n.a.) I	Clinical implication based on p-value	IPC-T
	Behavior problems, Within group, Phase 2 + 3 (PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 37 *d* = .9 CI (n.a.) I	Clinical implication based on p-value	IPC-T
	Behavior problems, Within group, Phase 2 + 3 (MED + PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 38 *d* = 1.4 CI (n.a.) I	Clinical implication based on p-value	IPC-T
	Externalizing, Within whole group, Phase I	Very high risk ● (CC, BP, BA)	*n* = 75 *d* = .9 CI (n.a.) I	Clinical implication based on p-value	TRF Externalizing Problems
	Externalizing, Within group, Phase 2 + 3 (PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 37 *d* = .5 CI (n.a.) I	Clinical implication based on p-value	TRF Externalizing
	Externalizing, Within group, Phase 2 + 3 (MED + PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 38 *d* = 1.2 CI (n.a.) I	Clinical implication based on p-value	TRF Externalizing

	ODD symptoms, Within group (no medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 25 *d* = -.16 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	FBB-SSV
Döpfner et al., 2014 **Population: 6-10 year olds in 1.-4. Grade with nonverbal IQ ≥ 80 meeting the DSM-III-R or ICD-10 criteria for ADHD** **Intervention: I: PE (multimodal). II: MED+PE or BT+PE: III: MED+PE+BT or BT or BT+PE. FU: MED+PE+BT or BT or MED+PE** **Comparison: no control**	**ODD symptoms, Within group (medication at FU), Post-FU**	Very high risk ● (CC, BP, BA)	*n* = 28 *d* = -.30 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	FBB-SSV
	ODD symptoms, Within group (medication and no medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 53 *d* = -.21 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	FBB-SSV
	Total child behavior, Within group (no medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 25 *d* = .14 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	TRF
	Total child behavior, Within group (medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 28 *d* = -.36 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up,	TRF

				indicating treatment effects were maintained; clinical implication based on p-value	
Total child behavior, Within group (medication and no medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 53 *d* = -.11 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	TRF
Externalizing behavior, Within group (no medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 25 *d* = .09 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	TRF Externalizing
Externalizing behavior, Within group (medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 28 *d* = -.29 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	TRF Externalizing
Externalizing behavior, Within group (medication and no medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 53 *d* = -.11 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	TRF Externalizing

Verhaltensprobleme. Kliniker*innenurteil					
Döpfner et al., 2014 **Population: 6-10 year olds in 1.-4. Grade with nonverbal IQ ≥ 80 meeting the DSM-III-R or ICD-10 criteria for ADHD** **Intervention: I: PE (multimodal). II: MED+PE or BT+PE: III: MED+PE+BT or BT or BT+PE. FU: MED+PE+BT or BT or MED+PE** **Comparison: no control**	**Behavior at home, Within group (no medication at FU), Post-FU**	Very high risk ● (CC, BP, BA)	*n* = 34 *d* = .01 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	8-item scale constructed, measuring children's behavior at home; completed by child's therapist based on parent interview data
	Behavior at home, Within group (medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 32 *d* = -.01 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	8-item scale constructed, measuring children's behavior at home; completed by child's therapist based on parent interview data
	Behavior at home, Within group (medication and no medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 66 *d* = .00 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	8-item scale constructed, measuring children's behavior at home; completed by child's therapist based on parent interview data
	Behavior at school, Within group (no medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 25 *d* = .07 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	8-item scale constructed, measuring children's behavior at home; completed by child's therapist based on parent interview data
	Behavior at school,	Very high risk ● (CC, BP, BA)	*n* = 28 *d* = .18 CI (n.a.)	No remaining variables changed significantly	8-item scale constructed, measuring children's

	Within group (medication at FU), Post-FU		**U**	between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	behavior at home; completed by child's therapist based on parent interview data
	Behavior at school, Within group (medication and no medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 53 *d* = .13 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	8-item scale constructed, measuring children's behavior at home; completed by child's therapist based on parent interview data
Internalisierende Symptome. Elternurteil					
Döpfner et al., 2004 **Population: children with ADHD (6-10 years) Intervention: I: PE (multimodal). II: MED+PE or BT+PE. III: MED+PE+BT or BT or BT+PE. IV: MED+PE+BT or BT or MED+PE Comparison: no control group**	**Internalizing, Within whole group, Phase I**	Very high risk ● (CC, BP, BA)	*n* = 75 *d* = .6 CI (n.a.) **I**	Clinical implication based on p-value	CBCL Internalizing Problems
	Internalizing, Within group, Phase 2 + 3 (PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 37 *d* = .5 CI (n.a.) **I**	Clinical implication based on p-value	CBCL Internalizing Problems
	Internalizing, Within group, Phase 2 + 3 (MED + PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 38 *d* = .6 CI (n.a.) **I**	Clinical implication based on p-value	CBCL Internalizing Problems
Döpfner et al., 2014 **Population: 6-10 year olds in 1.-4. Grade with nonverbal IQ ≥ 80 meeting the DSM-III-R or ICD-10 criteria for ADHD**	**Internalizing behavior, Within group (no medication at FU), Post-FU**	Very high risk ● (CC, BP, BA)	*n* = 34 *d* = .01 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained;	CBCL Internalizing

Intervention: I: PE (multimodal). II: MED+PE or BT+PE: III: MED+PE+BT or BT or BT+PE. FU: MED+PE+BT or BT or MED+PE Comparison: no control				clinical implication based on p-value	
	Internalizing behavior, Within group (medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 32 *d* = -.06 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	CBCL Internalizing
	Internalizing behavior, Within group (medication and no medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 66 *d* = -.02 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	CBCL Internalizing
Internalisierende Symptome. Leherer*innenurteil					
Döpfner et al., 2004 **Population: children with ADHD (6-10 years) Intervention: I: PE (multimodal). II: MED+PE or BT+PE. III: MED+PE+BT or BT or BT+PE. IV: MED+PE+BT or BT or MED+PE Comparison: no control group**	**Internalizing, Within whole group, Phase I**	Very high risk ● (CC, BP, BA)	*n* = 75 *d* = .3 CI (n.a.) **I**	Clinical implication based on p-value	TRF Internalizing
	Internalizing, Within group, Phase 2 + 3 (PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 37 *d* = .3 CI (n.a.) **U**	Clinical implication based on p-value	TRF Internalizing
	Internalizing, Within group, Phase 2 + 3 (MED + PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 38 *d* = .6 CI (n.a.) **I**	Clinical implication based on p-value	TRF Internalizing
Döpfner et al., 2014	**Internalizing behavior,**	Very high risk ● (CC, BP, BA)	*n* = 25 *d* = .27 CI (n.a.)	No remaining variables changed significantly	TRF Internalizing

Population: 6-10 year olds in 1.-4. Grade with nonverbal IQ ≥ 80 meeting the DSM-III-R or ICD-10 criteria for ADHD Intervention: I: PE (multimodal). II: MED+PE or BT+PE: III: MED+PE+BT or BT or BT+PE. FU: MED+PE+BT or BT or MED+PE Comparison: no control	**Within group (no medication at FU), Post-FU**		**U**	between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	
	Internalizing behavior, Within group (medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 28 *d* = -.08 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	TRF Internalizing
	Internalizing behavior, Within group (medication and no medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 53 *d* = .08 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	TRF Internalizing
Organisationale Fähigkeiten. Elternurteil					
DuPaul et al., 2018 Population: middle School Students with ADHD Intervention: Challenging Horizons Program Comparison: commuity care	**Organization skills: task planning**	Very high risk ● (BP, BA)	*n* = 130 *d* = -.4 CI (n.a.) **I**	Clinical implication based on p-value of group x time interaction	Children's organizational skill scale (COSS)
	Organization skills: organizing actions	Very high risk ● (BP, BA)	*n* = 130 *d* = -.58 CI (n.a.) **I**	Clinical implication based on p-value of group x time interaction	Children's organizational skill scale (COSS)
Harrison et al., 2020 Population: students (11-15 years old) with ADHD	**Binder organization**	Very high risk ● (BP, BA, ID, UM)	*n* = 55 *parial* η^2 = .23 CI (n.a.)	Clinical implication based on p-value of	Observation

Intervention: organization training, self-management, note-taking **Comparison: accomodations (organizination support, extended time, copy of theacher notes)**			**I**	group x time effects	
Langeberg et al., 2017 **Population: middle school students with ADHD** **Intervention: Homework, Organization and Planning Skills (HOPS) or Completing Homework by Improving Efficiency and Focus (CHIEF)** **Comparison: HOPS/CHIEF/Waiting List**	**Task planning, HOPS vs. CHIEF**	Very high risk ● (BP, BA)	*n* = 274 *d* = -.05 CI (n.a.) **U**	Clinical implication based on significance of pairwise comparisons	Children's Organizational Skills Scale (COSS)
	Task planning, HOPS vs. WLC	Very high risk ● (BP, BA)	*n* = 274 *d* = -.79 CI (n.a.) **I**	Clinical implication based on significance of pairwise comparisons	Children's Organizational Skills Scale (COSS)
	Task planning, CHIEF vs. WLC	Very high risk ● (BP, BA)	*n* = 274 *d* = -.72 CI (n.a.) **I**	Clinical implication based on significance of pairwise comparisons	Children's Organizational Skills Scale (COSS)
	Organized actions, HOPS vs. CHIEF	Very high risk ● (BP, BA)	*n* = 274 *d* = -.68 CI (n.a.) **I**	Clinical implication based on significance of pairwise comparisons	Children's Organizational Skills Scale (COSS)
	Organized actions, HOPS vs. WLC	Very high risk ● (BP, BA)	*n* = 274 *d* = -1.14 CI (n.a.) **I**	Clinical implication based on significance of pairwise comparisons	Children's Organizational Skills Scale (COSS)
	Organized actions, CHIEF vs. WLC	Very high risk ● (BP, BA)	*n* = 274 *d* = -.46 CI (n.a.) **I**	Clinical implication based on significance of pairwise comparisons	Children's Organizational Skills Scale (COSS)

	Material management, HOPS vs. CHIEF	Very high risk ● (BP, BA)	*n* = 274 *d* = -.24 CI (n.a.) **U**	Clinical implication based on significance of pairwise comparisons	Children's Organizational Skills Scale (COSS)
	Material management, HOPS vs. WLC	Very high risk ● (BP, BA)	*n* = 274 *d* = -.81 CI (n.a.) **I**	Clinical implication based on significance of pairwise comparisons	Children's Organizational Skills Scale (COSS)
	Material management, CHIEF vs. WLC	Very high risk ● (BP, BA)	*n* = 274 *d* = -.57 CI (n.a.) **I**	Clinical implication based on significance of pairwise comparisons	Children's Organizational Skills Scale (COSS)
Organisationale Fähigkeiten. Lehrer*innenurteil					
Langeberg et al., 2017 **Population: middle school students with ADHD** **Intervention: Homework, Organization and Planning Skills (HOPS) or Completing Homework by Improving Efficiency and Focus (CHIEF)** **Comparison: HOPS/CHIEF/Waiting List**	**Task planning, HOPS vs. CHIEF**	High risk ◑ (BP)	*n* = 274 *d* = -.02 CI (n.a.) **U**	Clinical implication based on significance of pairwise comparisons	Children's Organizational Skills Scale (COSS)
	Task planning, HOPS vs. WLC	High risk ◑ (BP)	*n* = 274 *d* = -.06 CI (n.a.) **U**	Clinical implication based on significance of pairwise comparisons	Children's Organizational Skills Scale (COSS)
	Task planning, CHIEF vs. WLC	High risk ◑ (BP)	*n* = 274 *d* = -.09 CI (n.a.) **U**	Clinical implication based on significance of pairwise comparisons	Children's Organizational Skills Scale (COSS)
	Organized actions, HOPS vs. CHIEF	High risk ◑ (BP)	*n* = 274 *d* = -.43 CI (n.a.) **I**	Clinical implication based on significance of pairwise comparisons	Children's Organizational Skills Scale (COSS)
	Organized actions, HOPS vs. WLC	High risk ◑ (BP)	*n* = 274 *d* = -.55	Clinical implication based	Children's Organizational

			CI (n.a.) **I**	on significance of pairwise comparisons	Skills Scale (COSS)
	Organized actions, CHIEF vs. WLC	High risk ◑ (BP)	*n* = 274 *d* = -.09 CI (n.a.) **U**	Clinical implication based on significance of pairwise comparisons	Children's Organizational Skills Scale (COSS)
	Material management, HOPS vs. CHIEF	High risk ◑ (BP)	*n* = 274 *d* = -.3 CI (n.a.) **U**	Clinical implication based on significance of pairwise comparisons	Children's Organizational Skills Scale (COSS)
	Material management, HOPS vs. WLC	High risk ◑ (BP)	*n* = 274 *d* = -.53 CI (n.a.) **I**	Clinical implication based on significance of pairwise comparisons	Children's Organizational Skills Scale (COSS)
	Material management, CHIEF vs. WLC	High risk ◑ (BP)	*n* = 274 *d* = -.18 CI (n.a.) **U**	Clinical implication based on significance of pairwise comparisons	Children's Organizational Skills Scale (COSS)
Hausaufgabenprobleme. Elternurteil					
DuPaul et al., 2018 **Population: middle School Students with ADHD** **Intervention: Challenging Horizons Program** **Comparison: commuity care**	**Homework problems**	Very high risk ● (BP, BA)	*n* = 130 *d* = -.44 CI (n.a.) **I**	Clinical implication based on p-value of group x time interaction	Homework problems checklist (HPC)
Langeberg et al., 2017 **Population: middle school students with ADHD**	**Homework problems total, HOPS vs. CHIEF**	Very high risk ● (BP, BA)	*n* = 274 *d* = .21 CI (n.a.) **U**	Clinical implication based on significance of pairwise comparisons	Homework problems checklist (HPC)

Intervention: Homework, Organization and Planning Skills (HOPS) or Completing Homework by Improving Efficiency and Focus (CHIEF) **Comparison: HOPS/CHIEF/Waiting List**	**Homework problems total, HOPS vs. WLC**	Very high risk ● (BP, BA)	*n* = 274 *d* = 1.29 CI (n.a.) **I**	Clinical implication based on significance of pairwise comparisons	Homework problems checklist (HPC)
	Homework problems total, CHIEF vs. WLC	Very high risk ● (BP, BA)	*n* = 274 *d* = 1.08 CI (n.a.) **I**	Clinical implication based on significance of pairwise comparisons	Homework problems checklist (HPC)
	Homework completion behavior, HOPS vs. CHIEF	Very high risk ● (BP, BA)	*n* = 274 *d* = -.19 CI (n.a.) **U**	Clinical implication based on significance of pairwise comparisons	Homework problems checklist (HPC)
	Homework completion behavior, HOPS vs. WLC	Very high risk ● (BP, BA)	*n* = 274 *d* = -1.27 CI (n.a.) **I**	Clinical implication based on significance of pairwise comparisons	Homework problems checklist (HPC)
	Homework completion behavior, CHIEF vs. WLC	Very high risk ● (BP, BA)	*n* = 274 *d* = -1.06 CI (n.a.) **I**	Clinical implication based on significance of pairwise comparisons	Homework problems checklist (HPC)
	Homework material management, HOPS vs. CHIEF	Very high risk ● (BP, BA)	*n* = 274 *d* = .07 CI (n.a.) **U**	Clinical implication based on significance of pairwise comparisons	Homework problems checklist (HPC)
	Homework material management, HOPS vs. WLC	Very high risk ● (BP, ID)	*n* = 274 *d* = -.87 CI (n.a.) **I**	Clinical implication based on significance of pairwise comparisons	Homework problems checklist (HPC)
	Homework material management, CHIEF vs. WLC	Very high risk ● (BP, BA)	*n* = 274 *d* = -.94 CI (n.a.)	Clinical implication based on significance of	Homework problems checklist (HPC)

			I	pairwise comparisons	
Hausaufgabenprobleme. Lehrer*innenurteil					
Langeberg et al., 2017 **Population: middle school students with ADHD** **Intervention: Homework, Organization and Planning Skills (HOPS) or Completing Homework by Improving Efficiency and Focus (CHIEF)** **Comparison: HOPS/CHIEF/Waiting List**	**Homework problems total, HOPS vs. CHIEF**	High risk ◑ (BP)	*n* = 274 *d* = -.1 CI (n.a.) U	Clinical implication based on significance of pairwise comparisons	Homework problems checklist (HPC)
	Homework problems total, HOPS vs. WLC	High risk ◑ (BP)	*n* = 274 *d* = -.15 CI (n.a.) U	Clinical implication based on significance of pairwise comparisons	Homework problems checklist (HPC)
	Homework problems total, CHIEF vs. WLC	High risk ◑ (BP)	*n* = 274 *d* = -.05 CI (n.a.) U	Clinical implication based on significance of pairwise comparisons	Homework problems checklist (HPC)
Andere funktionale Beeinträchtigungen					
DuPaul et al., 2018 **Population: middle School Students with ADHD** **Intervention: Challenging Horizons Program** **Comparison: commuity care**	**Academic problems**	Very high risk ● (BP, BA)	*n* = 130 *d* = -.53 CI (n.a.) I	Parent-rated; Clinical implication based on p-value of group x time interaction	Adolescent academic problems checklist (AAPC)
	GPA, Last measurement point	High risk ◑ (BP)	*n* = 130 *d* = .06 CI (n.a.) U	Clinical implication based on p-value of group x time interaction	n.a.
	Reading skills	High risk ◑ (BP)	*n* = 130 *d* = .37 CI (n.a.) I	Investigator rated; Clinical implication based on p-value of group differences	Woodcock-Johnson achievement test
	Maths skills	High risk ◑ (BP)	*n* = 130 *d* = -.34 CI (n.a.)	Investigator-rated; Clinical implication based	Woodcock-Johnson achievement test

			C	on p-value of group differences	
	Writing skills	High risk ◑ (BP)	*n* = 130 *d* = -.18 CI (n.a.) **U**	Investigator-rated; Clinical implication based on p-value of group differences	Woodcock-Johnson achievement test
Harrison et al., 2020 **Population: students (11-15 years old) with ADHD** **Intervention: organization training, self-management, note-taking** **Comparison: accomodations (organization support, extended time, copy of theacher notes)**	**Engagement (in science lesson)**	Very high risk ● (BP, BA, ID, UM)	*n* = 55 *parial* η^2 = .07 CI (n.a.) **I**	Clinical implication based on p-value of group x time effects	Observation
	Engagement (in independent practice)	Very high risk ● (BP, BA, ID, UM)	*n* = 55 *parial* η^2 = .07 CI (n.a.) **U**	Clinical implication based on p-value of group x time effects	Observation
	Disruption (in science lesson)	Very high risk ● (BP, BA, UM)	*n* = 55 *parial* η^2 = .06 CI (n.a.) **U**	Clinical implication based on p-value of group x time effects	Observation
	Dispruption (in independent practice)	Very high risk ● (BP, BA, ID, UM)	*n* = 55 *parial* η^2 = .07 CI (n.a.) **U**	Clinical implication based on p-value of group x time effects	Observation
	Completion of notes (in science lesson)	Very high risk ● (BP, BA, ID, UM)	*n* = 55 *parial* η^2 = .42 CI (n.a.) **I**	Clinical implication based on p-value of group x time effects	Observation
	Completion of notes (in independent practice)	Very high risk ● (BP, BA; ID, UM)	*n* = 55 *parial* η^2 = .06 CI (n.a.) **U**	Clinical implication based on p-value of group x time effects	Observation

	Accuracy of notes (in science lesson)	Very high risk ● (BP, BA, ID, UM)	*n* = 55 *parial* η^2 = .51 CI (n.a.) **I**	Clinical implication based on p-value of group x time effects	Observation
	Accuracy of notes (in independent practice)	Very high risk ● (BP, BA, ID, UM)	*n* = 55 *parial* η^2 = .1 CI (n.a.) **U**	Clinical implication based on p-value of group x time effects	Observation
Langsamkeits-, exzessive Tagträumens- und Schläfrigkeits-Symptome (SCT)					
Smith et al. (2020) **Population: young adolescents (mean age not specified) diagnosed with ADHD** **Intervention: organizational skills and homework completion interventions** **Comparison: waitlist control group**	**Sluggish cognitive tempo (SCT) all, Group x time**	Very high risk ● (BP, BA)	*n* = 274* *d* = .410 CI (n.a.) **I**	*n analysed not reported. Clinicial implication based on p value	SCT includes symptoms of slowness, excessive daydreaming, and drowsiness
	Sluggish cognitive tempo (SCT) all, Group x time	Very high risk ● (BP, BA)	*n* = 274* *d* = .313 CI (n.a.) **U**	*n analysed not reported. Clinicial implication based on p value	SCT includes symptoms of slowness, excessive daydreaming, and drowsiness
	High score of sluggish cognitive tempo (SCT), Group x time	Very high risk ● (BP, BA)	*n* = 203* *d* = .517 CI (n.a.) **I**	*n analysed not reported, here 74% of total. Clinicial implication based on p value	SCT includes symptoms of slowness, excessive daydreaming, and drowsiness
	High score of sluggish cognitive tempo (SCT), Group x time	Very high risk ● (BP, BA)	*n* = 149* *d* = .384 CI (n.a.) **U**	*n analysed not reported, here 74% of total. Clinicial implication based on p value	SCT includes symptoms of slowness, excessive daydreaming, and drowsiness

Anmerkung. *n* = Anzahl der Versuchspersonen. SG = sequence generation, CC = concealment, BP = blinding participants, BA = blinding assessors, ID = incomplete data, OR = outcome reporting, CE = carry over effects, SX = stopped early, UM = unvalidated measures, OI = other issues.

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1.3.3.2. In welchem Format, in welcher Intensität und mit welchen Inhalten sollten Eltern- und Lehrkräftetrainings bzw. –beratungen bei Kindern und Jugendlichen ab dem Schulalter angeboten werden?

1.3.3.2 A

Berücksichtigte Endpunktkategorien: Meta-Analysen

Endpunktkategorien	MAs	*m*	Gesamtaussagesicherheit der Evidenz
ADHS Symptome gesamt (KU)	2	2	Schwach - Moderat
ADHS Symptome gesamt (E)	2	2	
Aufmerksamkeit (KU)	1	1	
Hyperaktivität/Impulsivität (KU)	1	1	
ADHS Symptomverbesserung (KL)	1	1	
Verhaltensprobleme (KU)	2	2	
Verhaltensprobleme (E)	2	2	
Emotionale Probleme (E)	1	1	
Funktionalität (E)	2	2	
Lebensqualität (E)	1	1	
ADHS Wissen (E)	1	1	
ADHS Wissen (S)	1	1	
Elterliche mentale Gesundheit (E)	3	5	
Erziehungsverhalten (KU)	1	2	
Erziehungsverhalten (E)	3	10	
Eltern-Kind-Beziehung (KU)	1	1	

Anmerkung. MAs = Anzahl der Meta-Analysen, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.

Berücksichtigte Endpunktkategorien: RCTs

Endpunktkategorien	RCTS	*m*	Gesamtaussagesicherheit der Evidenz
ADHS Symptome gesamt (E)	7	10	Schwach - Moderat
ADHS Symptome gesamt (L)	2	2	
ADHS Symptome gesamt (KL)	2	2	
Aufmerksamkeit (E)	7	15	
Aufmerksamkeit (L)	1	1	
Hyperaktivität/Impulsivität (E)	7	15	
Hyperaktivität/Impulsivität (L)	1	1	
Verhaltensprobleme (E)	11	48	
Verhaltensprobleme (L)	2	2	
Verhaltensprobleme (KL)	2	2	
Internalisierende Symptome (E)	3	5	
Funktionale Beeinträchtigungen (E)	8	21	

Symptomverbesserung (E)	1	1
Lebensqualität (E)	3	7
Lebensqualität (S)	1	1
Physische Aktivität (T)	1	1
Schlaf (KU)	1	2
Elterliche mentale Gesundheit (E)	1	4
Erziehungsverhalten (E)	8	27
Eltern-Kind-Beziehung (E)	1	1

Anmerkung. RCTs = Anzahl der randomisierten kontrollierten Studien, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.

Summary of Findings Tabelle: Meta-Analysen

Referenz	Endpunkt	Aussagesicherheit (GRADE)	Effektstärke	Kommentare	Mess-instrument
ADHS Symptome gesamt. Kombiniertes Urteil					
Dahl et al., 2020 **Population:** youth (ages 5–17) diagnosed with ADHD **Intervention:** psychoeducation-based interventions in combination with other treatment modality or alone, delivered to parents or teachers of children **Comparison:** Individual counseling, parent support, TAU, no control group, placebo pill and psychoeducation	**ADHD symptoms**	Low ⊕⊕◯◯ (R)	*n* = 956, *k* = 7 *g* = .787 CI (.457 - 1.116) **I**	Parent- and teacher-ratings; psychoeducation interventions: any professionally-delivered treatment modality that integrated both psychotherapeutic and educational material into didactic sessions	ADHD-RS-IV, ADHD symptoms (Symptom Checklist), Conners' Rating Scales, Conners' Global Index
Hornstra et al., 2023 **Population:** parents of children and adolescents with ADHD **Intervention:** Individual parent training	**ADHD total symptoms, Individual BPT vs. group BPT**	Not applicable due to missing information	*n* = n.a., *k* = 26 *β* = .27 CI (.00 - .53) **I**	β1 indicates change in standardized mean difference when technique increases with one unit	n.a.

Comparison: group parent training					
ADHS Symptome gesamt. Elternurteil					
Leijten et al., 2018 **Population:** children with conduct problems, 1-12 years **Intervention:** Incredible Years parenting program **Comparison:** control condition, waitlist	**ADHD symptoms**	Moderate ⊕⊕⊕◯ (P)	*n* = 1532, *k* = 11 *SMD* = -.30 CI (-.44 - -.17) **I**		SDQ (1 study: PACS converted in SDQ)
Aufmerksamkeit. Kombiniertes Urteil					
Hornstra et al., 2023 **Population:** parents of children and adolescents with ADHD **Intervention:** Individual parent training **Comparison:** group parent training	**Inattention, Individual BPT vs. group BPT**	Not applicable due to missing information	*n* = n.a., *k* = 17 *β* = .29 CI (-.11 - .69) **U**	β1 indicates change in standardized mean difference when technique increases with one unit	n.a.
Hyperaktivität/Impulsivität. Kombiniertes Urteil					
Hornstra et al., 2023 **Population:** parents of children and adolescents with ADHD **Intervention:** Individual parent training **Comparison:** group parent training	**Hyp./Imp., Individual BPT vs. group BPT**	Not applicable due to missing information	*n* = n.a., *k* = 17 *β* = .55 CI (.10 - 1.00) **I**	β1 indicates change in standardized mean difference when technique increases with one unit	n.a.
Symptomsverbesserung. Kliniker*innenurteil					

Dahl et al., 2020 **Population:** youth (ages 5–17) diagnosed with ADHD **Intervention:** psychoeducation-based interventions in combination with other treatment modality or alone, delivered to parents or teachers of children **Comparison:** Individual counseling, parent support, TAU, no control group, placebo pill and psychoeducation	**Global symptom improvement**	Moderate ⊕⊕⊕◯ (R)	*n* = 168, *k* = 2 *g* = .578 CI (.272 - .885) **I**		CGI, CGI-I
Verhaltensprobleme. Kombiniertes Urteil					
Dahl et al., 2020 **Population:** youth (ages 5–17) diagnosed with ADHD **Intervention:** psychoeducation-based interventions in combination with other treatment modality or alone, delivered to parents or teachers of children **Comparison:** Individual counseling, parent support, TAU, no control group, placebo pill and psychoeducation	**Behavioral problems**	Low ⊕⊕◯◯ (R)	*n* = 568, *k* = 5 *g* = .466 CI (.158 - .774) **I**	Parent- and teacher-ratings	CBCL, SDQ, EPC, SPI, FTF
Hornstra et al., 2023 **Population:** parents of children and adolescents with ADHD **Intervention:** Individual parent training	**Behavioral problems, Individual BPT vs. group BPT**	Not applicable due to missing information	*n* = n.a., *k* = 21 *β* = -.09 CI (-.35 - .18) **U**	β1 indicates change in standardized mean difference when technique increases with one unit	n.a.

Comparison: group parent training					
Verhaltensprobleme. Elternurteil					
Leijten et al., 2018 **Population:** children with conduct problems, 1-12 years **Intervention:** Incredible Years parenting program **Comparison:** control condition, waitlist	**Conduct problems**	Moderate ⊕⊕⊕◯ (P)	*n* = 1622, *k* = 13 *SMD* = -.35 CI (-.51 - -.19) **I**	Ten studies (prevention or treatment trials) 70% of the children scored above clinical cut-off on ECBI, four studies (selective prevention trials for high-risk families) 30% of children scored above	ECBI (for 2 studies PACS was converted in ECBI)
Emotionale Probleme. Elternurteil					
Leijten et al., 2018 **Population:** children with conduct problems, 1-12 years **Intervention:** Incredible Years parenting program **Comparison:** control condition, waitlist	**Emotional problems**	Low ⊕⊕◯◯ (IP, P)	*n* = 1340, *k* = 10 *SMD* = -.06 CI (-.18 - .06) **U**		SDQ (for 2 studies CBCL converted in SDQ)
Funktionalität. Elternurteil					
Dahl et al., 2020 **Population:** youth (ages 5–17) diagnosed with ADHD **Intervention:** psychoeducation-based interventions in combination with other treatment modality or alone, delivered to parents or teachers of children	**Global functioning**	Very low ⊕◯◯◯ (R, IP)	*n* = 387, *k* = 3 *g* = .397 CI (-.01 - .808) **U**		CGAS, Weiss Functional Impairment Rating Scale, WFIRS-P

Comparison: Individual counseling, parent support, TAU, no control group, placebo pill and psychoeducation					
Lebensqualität. Elternurteil					
Dahl et al., 2020 **Population:** youth (ages 5–17) diagnosed with ADHD **Intervention:** psychoeducation-based interventions in combination with other treatment modality or alone, delivered to parents or teachers of children **Comparison:** Individual counseling, parent support, TAU, no control group, placebo pill and psychoeducation	**Quality of life**	Moderate ⨁⨁⨁◯ (IP)	*n* = 180, *k* = 2 *g* = .119 CI (-.174 - .412) **U**		EQ-5D, CHIP-CE
ADHS Wissen. Elternurteil					
Dahl et al., 2020 **Population:** youth (ages 5–17) diagnosed with ADHD **Intervention:** psychoeducation-based interventions in combination with other treatment modality or alone, delivered to parents or teachers of children **Comparison:** Individual counseling, parent support, TAU, no control group, placebo pill and psychoeducation	**Parent-teacher's knowledge of ADHD**	Very low ⨁◯◯◯ (R, IC, IP)	*n* = 154, *k* = 3 *g* = 1.037 CI (-.195 - 2.269) **U**	Validation of questionnaire unclear; parent-teacher-ratings	Questionnaire designed by authors in 3 studies

ADHS Wissen. Selbsturteil					
Dahl et al., 2020 **Population:** youth (ages 5–17) diagnosed with ADHD **Intervention:** psychoeducation-based interventions in combination with other treatment modality or alone, delivered to parents or teachers of children **Comparison:** Individual counseling, parent support, TAU, no control group, placebo pill and psychoeducation	**Child's knowledge of ADHD, Within group effect**	Very low ⊕◯◯◯ (R)	*n* = 40, *k* = 2 *g* = .721 CI (.370 - 1.072) **I**	2 included studies: pre-post design without CG; validation of questionnaire in one study unclear	Children's ADHD Knowledge & Opinions Questionnaire; Questionnaire designed by authors in 1 study
Elterliche mentale Gesundheit. Elternurteil					
Dahl et al., 2020 **Population:** youth (ages 5–17) diagnosed with ADHD **Intervention:** psychoeducation-based interventions in combination with other treatment modality or alone, delivered to parents or teachers of children **Comparison:** Individual counseling, parent support, TAU, no control group, placebo pill and psychoeducation	**Parenting stress**	Moderate ⊕⊕⊕◯ (IP)	*n* = 249, *k* = 3 *g* = .209 CI (-.039 - .458) **U**		NCSQ, PSI-SF
Dekkers et al., 2022 **Population:** children and adolescence with ADHD, < 18 years, no medication as part of intervention	**Parental mental health**	Low ⊕⊕◯◯ (R, IC)	*n* = 1155, *k* = 20 *g* = .41 CI (.20 - .61) **I**	Parental mental health included parenting stress and several indices of parental psychopathology	BDI, PSI, CSQ, GHQ, AARS, DASS, SNQ

Intervention: behavioral parent intervention (single/group) **Comparison:** active control, treatment as usual, no treatment/ waitlist				(eg, depression, anxiety, ADHD). No trim & fill considered, as funnel plot not asymmetric.	
Leijten et al., 2018 **Population:** children with conduct problems, 1-12 years **Intervention:** Incredible Years parenting program **Comparison:** control condition, waitlist	**Parental mental health: depression**	Low ⊕⊕◯◯ (IP, P)	*n* = 1359, *k* = 11 *SMD* = -.08 CI (-.17 - .01) **U**	Univariate analysis	BDI (3 studies converted from Brief symptom inventory and General health questionnaire in BDI)
	Parental mental health: stress	Low ⊕⊕◯◯ (IP, P)	*n* = 542, *k* = 5 *SMD* = -.18 CI (-.44 - .07) **U**	Univariate analysis	Parenting stress index
	Parental mental health: self-efficacy	Low ⊕⊕◯◯ (IP, P)	*n* = 417, *k* = 4 *SMD* = -.32 CI (-.77 - .13) **U**	Univariate analysis	Parental sense of competence scale
Erziehungsverhalten. Kombiniertes Urteil					
Dekkers et al., 2022 **Population:** children and adolescence with ADHD, < 18 years, no medication as part of intervention **Intervention**: behavioral parent intervention (single/group) **Comparison:** active control, treatment as usual, no treatment/ waitlist	**Positive parenting**	Low ⊕⊕◯◯ (IC)	*n* = 1470, *k* = 15 *g* = .60 CI (.39 - .81) **I**	No trim & fill considered, as funnel plot not asymmetric. Authors' note: Study should be seen as hypothesis-generating, not confirmation of effectiveness of parent training. ES not significantly different for probably blinded (SMD = 0.58) and unblinded measures (SMD =	PPI, DPICS, GIPCI, CCNES, APQ, PCRQ, PPI, FIQ, PAMS, Observation

				0.63) on positive parenting	
	Negative parenting	Very low ⊕◯◯◯ (R, IC)	*n* = 946, *k* = 13 *g* = .35 CI (.12 - .59) **I**	Robust ES for all 5 outcome domains; ES lower when parent training compared with active control conditions relative to waitlists, but only ES for negative parenting dropped to non-significant when including only studies with active control conditions. ES not significantly different for probably blinded (SMD = 0.68) and unblinded measures (SMD = 0.54) on negative parenting	APQ, PCRQ, PCRS, DPICS, PS, CCNES, Observation
Erziehungsverhalten. Elternurteil					
Dekkers et al., 2022 **Population:** children and adolescence with ADHD, < 18 years, no medication as part of intervention **Intervention**: behavioral parent intervention (single/group) **Comparison:** active control, treatment as usual, no treatment/ waitlist	**Parenting sense of competence**	Low ⊕⊕◯◯ (R, IC)	*n* = 1239, *k* = 14 *g* = .54 CI (.36 - .72) **I**		PSOC, PCEQ, PES, PSCS, PSI, PSBC

	Positive parenting: praise	Moderate ⊕⊕⊕◯ (P)	*n* = 630, *k* = 6 *SMD* = .26 CI (.01 - .51) **I**	To minimize missing data biases due to large amounts of missing data for some pooled outcome variables, multilevel modeling (random effect modeling) used	PPI, APQ, PS, interview, multiple parenting measures
	Positive parenting: tangible rewards	Low ⊕⊕◯◯ (IP, P)	*n* = 625, *k* = 6 *SMD* = .15 CI (-.16 - .45) **U**		PPI, APQ, PS, interview, multiple parenting measures
Leijten et al., 2018 **Population:** children with conduct problems, 1-12 years **Intervention:** Incredible Years parenting program **Comparison:** control condition, waitlist	**Positive parenting: monitoring**	Low ⊕⊕◯◯ (IP, P)	*n* = 1088, *k* = 9 *SMD* = .05 CI (-.08 - .18) **U**		PPI, APQ, PS, interview, multiple parenting measures
	Negative parenting: corporal punishment	Moderate ⊕⊕⊕◯ (P)	*n* = 1393, *k* = 10 *SMD* = -.22 CI (-.42 - -.01) **I**		PPI, APQ, PS, interview, multiple parenting measures
	Negative parenting: threatening	Moderate ⊕⊕⊕◯ (P)	*n* = 999, *k* = 9 *SMD* = -.21 CI (-.36 - -.06) **I**		PPI, APQ, PS, interview, multiple parenting measures
	Negative Parenting: laxness	Low ⊕⊕◯◯ (IP, P)	*n* = 978, *k* = 9 *SMD* = -.15 CI (-.37 - .07) **U**		PPI, APQ, PS, interview, multiple parenting measures

	Negative parenting: shouting	Moderate ⊕⊕⊕◯ (P)	*n* = 967, *k* = 15 *SMD* = -.31 CI (-.61 - -.01) **I**		PPI, APQ, PS, interview, multiple parenting measures
Eltern-Kind-Beziehung. Kombiniertes Urteil					
Dekkers et al., 2022 **Population:** children and adolescence with ADHD, < 18 years, no medication as part of intervention **Intervention**: behavioral parent intervention (single/group) **Comparison:** active control, treatment as usual, no treatment/ waitlist	**Quality of parent-child relationship**	Very low ⊕◯◯◯ (R, IC)	*n* = 727, *k* = 11 *g* = .37 CI (.07 - .67) **I**	Significantly different for probably blinded (SMD = 0.53) and unblinded measures (SMD = 0.54) of child-parent-relationship.	GIPCI, PSI, PPES, PBI, IRS, PSDQ, PCRQ, CBQ, PFMSS, Pasta Task, Observation

Anmerkung. *n* = Anzahl der Versuchspersonen, *k* = Anzahl der inkludierten Primärstudien. R = risk of bias, IC = inconsistency, ID = indirectness, IP = imprecision, P = publication bias.

Summary of Findings Tabellen: RCTs

Referenz	Endpunkt	Risk of Bias	Effektstärke	Kommentare	Mess-instrument
ADHS Symptome gesamt. Elternurteil					
Chu et al., 2022 **Population:** school-aged students (aged 6-8 years) with ADHD **Intervention:** group executive functioning and online parent training (GEF-OPT) program **Comparison:** waitlist group	**ADHD symptoms total**	Very high risk ● (BP, BA)	*n* = 145 *d* = .06 CI (-.21 - .33) **U**		Chinese version of SNAP-IV
Chung et al., 2024 **Population:** parents of children with ADHD (7-11 years old) **Intervention:** Behavioral Parent Training, done by a school-psychologist, online (via Zoom) **Comparison:** no control group	**ADHD total symptoms, Within group**	Very high risk ● (SG, BP, BA)	*n* = 22 *ω2* = .36 CI (n.a.) **I**	Clinical implication based on p-value	Child and Adolescent Symtom Inventory (CASI)
Dose, et al., 2017 **Population:** parents of medicated children with ADHD and residual functional impairment **Intervention:** TASH + routine care (incl. MED) **Comparison:** routine care (incl. MED) only	**ADHD total symptoms, TASH + TAU vs. TAU**	Very high risk ● (BP, BA)	*n* = 103 *d* = .28 CI (n.a.) **U**	Clinical implication based on p-value	FBB-ADHS
Engelbrektsson et al., 2023 **Population:** parents of children with disruptive behavior problems (3-11 years, no inf. Regarding diagnosis)	**ADHD symptoms, Online BPT vs. group BPT, 3 months Follow-up**	Very high risk ● (BP, BA)	*n* = 161 *d* = .05 CI (-.16 - .26) **U**	ITT-data extracted; PP-data only marginally different; clinical implication based on superiority analysis	Strengths and Difficulties Questionnaire (SDQ)

Intervention: internet-delivered parent training (iComet) **Comparison:** group parent training (in person, gComet)	**ADHD symptoms, Online BPT vs. group BPT, 12 months Follow-up**	Very high risk ● (BP, BA)	*n* = 161 *d* = .12 CI (-.13 - .38) **U**	ITT-data extracted; PP-data only marginally different; clinical implication based on superiority analysis	Strengths and Difficulties Questionnaire (SDQ)
Hautmann et al., 2018 **Population:** parents of children with ADHD (4-11 years old) **Intervention:** Behavioral Parent Training (BPT) **Comparison:** Nonbehavioral Parent Training (non-BPT)	**Total ADHD symptoms, BPT vs. non-BPT**	Very high risk ● (BP, BA, ID)	*n* = 110 *d* = .05 CI (-.23 - .33) **U**	Data from per-protocol analysis	FBB-ADHS
	Total ADHD symptoms, BPT vs. non-BPT, Follow-up	Very high risk ● (BP, BA, ID)	*n* = 110 *d* = .13 CI (-.22 - .48) **U**	Data from per-protocol analysis	FBB-ADHS
Nobel et al., 2020 **Population:** school-aged children diagnosed with ADHD and behavior problems despite previous treatments **Intervention:** home-based behavioral parent training **Comparison:** waiting list (no intervention) and care-as-usual home-based treatment	**ADHD symptoms, Intervention vs. waiting list**	Very high risk ● (BP, BA)	*n* = 49 *d* = .89 CI (n.a.) **I**	After treatment; clinical implication based on p-values of data analyzed with linear mixed model for repeated measure	Swanson, Nolan, and Pelham Questionnaire (SNAP-IV)
	ADHD symptoms, Intervention vs. TAU	Very high risk ● (BP, BA)	*n* = 50 *d* = .89 CI (n.a.) **I**	After treatment; clinical implication based on p-values of data analyzed with linear mixed model for repeated measure	Swanson, Nolan, and Pelham Questionnaire (SNAP-IV)
Tandon et al., 2024 **Population:** families with children with ADHD (ages 6–10 years) **Intervention:** weekly 90-min LEAP virtual "telegroups" were conducted via HIPAA-compliant zoom	**Core ADHD symptoms**	Very high risk ● (BP, BA, ID, OR)	*n* = 84 *ES* = n.a. CI (n.a.) **U**	No significant changes over time by intervention group; no p-value reported	Conners 3-P

Comparison: weekly 90-min standard BMT					
ADHS Symptome gesamt. Lehrer*innenurteil					
Chu et al., 2022 **Population:** school-aged students (aged 6-8 years) with ADHD **Intervention:** group executive functioning and online parent training (GEF-OPT) program **Comparison:** waitlist group	**ADHD symptoms total**	High risk ◑ (BP)	*n* = 145 *d* = .43 CI (.17 - .69) **I**		Chinese version of SNAP-IV
Hautmann et al., 2018 **Population:** parents of children with ADHD (4-11 years old) **Intervention:** Behavioral Parent Training (BPT) **Comparison:** Nonbehavioral Parent Training (non-BPT)	**Total ADHD symptoms, BPT vs. non-BPT**	Very high risk ● (BP, ID)	*n* = 110 *d* = -.2 CI (-.58 - .18) **U**	Data from per-protocol analysis; no information if teacher were blinded	FBB-ADHS
ADHS Symptome gesamt. Kliniker*innenurteil					
Engelbrektsson et al., 2023 **Population:** parents of children with disruptive behavior problems (3-11 years, no inf. Regarding diagnosis) **Intervention:** internet-delivered parent training (iComet) **Comparison:** group parent training (in person, gComet)	**Total ADHD symptoms, Online BPT vs. group BPT, 3 months FU**	High risk ◑ (BP)	*n* = 161 *d* = .34 CI (.02 - .66) **I**	ITT-data extracted; PP-data only marginally different; clinical implication based on superiority analysis	MINI-KID
Hautmann et al., 2018	**Total ADHD symptoms, BPT vs. non-BPT**	Very high risk ● (BP, ID)	*n* = 110 *d* = .05 CI (-.23 - .33) **U**	Data from per-protocol analysis	DCL-ADHS

Population: parents of children with ADHD (4-11 years old) **Intervention:** Behavioral Parent Training (BPT) **Comparison:** Nonbehavioral Parent Training (non-BPT)					
Aufmerksamkeit. Elternurteil					
Chu et al., 2022 **Population:** school-aged students (aged 6-8 years) with ADHD **Intervention:** group executive functioning and online parent training (GEF-OPT) program **Comparison:** waitlist group	**Inattentive**	Very high risk ● (BP, BA)	*n* = 145 *d* = .27 CI (-.06 - .60) **U**		Chinese version of SNAP-IV subscales - Inattention
Daley et al., 2021 **Population:** parents of mediacted children with ADHD **Intervention:** self-help version of the New Forest Parenting Programme + TAU (incl. MED) **Comparison:** TAU (incl. MED)	**Child inattention, PT + TAU vs. TAU**	Very high risk ● (BP, BA, CE)	*n* = 52 *d* = .23 CI (n.a.) **U**	Post intervention; clinical implication based on p-value	SNAP
	Child inattention, PT + TAU vs. TAU, Follow-up	Very high risk ● (BP, BA, CE)	*n* = 52 *d* = .25 CI (n.a.) **U**	Clinical implication based on p-value	SNAP
Dose, et al., 2017 **Population:** parents of medicated children with ADHD and residual functional impairment **Intervention:** TASH + routine care (incl. MED) **Comparison:** routine care (incl. MED) only	**Inattention, TASH + TAU vs. TAU**	Very high risk ● (BP, BA)	*n* = 103 *d* = .44 CI (n.a.) **I**	Clinical implication based on p-value	FBB-ADHS

	Inattention symptoms, AC vs. control, Post-treatment	Very high risk ● (BP, BA)	*n* = 60 *d* = .39 CI (-.12 - .90) **U**	T1 = 1 week after training	SWAN
	Inattention symptoms, CC vs. control, Post-treatment	Very high risk ● (BP, BA)	*n* = 62 *d* = .22 CI (-.29 - .73) **U**	T1 = 1 week after training	SWAN
Hornstra et al., 2021 **Population:** parents of children aged 4-12 with ADHD **Intervention:** Antecedent-based parent training (AC) or Consequent-based parent training (CC) **Comparison:** waitlist control group	**Inattention symptoms, AC vs. CC, Post-treatment**	Very high risk ● (BP, BA)	*n* = 62 *d* = .17 CI (-.34 - .68) **U**	T1 = 1 week after training	SWAN
	Inattention symptoms, AC vs. control, Follow-up	Very high risk ● (BP, BA)	*n* = 60 *d* = .34 CI (-.17 - .85) **U**	T2 = 3 weeks after training	SWAN
	Inattention symptoms, CC vs. control, Follow-up	Very high risk ● (BP, BA)	*n* = 62 *d* = -.17 CI (-.68 - .34) **U**	T2 = 3 weeks after training	SWAN
	Inattention symptoms, AC vs. CC, Follow-up	Very high risk ● (BP, BA)	*n* = 62 *d* = .51 CI (.00 - 1.02) **I**	T2 = 3 weeks after training	SWAN

Nuno et al., 2020 **Population:** parents of children 6-8 years old with ADHD or suspected of having ADHD **Intervention:** online parent training - Nurtured Heart Approach (NHA) **Comparison:** delayed control	**Inattention**	Very high risk ● (BP, BA)	*n* = 87 *ES* = n.a. CI (n.a.) **I**	Clinical implication based on p-value	Conners 3-P Short-Form
Paiva et al., 2024 **Population:** families of boys with ADHD symptoms (6-12 years old, 50% medicated) **Intervention:** Face to Face (F2F) behavioral parent training + standard treatment (ST, possibly incl. MED) **Comparison:** online behavioral parent training + standard treatment (ST, possibly incl. MED) or ST alone	**Inattention, F2F BPT vs. ST**	Very high risk ● (BP, BA, ID)	*n* = 39 *ES* = n.a. CI (n.a.) **U**	Clinical implication based on post-hoc analyses of time x group interaction	MTA-SNAP-IV
	Inattention, Online BPT vs. ST	Very high risk ● (BP, BA, ID)	*n* = 38 *ES* = n.a. CI (n.a.) **U**	Clinical implication based on post-hoc analyses of time x group interaction	MTA-SNAP-IV
	Inattention, F2F BPT vs. online BPT	Very high risk ● (BP, BA, ID)	*n* = 37 *ES* = n.a. CI (n.a.) **U**	Clinical implication based on post-hoc analyses of time x group interaction	MTA-SNAP-IV
Tandon et al., 2024 **Population:** families with children with ADHD (ages 6–10 years) **Intervention:** weekly 90-min LEAP virtual "telegroups" were conducted via HIPAA-compliant zoom **Comparison:** weekly 90-min standard BMT	**Inattention**	Very high risk ● (BP, BA, ID, OR)	*n* = 84 *ES* = n.a. CI (n.a.) **U**	No significant changes over time by intervention group; no p-value reported	Conners 3-P
Aufmerksamkeit. Lehrer*innenurteil					

Chu et al., 2022 **Population:** school-aged students (aged 6-8 years) with ADHD **Intervention:** group executive functioning and online parent training (GEF-OPT) program **Comparison:** waitlist group	**Inattentive**	High risk ◑ (BP)	*n* = 145 *d* = .53 CI (.24 - .82) **I**		Chinese version of SNAP-IV subscale - Inattention
Hyperaktivität/Impulsivität. Elternurteil					
Chu et al., 2022 **Population:** school-aged students (aged 6-8 years) with ADHD **Intervention:** group executive functioning and online parent training (GEF-OPT) program **Comparison:** waitlist group	**Hyperactivity/impulsivity**	Very high risk ● (BP, BA)	*n* = 145 *d* = -.41 CI (-.69 - -.14) **C**		Chinese version of SNAP-IV subscales - Hyperactivity
Daley et al., 2021 **Population:** parents of mediacted children with ADHD **Intervention:** self-help version of the New Forest Parenting Programme + TAU (incl. MED) **Comparison:** TAU (incl. MED)	**Child hyp./ imp., PT + TAU vs. TAU**	Very high risk ● (BP, BA, CE)	*n* = 52 *d* = -.16 CI (n.a.) **U**	Post intervention; clinical implication based on p-value	SNAP
	Child hyp./ imp., PT + TAU vs. TAU, Follow-up	Very high risk ● (BP, BA, CE)	*n* = 52 *d* = -.11 CI (n.a.) **U**	Clinical implication based on p-value	SNAP
Dose et al., 2017 **Population:** parents of medicated children with ADHD and residual functional impairment	**Hyp./ imp., TASH + TAU vs. TAU**	Very high risk ● (BP, BA)	*n* = 103 *d* = .11 CI (n.a.) **U**	Clinical implication based on p-value	FBB-ADHS

Intervention: TASH + routine care (incl. MED) **Comparison:** routine care (incl. MED) only					
Hornstra et al., 2021 **Population:** parents of children aged 4-12 with ADHD **Intervention:** Antecedent-based parent training (AC) or Consequent-based parent training (CC) **Comparison:** waitlist control group	**Hyperactivity-impulsivity symptoms, AC vs. control, Post-treatment**	Very high risk ● (BP, BA)	*n* = 60 *d* = .12 CI (-.45 - .69) **U**	T1 = 1 week after training	SWAN
	Hyperactivity-impulsivity symptoms, CC vs. control, Post-treatment	Very high risk ● (BP, BA)	*n* = 62 *d* = .33 CI (-.24 - .90) **U**	T1 = 1 week after training	SWAN
	Hyperactivity-impulsivity symptoms, AC vs. CC, Post-treatment	Very high risk ● (BP, BA)	*n* = 62 *d* = -.20 CI (-.76 - .37) **U**	T1 = 1 week after training	SWAN
	Hyperactivity-impulsivity symptoms, AC vs. control, Follow-up	Very high risk ● (BP, BA)	*n* = 60 *d* = .59 CI (.03 - 1.15) **I**	T2 = 3 weeks after training	SWAN
	Hyperactivity-impulsivity symptoms, CC vs. control, Follow-up	Very high risk ● (BP, BA)	*n* = 62 *d* = .42 CI (-.10 - .94) **U**	T2 = 3 weeks after training	SWAN
	Hyperactivity-impulsivity symptoms, AC vs. CC, Follow-up	Very high risk ● (BP, BA)	*n* = 62 *d* = .17 CI (-.38 - .72) **U**	T2 = 3 weeks after training	SWAN

Nuno et al., 2020 **Population:** parents of children 6-8 years old with ADHD or suspected of having ADHD **Intervention:** online parent training - Nurtured Heart Approach (NHA) **Comparison:** delayed control	**Hyperactivity/impulsivity**	Very high risk ● (BP, BA)	*n* = 87 *ES* = n.a. CI (n.a.) **I**	Clinical implication based on p-value	Conners 3-P Short-Form
Paiva et al., 2024 **Population:** families of boys with ADHD symptoms (6-12 years old, 50% medicated) **Intervention:** Face to Face (F2F) behavioral parent training + standard treatment (ST, possibly incl. MED) **Comparison:** online behavioral parent training + standard treatment (ST, possibly incl. MED) or ST alone	**Hyp./ imp., F2F BPT vs. ST**	Very high risk ● (BP, BA, ID)	*n* = 39 *ES* = n.a. CI (n.a.) **I**	Clinical implication based on post-hoc analyses of time x group interaction	MTA-SNAP-IV
	Hyp./ imp., Online BPT vs. ST	Very high risk ● (BP, BA, ID)	*n* = 38 *ES* = n.a. CI (n.a.) **U**	Clinical implication based on post-hoc analyses of time x group interaction	MTA-SNAP-IV
	Hyp./ imp., F2F BPT vs. online BPT	Very high risk ● (BP, BA, ID)	*n* = 37 *ES* = n.a. CI (n.a.) **U**	Clinical implication based on post-hoc analyses of time x group interaction	MTA-SNAP-IV
Tandon et al., 2024 **Population:** families with children with ADHD (ages 6–10 years) **Intervention:** weekly 90-min LEAP virtual "telegroups" were conducted via HIPAA-compliant zoom **Comparison:** weekly 90-min standard BMT	**Hyperactivity**	Very high risk ● (BP, BA, ID, OR)	*n* = 84 *ES* = n.a. CI (n.a.) **U**	No significant changes over time by intervention group; no p-value reported	Conners 3-P
Hyperaktivität/Impulsivität. Lehrer*innenurteil					

Chu et al., 2022 **Population:** school-aged students (aged 6-8 years) with ADHD **Intervention:** group executive functioning and online parent training (GEF-OPT) program **Comparison:** waitlist group	**Hyperactivity/impulsivity**	High risk ◑ (BP)	*n* = 145 *d* = -.09 CI (-.36 - .18) **U**		Chinese version of SNAP-IV subscale - Inattention
Verhaltensprobleme. Elternurteil					
Chu et al., 2022 **Population:** school-aged students (aged 6-8 years) with ADHD **Intervention:** group executive functioning and online parent training (GEF-OPT) program **Comparison:** waitlist group	**ODD**	Very high risk ● (BP, BA)	*n* = 145 *d* = .27 CI (-.03 - .57) **U**		Chinese version of SNAP-IV subscales - Hyperactivity
Chung et al., 2024 **Population:** parents of children with ADHD (7-11 years old) **Intervention:** Behavioral Parent Training, done by a school-psychologist, online (via Zoom) **Comparison:** no control group	**ODD total symptoms, Within group**	Very high risk ● (SG, BP, BA)	*n* = 22 *ω2* = .11 CI (n.a.) **U**	Clinical implication based on p-value	Child and Adolescent Symptom Inventory (CASI)
	Child prosocial behaviour, Within group	Very high risk ● (SG, BP, BA)	*n* = 22 *ω2* = .11 CI (n.a.) **U**	Clinical implication based on p-value	Child and Adolescent Symptom Inventory (CASI)
Daley et al., 2021 **Population:** parents of mediacted children with ADHD	**Child ODD symptoms, PT + TAU vs. TAU**	Very high risk ● (BP, BA, CE)	*n* = 52 *d* = .00 CI (n.a.) **U**	Post intervention; clinical implication based on p-value	SNAP

Intervention: self-help version of the New Forest Parenting Programme + TAU (incl. MED) **Comparison:** TAU (incl. MED)	**Child problem behavior, PT + TAU vs. TAU**	Very high risk ● (BP, BA, CE)	*n* = 52 *d* = .19 CI (n.a.) **U**	Frequency; post intervention; clinical implication based on p-value	Eyberg Child Behavior Inventory (ECBI)
	Child ODD symptoms, PT + TAU vs. TAU, Follow-up	Very high risk ● (BP, BA, CE)	*n* = 52 *d* = .3 CI (n.a.) **U**	Post intervention; clinical implication based on p-value	SNAP
	Child problem behavior, PT + TAU vs. TAU, Follow-up	Very high risk ● (BP, BA, CE)	*n* = 52 *d* = .15 CI (n.a.) **U**	Frequency; post intervention; clinical implication based on p-value	Eyberg Child Behavior Inventory (ECBI)
De Jong et al., 2023 **Population:** parents with children (4-12 years) with externalizing problems + ADHD or ODD **Intervention:** parenting program **Comparison:** waiting group	**Daily externalizing behavior, P1 + P2 vs. WG**	Very high risk ● (BP, BA, UM)	*n* = 110 *d* = -.43 CI (n.a.) **I**	Clinical implication based on p-value	EMA (phone interview with parents)
	Daily externalizing behavior, P1 + P2 within group, T2 vs. follow-up	Very high risk ● (BP, BA, UM)	*n* = 74 *b* = -.11 CI (n.a.) **I**	Clinical implication based on p-value	EMA (phone interview with parents)
	Daily externalizing behavior, P1 + P2 vs. WG	Very high risk ● (BP, BA)	*n* = 110 *d* = -.51 CI (n.a.) **I**	Clinical implication based on p-value	ECBI

Daily externalizing behavior, P1 + P2 within group, T2 vs. follow-up	Very high risk ● (BP, BA)	*n* = 74 *b* = -3.48 CI (n.a.) **I**	Clinical implication based on p-value	ECBI
Daily externalizing behavior, P1 vs. P2, At T2	Very high risk ● (BP, BA, UM)	*n* = 74 *d* = -.03 CI (n.a.) **I**	Clinical implication based on p-value	EMA (phone interview with parents)
Daily externalizing behavior, P1 vs. P2, At T2	Very high risk ● (BP, BA)	*n* = 74 *d* = .12 CI (n.a.) **I**	Clinical implication based on p-value	ECBI
Daily externalizing behavior, P1 vs. P2, At follow-up	Very high risk ● (BP, BA, UM)	*n* = 74 *d* = -.32 CI (n.a.) **I**	Clinical implication based on p-value	EMA (phone interview with parents)
Daily externalizing behavior, P1 vs. P2, At follow-up	Very high risk ● (BP, BA)	*n* = 74 *d* = -.05 CI (n.a.) **I**	Clinical implication based on p-value	ECBI
Daily externalizing behavior, P1 within group, T2 vs. follow-up	Very high risk ● (BP, BA, UM)	*n* = 37 *b*= -.20 CI (n.a.) **I**	Clinical implication based on p-value	EMA (phone interview with parents)

	Daily externalizing behavior, P2 within group, T2 vs. follow-up	Very high risk ● (BP, BA, UM)	*n* = 37 *b* = -.02 CI (n.a.) **I**	Clinical implication based on p-value	EMA (phone interview with parents)
	Daily externalizing behavior, P1 within group, T2 vs. follow-up	Very high risk ● (BP, BA)	*n* = 37 *b* = -5.24 CI (n.a.) **I**	Clinical implication based on p-value	ECBI
	Daily externalizing behavior, P2 within group, T2 vs. follow-up	Very high risk ● (BP, BA)	*n* = 37 *b* = -2.07 CI (n.a.) **I**	Clinical implication based on p-value	ECBI
Dose et al., 2017 **Population:** parents of medicated children with ADHD and residual functional impairment **Intervention:** TASH + routine care (incl. MED) **Comparison:** routine care (incl. MED) only	**ODD total symptoms, TASH + TAU vs. TAU**	Very high risk ● (BP, BA)	*n* = 103 *d* = .43 CI (n.a.) **I**	Clinical implication based on p-value	FBB-SSV
Engelbrektsson et al., 2023 **Population:** parents of children with disruptive behavior problems (3-11 years, no inf. Regarding diagnosis) **Intervention:** internet-delivered parent training (iComet) **Comparison:** group parent training (in person, gComet)	**Disruptive behavior, Online BPT vs. group BPT, 3 months FU**	Very high risk ● (BP, BA)	*n* = 161 *d* = .12 CI (n.a. - .32) **U**	ITT-data extracted; PP-data only marginally different; clinical implication based on non-inferiority analysis	ECBI-IS
	Disruptive behavior, Online BPT vs. group BPT, 6 months FU	Very high risk ● (BP, BA)	*n* = 161 *d* = .08 CI (n.a. - .33) **U**	ITT-data extracted; PP-data only marginally different; clinical implication based on non-inferiority analysis	ECBI-IS

	Disruptive behavior, Online BPT vs. group BPT, 12 months FU	Very high risk ● (BP, BA)	*n* = 161 *d* = .11 CI (n.a. - .33) **U**	ITT-data extracted; PP-data only marginally different; clinical implication based on non-inferiority analysis	ECBI-IS
	Conduct problems, Online BPT vs. group BPT, 3 months FU	Very high risk ● (BP, BA)	*n* = 161 *d* = .15 CI (-.11 - .40) **U**	ITT-data extracted; PP-data only marginally different; clinical implication based on superiority analysis	SDQ
	Conduct problems, Online BPT vs. group BPT, 12 months FU	Very high risk ● (BP, BA)	*n* = 161 *d* = .11 CI (-.23 - .45) **U**	ITT-data extracted; PP-data only marginally different; clinical implication based on superiority analysis	SDQ
Hautmann et al., 2018 **Population:** parents of children with ADHD (4-11 years old) **Intervention:** Behavioral Parent Training (BPT) **Comparison:** Nonbehavioral Parent Training (non-BPT)	**Total ODD symptoms, BPT vs. non-BPT**	Very high risk ● (BP, BA, ID)	*n* = 110 *d* = -.20 CI (-.52 - .12) **U**	Data from per-protocol analysis	FBB-SSV
	Externalizing symptoms, BPT vs. non-BPT	Very high risk ● (BP, BA, ID)	*n* = 110 *d* = -.31 CI (-.59 - -.04) **I**	Data from per-protocol analysis	CBCL
	Total ODD symptoms, BPT vs. non-BPT, Follow-up	Very high risk ● (BP, BA, ID)	*n* = 110 *d* = .02 CI (-.34 - .38) **U**	Data from per-protocol analysis	FBB-SSV

	Total behavioral problems, Ind. BPT vs. TAU	Very high risk ● (BP, BA)	*n* = 160 *d* = 1.05 CI (n.a.) **I**	Clinical implication based on authors statement about CI including 0 or not; results controlled for MED effect	Home Situations Questionnaire (HSQ)
	Total behavioral problems, Group BPT vs. TAU	Very high risk ● (BP, BA)	*n* = 155 *d* = .61 CI (n.a.) **I**	Clinical implication based on authors statement about CI including 0 or not; results controlled for MED effect	Home Situations Questionnaire (HSQ)
Heubeck et al., 2021 **Population:** parents of children with ADHD (mostly with comorbid ODD/CD) **Intervention:** individual behavioral parent training (Ind. BPT) or group behavioral parent training (group BPT) **Comparison:** TAU	**Total behavioral problems, Ind. BPT vs. TAU, Follow-up**	Very high risk ● (BP, BA)	*n* = 160 *d* = .81 CI (n.a.) **I**	Clinical implication based on authors statement about CI including 0 or not; results controlled for MED effect	Home Situations Questionnaire (HSQ)
	Total behavioral problems, Group BPT vs. TAU, Follow-up	Very high risk ● (BP, BA)	*n* = 155 *d* = .62 CI (n.a.) **I**	Clinical implication based on authors statement about CI including 0 or not; results controlled for MED effect	Home Situations Questionnaire (HSQ)
	Total behavioral problems, Ind. BPT within group	Very high risk ● (BP, BA)	*n* = 160 *d* = 1.86 CI (n.a.) **I**	Clinical implication based on authors statement about CI including 0 or not; results controlled for MED effect	Home Situations Questionnaire (HSQ)
	Total behavioral problems,	Very high risk ● (BP, BA)	*n* = 155 *d* = 1.25 CI (n.a.)	Clinical implication based on authors	Home Situations Questionnaire (HSQ)

	Group BPT within group		**I**	statement about CI including 0 or not; results controlled for MED effect	
	Total behavioral problems, Ind. BPT within group, Follow-up	Very high risk ● (BP, BA)	*n* = 160 *d* = 2.03 CI (n.a.) **I**	Clinical implication based on authors statement about CI including 0 or not; results controlled for MED effect	Home Situations Questionnaire (HSQ)
	Total behavioral problems, Group BPT within group, Follow-up	Very high risk ● (BP, BA)	*n* = 155 *d* = 1.74 CI (n.a.) **I**	Clinical implication based on authors statement about CI including 0 or not; results controlled for MED effect	Home Situations Questionnaire (HSQ)
	Total behavioral problems, Ind. BPT vs. group BPT	Very high risk ● (BP, BA)	*n* = 159 *d* = .44 CI (n.a.) **I**	Clinical implication based on authors statement about CI including 0 or not; results controlled for MED effect	Home Situations Questionnaire (HSQ)
	Total behavioral problems, Ind. BPT vs. group BPT, Follow-up	Very high risk ● (BP, BA)	*n* = 159 *d* = .19 CI (n.a.) **U**	Clinical implication based on authors statement about CI including 0 or not; results controlled for MED effect	Home Situations Questionnaire (HSQ)
Hornstra et al., 2021 **Population:** parents of children aged 4-12 with ADHD	**ODD symptoms, AC vs. control, Post-treatment**	Very high risk ● (BP, BA)	*n* = 60 *d* = .25 CI (-.26 - .76) **U**	T1 = 1 week after training	DBDRS

Intervention: Antecedent-based parent training (AC) or Consequent-based parent training (CC) **Comparison:** waitlist control group	**ODD symptoms, CC vs. control, Post-treatment**	Very high risk ● (BP, BA)	*n* = 62 *d* = .03 CI (-.29 - .73) **U**	T1 = 1 week after training	DBDRS
	ODD symptoms, AC vs. CC, Post-treatment	Very high risk ● (BP, BA)	*n* = 62 *d* = .22 CI (-.29 - .73) **U**	T1 = 1 week after training	DBDRS
	ODD symptoms, AC vs. control, Follow-up	Very high risk ● (BP, BA)	*n* = 60 *d* = .32 CI (-.19 - .83) **U**	T2 = 3 weeks after training	DBDRS
	ODD symptoms, CC vs. control, Follow-up	Very high risk ● (BP, BA)	*n* = 62 *d* = -.27 CI (-.78 - .24) **U**	T2 = 3 weeks after training	DBDRS
	ODD symptoms, AC vs. CC, Follow-up	Very high risk ● (BP, BA)	*n* = 62 *d* = .59 CI (.07 - 1.11) **I**	T2 = 3 weeks after training	DBDRS
Nuno et al., 2020 **Population:** parents of children 6-8 years old with ADHD or suspected of having ADHD **Intervention:** online parent training - Nurtured Heart Approach (NHA) **Comparison:** delayed control	**Defiance/aggression**	Very high risk ● (BP, BA)	*n* = 87 *ES* = n.a. CI (n.a.) **U**	Clinical implication based on p-value	Conners 3-P Short-Form

Paiva et al., 2024 **Population:** families of boys with ADHD symptoms (6-12 years old, 50% medicated) **Intervention:** Face to Face (F2F) behavioral parent training + standard treatment (ST, possibly incl. MED) **Comparison:** online behavioral parent training + standard treatment (ST, possibly incl. MED) or ST alone	**ODD total symptoms, F2F BPT vs. ST**	Very high risk ● (BP, BA, ID)	*n* = 39 *ES* = n.a. CI (n.a.) **U**	Clinical implication based on post-hoc analyses of time x group interaction	MTA-SNAP-IV
	ODD total symptoms, Online BPT vs. ST	Very high risk ● (BP, BA, ID)	*n* = 38 *ES* = n.a. CI (n.a.) **U**	Clinical implication based on post-hoc analyses of time x group interaction	MTA-SNAP-IV
	ODD total symptoms, F2F BPT vs. online BPT	Very high risk ● (BP, BA, ID)	*n* = 37 *ES* = n.a. CI (n.a.) **U**	Clinical implication based on post-hoc analyses of time x group interaction	MTA-SNAP-IV
Verhaltensprobleme. Lehrer*innenurteil					
Chu et al., 2022 **Population:** school-aged students (aged 6-8 years) with ADHD **Intervention:** group executive functioning and online parent training (GEF-OPT) program **Comparison:** waitlist group	**ODD**	High risk ◑ (BP)	*n* = 145 *d* = .53 CI (.28 - .78) **I**		Chinese version of SNAP-IV subscale - Inattention
Hautmann et al., 2018 **Population:** parents of children with ADHD (4-11 years old) **Intervention:** Behavioral Parent Training (BPT) **Comparison:** Nonbehavioral Parent Training (non-BPT)	**Total ODD symptoms, BPT vs. non-BPT**	Very high risk ● (BP, ID)	*n* = 110 *d* = -.31 CI (-.68 - .06) **U**	Data from per-protocol analysis; no info if teachers were blinded	FBB-SSV
Verhaltensprobleme. Kliniker*innenurteil					

Engelbrektsson et al., 2023 **Population:** parents of children with disruptive behavior problems (3-11 years, no inf. Regarding diagnosis) **Intervention:** internet-delivered parent training (iComet) **Comparison:** group parent training (in person, gComet)	**Total ODD symptoms Online BPT vs. group BPT, 3 months FU**	High risk ◑ (BP)	*n* = 161 *d* = .34 CI (-.05 - .72) **U**	ITT-data extracted; PP-data only marginally different; clinical implication based on superiority analysis	MINI-KID
Hautmann et al., 2018 **Population:** parents of children with ADHD (4-11 years old) **Intervention:** Behavioral Parent Training (BPT) **Comparison:** Nonbehavioral Parent Training (non-BPT)	**Total ODD symptoms, BPT vs. non-BPT**	Very high risk ● (PB, ID)	*n* = 110 *d* = -.35 CI (-.66 - -.04) **I**	Data from per-protocol analysis	DCL-SSV
Internalisierende Symptome. Elternurteil					
Engelbrektsson et al., 2023 **Population:** parents of children with disruptive behavior problems (3-11 years, no inf. Regarding diagnosis) **Intervention:** internet-delivered parent training (iComet) **Comparison:** group parent training (in person, gComet)	**Emotional symptoms Online BPT vs. group BPT, 3 months FU**	Very high risk ● (BP, BA)	*n* = 161 *d* = .21 CI (-.04 - .46) **U**	ITT-data extracted; PP-data only marginally different; clinical implication based on superiority analysis	SDQ
	Emotional symptoms Online BPT vs. group BPT, 12 months FU	Very high risk ● (BP, BA)	*n* = 161 *d* = .29 CI (.00 - .59) **I**	ITT-data extracted; PP-data only marginally different; clinical implication based on superiority analysis	SDQ

Hautmann et al., 2018 **Population:** parents of children with ADHD (4-11 years old) **Intervention:** Behavioral Parent Training (BPT) **Comparison:** Nonbehavioral Parent Training (non-BPT)	**Internalizing symptoms, BPT vs. non-BPT**	Very high risk ● (BP, BA, ID)	*n* = 110 *d* = -.25 CI (-.56 - .07) **U**	Data from per-protocol analysis	11-CBCL
Nobel et al., 2020 **Population:** school-aged children diagnosed with ADHD and behavior problems despite previous treatments **Intervention:** home-based behavioral parent training **Comparison:** waiting list (no intervention) and care-as-usual home-based treatment	**Internalizing problems, Intervention vs. waiting list**	Very high risk ● (BP, BA)	*n* = 49 *d* = .65 CI (n.a.) **I**	After treatment; clinical implication based on p-values of data analyzed with linear mixed model for repeated measure	CBCL
	Internalizing problems, Intervention vs. TAU	Very high risk ● (BP, BA)	*n* = 50 *ES* = n.a. CI (n.a.) **U**	After treatment; clinical implication based on p-values of data analyzed with linear mixed model for repeated measure	CBCL
Funktionale Beeinträchtigung. Elternurteil					
Chu et al., 2022 **Population:** school-aged students (aged 6-8 years) with ADHD **Intervention:** group executive functioning and online parent training (GEF-OPT) program **Comparison:** waitlist group	**Functional impairment total**	Very high risk ● (BP, BA)	*n* = 145 *d* = .30 CI (.03 - .56) **I**		WFIRS-P
	Learning and school	Very high risk ● (BP, BA)	*n* = 145 *d* = .60 CI (.27 - .94) **I**		WFIRS-P, Subscale Learning and School
Chung et al., 2024 **Population:** parents of children with ADHD (7-11 years old)	**Functional impairment, Within group**	Very high risk ● (SG, BP, BA)	*n* = 22 *ω2* = .21 CI (n.a.) **U**	Clinical implication based on p-value	Impairment Rating Scale (IRS)

Intervention: Behavioral Parent Training, done by a school-psychologist, online (via Zoom) **Comparison:** no control group					
Daley et al., 2021 **Population:** parents of mediacted children with ADHD **Intervention:** self-help version of the New Forest Parenting Programme + TAU (incl. MED) **Comparison:** TAU (incl. MED)	**Family functioning PT + TAU vs. TAU**	Very high risk ● (BP, BA, CE)	*n* = 52 *d* = .20 CI (n.a.) **U**	Post intervention; clinical implication based on p-value	Family Strain Index (FSI)
	Family functioning PT + TAU vs. TAU, Follow-up	Very high risk ● (BP, BA, CE)	*n* = 52 *d* = .41 CI (n.a.) **U**	Post intervention; clinical implication based on p-value	Family Strain Index (FSI)
	Overall school performance, PT + TAU vs. TAU	Very high risk ● (BP, BA, CE)	*n* = 52 *ES* = n.a. CI (n.a.) **U**	Post intervention; clinical implication based on p-value; no effect in any subscale	Vanderbilt ADHD rating scale (subscales - school, maths, reading, writing, family-, peer- and parent-relationship)
	Overall school performance, PT + TAU vs. TAU, Follow-up	Very high risk ● (BP, BA, CE)	*n* = 52 *ES* = n.a. CI (n.a.) **U**	Post intervention; clinical implication based on p-value; no effect in any subscale	Vanderbilt ADHD rating scale (subscales - school, maths, reading, writing, family-, peer- and parent-relationship)
Dose et al., 2017 **Population:** parents of medicated children with ADHD and residual functional impairment **Intervention:** TASH + routine care (incl. MED)	**Child functioning, TASH + TAU vs. TAU**	Very high risk ● (BP, BA)	*n* = 103 *ES* = n.a. CI (n.a.) **U**	Clinical implication based on p-value; no significant effect on any subscale	WFIRS-P (subscales - Family, School, Life Skills, Self-concept, social activities & total score)

Comparison: routine care (incl. MED) only					
	Family conflicts, Online BPT vs. group BPT, 3 months FU	Very high risk ● (BP, BA)	*n* = 161 *d* = .11 CI (-.17 - .38) **U**	ITT-data extracted; PP-data only marginally different; clinical implication based on superiority analysis	CPRS-Conflicts
	Family conflicts, Online BPT vs. group BPT, 12 months FU	Very high risk ● (BP, BA)	*n* = 161 *d* = .02 CI (-.27 - .32) **U**	ITT-data extracted; PP-data only marginally different; clinical implication based on superiority analysis	CPRS-Conflicts
Engelbrektsson et al., 2023 **Population:** parents of children with disruptive behavior problems (3-11 years, no inf. Regarding diagnosis) **Intervention:** internet-delivered parent training (iComet) **Comparison:** group parent training (in person, gComet)	**Peer rel. problems, Online BPT vs. group BPT, 3 months FU**	Very high risk ● (BP, BA)	*n* = 161 *d* = .08 CI (-.15 - .30) **U**	ITT-data extracted; PP-data only marginally different; clinical implication based on superiority analysis	SDQ
	Peer rel. problems, Online BPT vs. group BPT, 12 months FU	Very high risk ● (BP, BA)	*n* = 161 *d* = -.12 CI (-.39 - .16) **U**	ITT-data extracted; PP-data only marginally different; clinical implication based on superiority analysis	SDQ
	Prosocial behavior Online BPT vs. group BPT, 3 months FU	Very high risk ● (BP, BA)	*n* = 161 *d* = -.08 CI (-.35 - .18) **U**	ITT-data extracted; PP-data only marginally different; clinical implication based on superiority analysis	SDQ
	Prosocial behavior, Online BPT vs. group BPT,	Very high risk ● (BP, BA)	*n* = 161 *d* = .00 CI (-.27 - .27)	ITT-data extracted; PP-data only marginally different; clinical	SDQ

	12 months FU		**U**	implication based on superiority analysis	
Hautmann et al., 2018 **Population:** parents of children with ADHD (4-11 years old) **Intervention:** Behavioral Parent Training (BPT) **Comparison:** Nonbehavioral Parent Training (non-BPT)	**Functioning level, BPT vs. non-BPT**	Very high risk ● (BP, BA, ID)	*n* = 110 *d* = -.26 CI (-.60 - .08) **U**	Data from per-protocol analysis	WFIRS-P
Nuno et al., 2020 **Population:** parents of children 6-8 years old with ADHD or suspected of having ADHD **Intervention:** online parent training - Nurtured Heart Approach (NHA) **Comparison:** delayed control	**Learning problems**	Very high risk ● (BP, BA)	*n* = 87 *ES* = n.a. CI (n.a.) **I**	Clinical implication based on p-value	Conners 3-P Short-Form
	Executive functioning	Very high risk ● (BP, BA)	*n* = 87 *ES* = n.a. CI (n.a.) **I**	Clinical implication based on p-value	Conners 3-P Short-Form
	Peer relations	Very high risk ● (BP, BA)	*n* = 87 *ES* = n.a. CI (n.a.) **I**	Clinical implication based on p-value	Conners 3-P Short-Form
Pijarnvanit et al., 2022 **Population:** parents of children with ADHD, aged 7–12 years	**Executive function, behavioral regulation, Within group**	Very high risk ● (SG, CC, BP, BA)	*n* = 9 *R* = .447 CI (n.a.) **U**	Clinical implication based on p-value; no info on validation of Thai BRIEF version	BRI from BRIEF (adapted Thai version)

Intervention: 13 sessions of telehealth parent coaching with 3 components (goal setting, education, and problem-solving process) **Comparison:** no control group	**Executive function, metacognition, Within group**	Very high risk ● (SG, CC, BP, BA)	*n* = 9 *R* = .629 CI (n.a.) **I**	Clinical implication based on p-value; no info on validation of Thai BRIEF version	MI from BRIEF (adapted Thai version)
	Global executive function, Within group	Very high risk ● (SG, CC, BP, BA)	*n* = 9 *R* = .595 CI (n.a.) **I**	Clinical implication based on p-value; no info on validation of Thai BRIEF version	Global executive composite from BRIEF (adapted Thai version)
Symptomverbesserung. Elternurteil					
Chung et al., 2024 **Population:** parents of children with ADHD (7-11 years old) **Intervention:** Behavioral Parent Training, done by a school-psychologist, online (via Zoom) **Comparison:** no control group	**Clinical global impairment, Within group**	Very high risk ● (SG, BP, BA)	*n* = 22 *ω2* = .21 CI (n.a.) **U**	Clinical implication based on p-value	CGI
Lebensqualität. Elternurteil					
Daley et al., 2021 **Population:** parents of mediacted children with ADHD **Intervention:** self-help version of the New Forest Parenting Programme + TAU (incl. MED) **Comparison:** TAU (incl. MED)	**Child QoL, PT + TAU vs. TAU**	Very high risk ● (BP, BA, CE)	*n* = 52 *ES* = n.a. CI (n.a.) **U**	Clinical implication based on p-value; no effect in any subscale	(CHIP CE/ CRF), subscales satisfaction, comfort, resilience, risk avoid, achievement
	Child QoL, PT + TAU vs. TAU, Follow-up	Very high risk ● (BP, BA, CE)	*n* = 52 *ES* = n.a. CI (n.a.) **U**	Clinical implication based on p-value; no effect in any subscale	(CHIP CE/ CRF), subscales satisfaction, comfort, resilience, risk avoid, achievement

Hautmann et al., 2018 **Population:** parents of children with ADHD (4-11 years old) **Intervention:** Behavioral Parent Training (BPT) **Comparison:** Nonbehavioral Parent Training (non-BPT)	**QoL, BPT vs. non-BPT**	Very high risk ● (BP, BA, ID)	*n* = 110 *d* = .07 CI (-.30 - .44) **U**	Data from per-protocol analysis	KINDL-R
	QoL, BPT vs. non-BPT, 12 months FU	Very high risk ● (BP, BA, ID)	*n* = 110 *d* = -.01 CI (-.52 - .50) **U**	Data from per-protocol analysis	KINDL-R
Paiva et al., 2024 **Population:** families of boys with ADHD symptoms (6-12 years old, 50% medicated) **Intervention:** Face to Face (F2F) behavioral parent training + standard treatment (ST, possibly incl. MED) **Comparison:** online behavioral parent training + standard treatment (ST, possibly incl. MED) or ST alone	**Quality of life, F2F BPT vs. ST**	Very high risk ● (BP, BA, ID)	*n* = 39 *ES* = n.a. CI (n.a.) **U**	No significant group differences on any subscale using corrected values; clinical Implication based on post-hoc analyses of time x group interaction	Kidscreen-52
	Quality of life, Online BPT vs. ST	Very high risk ● (BP, BA, ID)	*n* = 38 *ES* = n.a. CI (n.a.) **U**	No significant group differences on any subscale using corrected values; clinical Implication based on post-hoc analyses of time x group interaction	Kidscreen-52
	Quality of life, F2F BPT vs. online BPT	Very high risk ● (BP, BA, ID)	*n* = 37 *ES* = n.a. CI (n.a.) **U**	No significant group differences on any subscale using corrected values; clinical Implication based on post-hoc analyses of time x group interaction	Kidscreen-52
Lebensqualität. Selbsturteil					

Engelbrektsson et al., 2023 **Population:** parents of children with disruptive behavior problems (3-11 years, no inf. Regarding diagnosis) **Intervention:** internet-delivered parent training (iComet) **Comparison:** group parent training (in person, gComet)	**Quality of life, Online BPT vs. group BPT, 3 months FU**	High risk ◑ (BP)	*n* = 161 *d* = -.05 CI (-.47 - .37) **U**	ITT-data extracted; PP-data only marginally different; clinical implication based on superiority analysis	KINDL-R
Physische Aktivität. Test					
Tandon et al., 2024 **Population:** families with children with ADHD (6–10 years) **Intervention:** weekly 90-min LEAP virtual "telegroups" were conducted via HIPAA-compliant Zoom **Comparison:** weekly 90-min standard BMT	**Healthy behaviors, Moderate to vigorous PA**	Very high risk ● (BP, ID, OR)	*n* = 84 *ES* = n.a. CI (n.a.) **U**	Clinical implication based on p-value; no significant difference in change over time by study arm or ADHD subtype	Accelerometer
Schlaf. Kombiniertes Urteil					
Tandon et al., 2024 **Population:** families with children with ADHD (6–10 years) **Intervention:** weekly 90-min LEAP virtual "telegroups" were conducted via HIPAA-compliant Zoom **Comparison:** weekly 90-min standard BMT	**Healthy behaviors, Sleep duration**	Very high risk ● (BP, ID, OR)	*n* = 84 *ES* = n.a. CI (n.a.) **U**	Sleep duration measured at baseline, 10 weeks, and 20 weeks similar among LEAP and BMT participants; two study groups similar patterns over time	Minutes measured by 24h accelerometer wear (validated and refined to collect quantitative sleep data in school-age children)
	Healthy behaviors, Sleep duration, Parent estimation	Very high risk ● (BP, ID, OR)	*n* = 84 *ES* = n.a. CI (n.a.) **U**	Parent-estimated average sleep duration decreased from baseline to 10 weeks for both groups and increased from 10	Children's Sleep Habits Questionnaire (CSHQ; Bedtime Resistance subscale)

				to 20 weeks, but changes not significant	
Elterliche mentale Gesundheit. Elternurteil					
Nuno et al., 2020 **Population:** parents of children 6-8 years old with ADHD or suspected of having ADHD **Intervention:** online parent training - Nurtured Heart Approach (NHA) **Comparison:** delayed control	**Parenting stress: parental distress**	Very high risk ● (BP, BA)	*n* = 87 *ES* = n.a. CI (n.a.) **U**	Clinical implication based on p-value	Parenting Stress Index (PSI) 4 Short Form
	Parenting stress: difficult child	Very high risk ● (BP, BA)	*n* = 87 *ES* = n.a. CI (n.a.) **I**	Clinical implication based on p-value	Parenting Stress Index (PSI) 4 Short Form
	Parenting stress: total score	Very high risk ● (BP, BA)	*n* = 87 *ES* = n.a. CI (n.a.) **I**	Clinical implication based on p-value	Parenting Stress Index (PSI) 4 Short Form
	Parenting stress: parent-child dysfunctional interaction	Very high risk ● (BP, BA)	*n* = 87 *ES* = n.a. CI (n.a.) **U**	Clinical implication based on p-value	Parenting Stress Index (PSI) 4 Short Form
Erziehungsverhalten. Elternurteil					
Daley et al., 2021 **Population:** parents of mediacted children with ADHD **Intervention:** self-help version of the New Forest Parenting Programme + TAU (incl. MED) **Comparison:** TAU (incl. MED)	**Parenting efficacy, PT + TAU vs. TAU**	Very high risk ● (BP, BA, CE)	*n* = 52 *d* = -.24 CI (n.a.) **U**	Clinical implication based on p-value; post intervention	Parenting Sense of Competence Scale (PSOC)
	Parenting satisfaction, PT + TAU vs. TAU	Very high risk ● (BP, BA, CE)	*n* = 52 *d* = -.14 CI (n.a.) **U**	Clinical implication based on p-value; post intervention	Parenting Sense of Competence Scale (PSOC)

	Parenting efficacy, PT + TAU vs. TAU, Follow-up	Very high risk ● (BP, BA, CE)	*n* = 52 *d* = .11 CI (n.a.) **I**	Clinical implication based on p-value; post intervention	Parenting Sense of Competence Scale (PSOC)
	Parenting satisfaction, PT + TAU vs. TAU, Follow-up	Very high risk ● (BP, BA, CE)	*n* = 52 *d* = .43 CI (n.a.) **U**	Clinical implication based on p-value; post intervention	Parenting Sense of Competence Scale (PSOC)
Dose et al., 2017 **Population:** parents of medicated children with ADHD and residual functional impairment **Intervention:** TASH + routine care (incl. MED) **Comparison:** routine care (incl. MED) only	**Positive parenting, TASH + TAU vs. TAU**	Very high risk ● (BP, BA)	*n* = 103 *ES* = n.a. CI (n.a.) **U**	Clinical implication based on p-value	FPNE
	Negative parenting, TASH + TAU vs. TAU	Very high risk ● (BP, BA)	*n* = 103 *ES* = n.a. CI (n.a.) **I**	Clinical implication based on p-value	FPNE
Engelbrektsson et al., 2023 **Population:** parents of children with disruptive behavior problems (3-11 years, no inf. Regarding diagnosis) **Intervention:** internet-delivered parent training (iComet) **Comparison:** group parent training (in person, gComet)	**Total parenting strategies, Online BPT vs. group BPT, 3 months FU**	Very high risk ● (BP, BA)	*n* = 161 *d* = -.41 CI (-.39 - -.12) **C**	ITT-data extracted; PP-data only marginally different; clinical implication based on superiority analysis	PARYC-total
	Total parenting strategies, Online BPT vs. group BPT, 12 months FU	Very high risk ● (BP, BA)	*n* = 161 *d* = .00 CI (-.31 - .30) **U**	ITT-data extracted; PP-data only marginally different; clinical implication based on superiority analysis	PARYC-total

	Parental self-efficacy, BPT vs. non-BPT	Very high risk ● (BP, BA, ID)	*n* = 110 *d* = .36 CI (.07 - .65) **I**	Data from per-protocol analysis	FSW
	Parental self-efficacy, BPT vs. non-BPT, 12 months FU	Very high risk ● (BP, BA, ID)	*n* = 110 *d* = -.04 CI (-.43 - .35) **U**	Data from per-protocol analysis	FSW
Hautmann et al., 2018 **Population:** parents of children with ADHD (4-11 years old) **Intervention:** Behavioral Parent Training (BPT) **Comparison:** Nonbehavioral Parent Training (non-BPT)	**Positive parenting BPT vs. non-BPT**	Very high risk ● (BP, BA, ID)	*n* = 110 *d* = .29 CI (.00 - .58) **I**	Data from per-protocol analysis	FPNE
	Negative parenting, BPT vs. non-BPT	Very high risk ● (BP, BA, ID)	*n* = 110 *d* = -.35 CI (-.64 - -.06) **I**	Data from per-protocol analysis	FPNE
	Positive parenting, BPT vs. non-BPT, Follow-up	Very high risk ● (BP, BA, ID)	*n* = 110 *d* = .15 CI (-.18 - .49) **U**	Data from per-protocol analysis	FPNE
	Negative parenting, BPT vs. non-BPT, Follow-up	Very high risk ● (BP, BA, ID)	*n* = 110 *d* = -.07 CI (-.04 - .26) **U**	Data from per-protocol analysis	FPNE

Nuno et al., 2020 **Population:** parents of children 6-8 years old with ADHD or suspected of having ADHD **Intervention:** online parent training - Nurtured Heart Approach (NHA) **Comparison:** delayed control	**Parenting sense of competence: satisfaction**	Very high risk ● (BP, BA, OI)	*n* = 87 *ES* = n.a. CI (n.a.) **U**	Clinical implication based on p-value; PSOC version used in study labeled incorrect, precision may be reduced, but version coherently used among all participants	Parenting Sense of Competence Scale (PSOC)
	Parenting sense of competence: efficacy	Very high risk ● (BP, BA, OI)	*n* = 87 *ES* = n.a. CI (n.a.) **U**	Clinical implication based on p-value; PSOC version used in study labeled incorrect, precision may be reduced, but version coherently used among all participants	Parenting Sense of Competence Scale (PSOC)
	Parenting sense of competence, Total score	Very high risk ● (BP, BA, OI)	*n* = 87 *ES* = n.a. CI (n.a.) **U**	Clinical implication based on p-value; PSOC version used in study labeled incorrect, precision may be reduced, but version coherently used among all participants	Parenting Sense of Competence Scale (PSOC)
Paiva et al., 2024 **Population:** families of boys with ADHD symptoms (6-12 years old, 50% medicated) **Intervention:** Face to Face (F2F) behavioral parent training +	**Parenting style, F2F BPT vs. ST**	Very high risk ● (BP, BA, ID)	*n* = 39 *ES* = n.a. CI (n.a.) **I**	No significant group differences on any subscale using corrected values; clinical Implication based on post-hoc analyses of time x group interaction	PSDQ

standard treatment (ST, possibly incl. MED) **Comparison:** online behavioral parent training + standard treatment (ST, possibly incl. MED) or ST alone	**Parenting style, Online BPT vs. ST**	Very high risk ● (BP, BA, ID)	*n* = 38 *ES* = n.a. CI (n.a.) **I**	No significant group differences on any subscale using corrected values; clinical Implication based on post-hoc analyses of time x group interaction	PSDQ
	Parenting style, F2F BPT vs. online BPT	Very high risk ● (BP, BA, ID)	*n* = 37 *ES* = n.a. CI (n.a.) **I**	No significant group differences on any subscale using corrected values; clinical Implication based on post-hoc analyses of time x group interaction	PSDQ
Pijarnvanit et al., 2022 **Population:** parents of children with ADHD, aged 7–12 years **Intervention:** 13 sessions of telehealth parent coaching with 3 components (goal setting, education, and problem-solving process) **Comparison:** no control group	**Parenting efficacy, Within group**	Very high risk ● (SG, CC, BP, BA)	*n* = 9 *R* = .587 CI (n.a.) **U**	Clinical implication based on p-value	Parenting Sense of Competence Scale (PSOC)
Shechtman et al., 2019 **Population:** parents of children with ADHD (6-17 years old) **Intervention:** emotion regulation coaching (Coach.) **Comparison:** self-help intervention (via book)	**Parenting efficacy, Coach vs. self-help**	Very high risk ● (SG, BP, BA)	*n* = 66 *ES* = n.a. CI (n.a.) **U**	Clinical implication based on p-value; within-group effects not presented for single intervention; group allocation not random	Parenting Sense of Competence Scale (PSOC)

Parenting satisfaction, Coach vs. self-help	Very high risk ● (SG, BP, BA)	*n* = 66 *ES* = n.a. CI (n.a.) **U**	Clinical implication based on p-value; within-group effects not presented for single intervention; group allocation not random	Parenting Sense of Competence Scale (PSOC)
Parenting efficacy, Coach vs. self-help	Very high risk ● (SG, BP, BA)	*n* = 66 *ES* = n.a. CI (n.a.) **U**	Clinical implication based on p-value; within-group effects not presented for single intervention; group allocation not random	Parenting Sense of Competence Scale (PSOC)
Total parenting competence, Coach vs. self-help	Very high risk ● (SG, BP, BA)	*n* = 66 *ES* = n.a. CI (n.a.) **U**	Clinical implication based on p-value; within-group effects not presented for single intervention; group allocation not random	Parenting Sense of Competence Scale (PSOC)
Restrictive coping, Coach vs. self-help	Very high risk ● (SG, BP, BA)	*n* = 66 *ES* = n.a. CI (n.a.) **I**	Clinical Implication based on p-value; within-group effects not presented for single intervention; group allocation not random	Coping with Children's Negative Emotions Scale (CCNES)

	Positive coping, Coach vs. self-help	Very high risk ● (SG, BP, BA)	*n* = 66 *ES* = n.a. CI (n.a.) **U**	Clinical Implication based on p-value; within-group effects not presented for single intervention; group allocation not random	Coping with Children's Negative Emotions Scale (CCNES)
Eltern-Kind-Beziehung. Elternurteil					
Engelbrektsson et al., 2023 **Population:** parents of children with disruptive behavior problems (3-11 years, no inf. Regarding diagnosis) **Intervention:** internet-delivered parent training (iComet) **Comparison:** group parent training (in person, gComet)	**Parent-child relationship, Online BPT vs. group BPT, 3 months FU**	High risk ◑ (BP)	*n* = 161 *d* = .02 CI (-.42 - .47) **U**	ITT-data extracted; PP-data only marginally different; clinical implication based on superiority analysis	Alabama Parenting Questionnaire

Anmerkung. *n* = Anzahl der Versuchspersonen. SG = sequence generation, CC = concealment, BP = blinding participants, BA = blinding assessors, ID = incomplete data, OR = outcome reporting, CE = carry over effects, SX = stopped early, UM = unvalidated measures, OI = other issue.

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1.3.3.3. Wie sollten Interventionen im schulischen Umfeld bei Kindern im Schulalter mit ADHS durchgeführt werden?

1.3.3.3. A

Berücksichtigte Endpunktkategorien: Meta-Analysen

Endpunktkategorien	MAs	*m*	Gesamtaussagesicherheit der Evidenz
ADHS Symptome gesamt (E)	1	1	Schwach/ sehr schwach
ADHS Symptome gesamt (L)	2	2	
ADHS Symptome gesamt (U)	2	5	
Beeinträchtigungen (E)	1	1	
Beeinträchtigungen (L)	1	1	
Beeinträchtigungen (KL/Obs)	1	1	
Verhaltensprobleme (L)	2	6	
Verhaltensprobleme (KL/ Obs)	2	2	
Verhaltensprobleme (U)	1	2	
Prosoziales Verhalten (U)	1	1	
ADHS Wissen (L)	1	1	
Lehrverhalten (L)	1	3	

Anmerkung. MAs = Anzahl der Meta-Analysen, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.

Berücksichtigte Endpunktkategorien: RCTs

Endpunkt	RCTS	*m*	Gesamtaussagesicherheit der Evidenz
ADHS Symptome gesamt (E)	1	1	Schwach/ sehr schwach
Beeinträchtigungen (L)	1	1	
Verhaltensprobleme (E)	1	1	
Verhaltensprobleme (L)	1	7	
Verhaltensprobleme (KL/ Obs)	1	2	
Soziale Funktionalität (E)	1	1	
Soziale Funktionalität (S)	1	2	
Soziale Funktionalität (Gl)	1	1	
Akademische Funktionalität (E)	1	1	
Akademische Funktionalität (L)	1	1	
Symptomverbesserung (E)	1	1	

Anmerkung. RCTs = Anzahl der randomisierten kontrollierten Studien, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.

Summary of Findings Tabelle: Meta-Analysen

Referenz	Endpunkt	Aussagesicherheit (GRADE)	Effektstärke	Kommentare	Mess-instrument
ADHS Symptome gesamt. Elternurteil					
Fabiano, et al., 2021 **Population:** children and adolescents with ADHD/ ODD (max. 18 years) **Intervention:** Behavioral Classroom Management **Comparison:** control group	**ADHD symptoms**	Moderate ⊕⊕⊕◯ (P)	*n* = n.a., *k* = 3 *d* = .35 CI (.00 - .70) **I**	Between group study design; in studies focused on externalizing behavior problems over 50% of the participants must have been diagnosed with ADHD or characterized as such; assignment to primary studies not possible.	n.a.
ADHS Symptome gesamt. Lehrer*innenurteil					
Fabiano, et al., 2021 **Population:** children and adolescents with ADHD/ ODD (max. 18 years) **Intervention:** Behavioral Classroom Management **Comparison:** control group	**ADHD symptoms**	Moderate ⊕⊕⊕◯ (P)	*n* = n.a., *k* = 3 *d* = .66 CI (.35 - .97) **I**	Between group study design; in studies focused on externalizing behavior problems over 50% of the participants must have been diagnosed with ADHD or characterized as such; assignment to primary studies not possible.	n.a.
Veenman, et al., 2018 **Population:** children with ADHD and ODD/ CD symptoms (6-12 years) **Intervention:** behavioral teaching/ classroom program	**ADHD symptoms, Clinical, at-risk and community samples**	Low ⊕⊕◯◯ (ID, P)	*n* = 13313, *k* = 9 *d* = -.19 CI (-.35 - -.02) **I**	Symptoms of ODD and CD taken together. Behavioral programs defined as programs using behavioral techniques on daily basis, comprehensive treatment programs using	DBD, CRS, ADS-IV, ADHD-RS, SNAP, TOCA

Comparison: waitlist, treatment as usual, other intervention				behavioral classroom program as one main element also included.	
ADHS Symptome gesamt. Unklares Urteil					
Aldabbagh, et al., 2022 **Population:** children with ADHD and externalizing behaviors (2-13 years) **Intervention:** teacher training: IY, classroom management, CBT, web-based intervention, Best In Class intervention, Behavior management strategies, Key2Tech, Daily Report Cards, RFRP, Positivity and Ruels Programm, playing together session, counseling, coaching functional behavior **Comparison:** waiting list, treatment as usual, other treatment	**ADHD symptoms**	Low ⊕⊕◯◯ (R)	*n* = 259, *k* = 5 *d* = .47 CI (.30 - .65) **I**	Researchers grouped hyperactivity symptoms and inattention symptoms together if listed separately in a study	SDQ, CTRS
Ward, et al., 2022 **Population:** children and adolescents with ADHD or identified as displaying ADHD-type behaviors	**ADHD symptoms in pupils, Between subjects, Posttest**	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 422, *k* = 5 *SMD* = .71 CI (-.11 - 1.52) **U**	Variety of measurement including vignettes, self-report questionnaire and blinded observations	CTRS-R, YCI, COC, CBTC, TRF, K-ARS, BOSS, Conner's 3 teacher, non-blinded, and blinded observations

Intervention: teacher training/ school intervention **Comparison:** waitlist control, alternative treatment, control group	**ADHD symptoms in pupils, Within subjects, Posttest**	Very low ⊕◯◯◯ (R, IC)	*n* = 275, *k* = 7 *SMD* = .78 CI (.37 - 1.18) **I**		CTRS-R, YCI, COC, CBTC, TRF, K-ARS, BOSS, Conner's 3 teacher, non-blinded, and blinded observations
	ADHD symptoms in pupils, Between subjects, Follow-up	Moderate ⊕⊕⊕◯ (R)	*n* = 180, *k* = 2 *SMD* = .50 CI (.14 - .87) **I**		TRF, Conners
	ADHD symptoms in pupils, Within subjects, Follow-up	Moderate ⊕⊕⊕◯ (R)	*n* = 138, *k* = 3 *SMD* = .39 CI (.15 - .62) **I**		TRF, Conners-T, DSM-IV TR symptom list
Beeinträchtigungen. Elternurteil					
Fabiano, et al., 2021 **Population:** children and adolescents with ADHD/ ODD (max. 18 years) **Intervention:** Behavioral Classroom Management **Comparison:** control group	**Impairment**	Moderate ⊕⊕⊕◯ (P)	*n* = n.a., *k* = 1 *d* = .15 CI (.03 - .28) **I**	Assignment to primary studies not possible	n.a.
Beeinträchtigungen. Lehrer*innenurteil					
Fabiano, et al., 2021 **Population:** children and adolescents with ADHD/ ODD (max. 18 years) **Intervention:** Behavioral Classroom Management	**Impairment**	Very low ⊕◯◯◯ (IC, IP, P)	*n* = n.a., *k* = 2 *d* = .72 CI (-.10 - 1.54) **U**	Assignment to primary studies not possible	n.a.

Comparison: control group					
Beeinträchtigung. Kliniker*innenurteil (Obs)					
Fabiano, et al., 2021 **Population:** children and adolescents with ADHD/ ODD (max. 18 years) **Intervention:** Behavioral Classroom Management **Comparison:** control group	**Impairment**	Very low ⊕◯◯◯ (IC, IP, P)	*n* = n.a., *k* = 1 *d* = .18 CI (-1.66 - 2.02) **U**	Assignment to primary studies not possible	n.a.
Verhaltensprobleme. Lehrer*innenurteil					
Fabiano, et al., 2021 **Population:** children and adolescents with ADHD/ ODD (max. 18 years) **Intervention:** Behavioral Classroom Management **Comparison:** control group	**Externalizing behavior problems**	Moderate ⊕⊕⊕◯ (P)	*n* = n.a., *k* = 1 *d* = .26 CI (.26 - .26) **I**	Assignment to primary studies not possible	n.a.
Veenman, et al., 2018 **Population:** children with ADHD and ODD/ CD symptoms (6-12 years) **Intervention:** behavioral teaching/ classroom program **Comparison:** waitlist, treatment as usual, other intervention	**ODD/CD symptoms, Clinical, at-risk, and community samples**	Low ⊕⊕◯◯ (ID, P)	*n* = 16743, *k* = 10 *d* = -.15 CI (-.23 - -.06) **I**	Symptoms of ODD and CD taken together. Behavioral programs defined as programs using behavioral techniques on daily basis, comprehensive treatment programs using behavioral classroom program as one	DBD, TRF, CRS, PBSI, SNAP, TOCA

				main element also included.	
	Disruptive behavior, Clinical, at-risk, and community samples	Very low ⊕◯◯◯ (IC, ID, P)	*n* = 18074, *k* = 17 *d* = -.20 CI (-.29 - -.10) I	At-risk samples consisted of participants with elevated levels of disruptive behavior problems at school	CRS, SDQ, PBSI, SNAP, TOCA, BASC, ADHD-RS, TRF, DBD
	Disruptive behavior, Clinical sample	Moderate ⊕⊕⊕◯ (ID)	*n* = 828, *k* = 7 *d* = -.19 CI (-.35 - -.04) I	Clinical sample > 85% met diagnostic criteria	CRS, SDQ, PBSI, SNAP, TOCA, BASC, ADHD-RS, TRF, DBD, ADS-IV
	Disruptive behavior, At-risk sample	Low ⊕⊕◯◯ (IC, ID)	*n* = 1081, *k* = 6 *d* = -.26 CI (-.42 - -.09) I	At-risk samples consisted of participants with elevated levels of disruptive behavior problems at school	CRS, SDQ, PBSI, SNAP, TOCA, BASC, ADHD-RS, TRF, DBD, ADS-IV
	Disruptive behavior, Community sample	Very low ⊕◯◯◯ (IC, ID, P)	*n* = 828, *k* = 7 *d* = -.19 CI (-.35 - -.04) I		CRS, SDQ, PBSI, SNAP, TOCA, BASC, ADHD-RS, TRF, DBD, ADS-IV
Verhaltensprobleme. Kliniker*innenurteil (Obs)					
Fabiano, et al., 2021 **Population:** children and adolescents with ADHD/ ODD (max. 18 years)	**Externalizing behavior problems**	Moderate ⊕⊕⊕◯ (P)	*n* = n.a., *k* = 1 *d* = 1.12 CI (.49 - 1.75) I	Assignment to primary studies not possible	n.a.

Intervention: Behavioral Classroom Management **Comparison:** control group					
Veenman, et al., 2018 **Population:** children with ADHD and ODD/ CD symptoms (6-12 years) **Intervention:** behavioral teaching/ classroom program **Comparison:** waitlist, treatment as usual, other intervention	**Disruptive behavior, Clinical, at-risk, and community samples**	Very low ⊕◯◯◯ (R, IC, ID, IP)	*n* = 907, *k* = 4 *d* = -.48 CI (-1.11 - .15) **U**		Observation
Verhaltensprobleme. Unbekanntes Urteil					
Aldabbagh, et al., 2022 **Population:** children with ADHD and externalizing behaviors (2-13 years) **Intervention:** teacher training: IY, classroom management, CBT, web-based intervention, Best In Class intervention, Behavior management strategies, Key2Tech, Daily Report Cards, RFRP, Positivity and Ruels Programm, playing together session, counseling, coaching functional behavior **Comparison:** waiting list, treatment as usual, other treatment	**Externalizing behavior**	Low ⊕⊕◯◯ (R)	*n* = 639, *k* = 12 *d* = .41 CI (.25 - .56) **I**	Externalizing behavior problems domain was heterogeneous and comprised studies measuring oppositional behavior, challenging behavior, and conduct behavior, using variety of measures as listed	SDQ, SESBI, CTRS, SSBS-2, TCIDOS, CTRF, TOCA-C, SCP, SSIS-RS, PBQ, ECBI, SESBI-R
	Conduct problems	Very low ⊕◯◯◯ (R, IC)	*n* = 268, *k* = 5 *d* = .38 CI (.04 - .71) **I**		DPICS, TCIDOS, TPOT, CCOF
Prosoziales Verhalten. Unklares Urteil					

Aldabbagh, et al., 2022 **Population:** children with ADHD and externalizing behaviors (2-13 years) **Intervention:** teacher training: IY, classroom management, CBT, web-based intervention, Best In Class intervention, Behavior management strategies, Key2Tech, Daily Report Cards, RFRP, Positivity and Ruels Programm, playing together session, counseling, coaching functional behavior **Comparison:** waiting list, treatment as usual, other treatment	**Prosocial behavior**	Very low ⊕◯◯◯ (R, IC)	*n* = 502, *k* = 9 *d* = .46 CI (.28 - .64) **I**	The included studies measured peer relationships, prosocial skills and social behavior.	PRO, SDQ, WMCSC, SSBS-2, TPOT, TOCA-A, SCP, SSIS
ADHS Wissen. Lehrer*innenurteil					
Ward, et al., 2022 **Population:** children and adolescents with ADHD or identified as displaying ADHD-type behaviors **Intervention:** teacher training/ school intervention **Comparison:** waitlist control, alternative treatment, control group	**Teacher ADHD knowledge, Between subjects, Posttest**	Very low ⊕◯◯◯ (R, IC)	*n* = 753, *k* = 6 *SMD* = 1.56 CI (.52 - 2.95) **I**	Variety of measurement including vignettes, self-report questionnaire and blinded observations; data at follow-up for teacher knowledge between-group	Study own self-report questionnaires, KADDS, SRAQ teacher
Lehrverhalten. Lehrer*innenurteil					

Aldabbagh, et al., 2022 **Population:** children with ADHD and externalizing behaviors (2-13 years) **Intervention:** teacher training: IY, classroom management, CBT, web-based intervention, Best In Class intervention, Behavior management strategies, Key2Tech, Daily Report Cards, RFRP, Positivity and Ruels Programm, playing together session, counseling, coaching functional behavior **Comparison:** waiting list, treatment as usual, other treatment	**Teacher's warmth and closeness**	Very low ⊕◯◯◯ (R, IC)	*n* = 304, *k* = 6 *d* = .48 CI (.15 - .81) **I**		TPOT, STRS
	Teacher's conflict	Low ⊕⊕◯◯ (R)	*n* = 262, *k* = 5 *d* = .19 CI (.05 - .34) **I**		STRS
	Teacher's positive strategies	Very low ⊕◯◯◯ (R, IC)	*n* = 231, *k* = 8 *d* = .71 CI (.29 - 1.14) **I**		MOOSES, DPICS, TCIDOS, CMSQ, TPOT, CLASS, OREVS

Anmerkung. *n* = Anzahl der Versuchspersonen, *k* = Anzahl der inkludierten Primärstudien. R = risk of bias, IC = inconsistency, ID = indirectness, IP = imprecision, P = publication bias.

Summary of Findings Tabelle: RCTs

Referenz	Endpunkt	Risk of Bias	Effektstärke	Kommentare	Mess-instrument
ADHS Symptome gesamt. Elternurteil					
Pfiffner, et al., 2018 **Population:** students with ADHD 2nd – 5th grade **Intervention:** Collaborative Life Skills (CLS) program (classroom int., parent training, child skill training)	**ADHD total symptoms**	Very high risk ● (BP, BA, OR)	*n* = 62 *d* = -.95 CI (-1.33 - -.58) **I**	Results are from FU-values, measured in following school year	Child Symptom Inventory (CSI)

Comparison: usual community service					
Beeinträchtigung. Lehrer*innenurteil					
Mikami, et al., 2022 **Population:** children with risk for ADHD and their teachers **Intervention:** making socially accepting inclusive classrooms (MOSAIC) **Comparison:** typical practice	**Impairment due to ADHD symptoms**	High risk ◑ (BP)	*n* = 134 *parial* η^2 = .05 CI (n.a.) **U**	Clinical implication based on p-value	Academic Competence Evaluation Scales – Short Form (ASF)
Verhaltensprobleme. Elternurteil					
Pfiffner, et al., 2018 **Population:** students with ADHD 2nd – 5th grade **Intervention:** Collaborative Life Skills (CLS) program (classroom int., parent training, child skill training) **Comparison:** usual community service	**ODD total symptoms**	Very high risk ● (BP, BA, OR)	*n* = 28 *d* = -.57 CI (-.94 - -.22) **I**	Results are from FU-values, measured in following school year	Child Symptom Inventory (CSI)
Verhaltensprobleme. Lehrer*innenurteil					
Staff, et al., 2021 **Population:** children with impairing levels of ADHD symptoms (6-12 years) **Intervention:** short (2 sessions), individualized intervention consisting of either (A) antecedent-based techniques (stimulus control), (B) consequent-based	**Total problem behaviors, Antecedent vs. control, T0-T1**	Very high risk ● (BP, BA)	*n* = 60 *d* = .99 CI (.35 - 1.63) **I**	T1 during week immediately after	Problem behaviors derived by teachers from list of target behaviors (van den Hoofdakker et al., 2007), listing 32 possible problem behaviors related to ADHD.

techniques (contingency management) **Comparison:** waitlist	**Total problem behaviors, Antecedent vs. control, T0-T2**	Very high risk ● (BP, BA)	*n* = 60 *d* = .93 CI (.29 - 1.57) **I**	T2 three weeks after intervention	Problem behaviors derived by teachers from list of target behaviors (van den Hoofdakker et al., 2007), listing 32 possible problem behaviors related to ADHD.
	Total problem behaviors, Consequent vs. control, T0-T1	Very high risk ● (BP, BA)	*n* = 60 d = .77 CI (.14 - 1.40) **I**	T1 during week immediately after	Problem behaviors derived by teachers from list of target behaviors (van den Hoofdakker et al., 2007), listing 32 possible problem behaviors related to ADHD.
	Total problem behaviors, Consequent vs. control, T0-T2	Very high risk ● (BP, BA)	*n* = 60 *d* = .92 CI (.28 - 1.56) **I**	T2 three weeks after intervention	Problem behaviors derived by teachers from list of target behaviors (van den Hoofdakker et al., 2007), listing 32 possible problem behaviors related to ADHD.
	Total problem behaviors, Antecedent vs. Consequent, T0-T1	Very high risk ● (BP, BA)	*n* = 60 *d* = .06 CI (-.56 - .68) **U**	T1 during week immediately after	Problem behaviors derived by teachers from list of target

					behaviors (van den Hoofdakker et al., 2007), listing 32 possible problem behaviors related to ADHD.
	Total problem behaviors, Antecedent vs. Consequent, T0-T2	Very high risk ● (BP, BA)	*n* = 60 *d* = .14 CI (-.48 - .76) **U**	T2 three weeks after intervention	Problem behaviors derived by teachers from list of target behaviors (van den Hoofdakker et al., 2007), listing 32 possible problem behaviors related to ADHD.
	Total problem behaviors, Antecedent vs. Consequent, T2-T3	Very high risk ● (BP, BA)	*n* = 60 *d* = .30 CI (-.32 - .92) **U**	T3 follow-up tree months after baseline	Problem behaviors derived by teachers from list of target behaviors (van den Hoofdakker et al., 2007), listing 32 possible problem behaviors related to ADHD.
Verhaltensprobleme. Kliniker*innenurteil (Obs)					
Harrison, et al., 2022 **Population:** students with ADHD **Intervention:** classroom strategies: prompting, self-management,	**Disruptive behavior, Prompting vs. sensory proprioception**	Very high risk ● (BP, BA, UM)	*n* = 15 *d* = 1.64 CI (n.a.) **I**	Clinical implication based on post hoc pairwise comparison. Only comparisons with significant	Observation

sensory proprioception, taking breaks **Comparison:** strategies compared to each other				differences reported	
	Disruptive behavior, Prompting vs. taking breaks	Very high risk ● (BP, BA, UM)	*n* = 15 *d* = 1.31 CI (n.a.) **I**	Clinical implication based on post hoc pairwise comparison. Only comparisons with significant differences reported	Observation
Soziale Funktionalität. Elternurteil					
Pfiffner, et al., 2018 **Population:** students with ADHD 2nd – 5th grade **Intervention:** Collaborative Life Skills (CLS) program (classroom int., parent training, child skill training) **Comparison:** usual community service	**Social skills**	Very high risk ● (BP, BA, OR)	*n* = 32 *d* = .11 CI (n.a.) **U**	Results are from FU-values, measured in following school year	The Social Skills Improvement System (SSIS)
Soziale Funktionalität. Selbsturteil					
Mikami, et al., 2022 **Population:** children with risk for ADHD and their teachers **Intervention:** making socially accepting inclusive classrooms (MOSAIC) **Comparison:** typical practice	**Support from teachers**	High risk ◑ (BP)	*n* = 134 *parial* η^2 = .05 CI (n.a.) **I**	Clinical implication based on p-value	Classroom, Life Measure (CLM)
	Support from peers	High risk ◑ (BP)	*n* = 134 *parial* η^2 = .02 CI (n.a.) **U**	Clinical implication based on p-value	Classroom, Life Measure (CLM)
Soziale Funktionalität. Gleichaltrigenurteil					
Mikami, et al., 2022	**Social preference**	High risk ◑ (UM)	*n* = 134 *parial* η^2 = .06 CI (n.a.)	Clinical implication based on p-value	Positive/negative nominations by classmates

Population: children with risk for ADHD and their teachers **Intervention:** making socially accepting inclusive classrooms (MOSAIC) **Comparison:** typical practice			**C**		
Akademische Funktionalität. Elternurteil					
Pfiffner, et al., 2018 **Population:** students with ADHD 2nd – 5th grade **Intervention:** Collaborative Life Skills (CLS) program (classroom int., parent training, child skill training) **Comparison:** usual community service	**Organizational functioning**	Very high risk ● (BP, BA, OR)	*n* = 45 *d* = -.57 CI (-.95 - -.21) **I**	Results are from FU-values, measured in following school year	Children's Organizational Skills Scale
Akademische Funktionalität. Lehrer*innenurteil					
Mikami, et al., 2022 **Population:** children with risk for ADHD and their teachers **Intervention:** making socially accepting inclusive classrooms (MOSAIC) **Comparison:** typical practice	**Academic competence**	High risk ◑ (BP)	*n* = 134 *parial* η^2 = .05 CI (n.a.) **U**	Clinical implication based on p-value	Academic Competence Evaluation Scales – Short Form (ASF)
Symptomverbesserung. Elternurteil					
Pfiffner, et al., 2018 **Population:** students with ADHD 2nd – 5th grade **Intervention:** Collaborative Life Skills (CLS) program (classroom int., parent	**Global improvement**	Very high risk ● (BP, BA, OR)	*n* = n.a. *OR* = 2.55 CI (1.7 - 3.9) **U**	Results are from FU-values, measured in following school year	CGI

training, child skill training) **Comparison:** usual community service	

Anmerkung. *n* = Anzahl der Versuchspersonen. SG = sequence generation, CC = concealment, BP = blinding participants, BA = blinding assessors, ID = incomplete data, OR = outcome reporting, CE = carry over effects, SX = stopped early, UM = unvalidated measures, OI = other issue.

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1.3.3.4. Was sind die Ziele einer kognitiv-behavioralen Behandlung von Kindern / Jugendlichen mit ADHS ab dem Schulalter?

1.3.3.4. A

Berücksichtigte Endpunktkategorien: Meta-Analysen

Endpunktkategorien	MAs	*m*	Gesamtaussagesicherheit der Evidenz
Aufmerksamkeit (KU)	1	2	Schwach/ sehr schwach
Aufmerksamkeit (E)	2	4	
Aufmerksamkeit (L)	1	1	
Hyperaktivität/Impulsivität (KU)	1	2	
Hyperaktivität/Impulsivität (E)	1	3	
Funktionalität (E)	3	5	
Funktionalität (L)	2	2	
Verhalten (E)	1	3	
Metakognition (E)	1	3	

Anmerkung. MAs = Anzahl der Meta-Analysen, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.

Berücksichtigte Endpunktkategorien: RCTs

Endpunktkategorien	RCTs	*m*	Gesamtaussagesicherheit der Evidenz
Allgemeine Symptome (E)	1	2	Schwach/ sehr schwach
Allgemeine Symptome (L)	1	2	
ADHS Symptome gesamt (E)	3	7	
ADHS Symptome gesamt (L)	2	6	
Aufmerksamkeit (E)	3	7	
Aufmerksamkeit (L)	2	6	
Hyperaktivität/Impulsivität (E)	1	1	
Verhaltensprobleme (E)	4	23	
Verhaltensprobleme (KL)	1	6	
Verhaltensprobleme (L)	2	18	
Internalisierende Symptome (E)	3	7	
Internalisierende Symptome (L)	2	6	
Organisationale Fähigkeiten (E)	2	11	
Organisationale Fähigkeiten (B)	1	1	
Organisationale Fähigkeiten (L)	1	9	
Hausaufgabenprobleme (E)	2	10	
Hausaufgabenprobleme (L)	1	3	
Andere funktionale Beeinträchtigungen	2	13	
Symptome der Langsamkeit, exzessiven Tagträumens und Schläfrigkeit (SCT)	1	4	

Anmerkung. RCTs = Anzahl der randomisierten kontrollierten Studien, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.

Summary of Findings Tabelle: Meta-Analysen

Referenz	Endpunkt	Aussagesicherheit (GRADE)	Effektstärke	Kommentare	Mess-instrument
Aufmerksamkeit. Kombiniertes Urteil					
Chen, et al., 2021 **Population:** children and adolescents with ADHD (3-18 years and probably medicated) **Intervention:** cognitive training or executive function training targeting domains of neuropsychological deficit **Comparison:** control: TAU; waiting list, active/placebo/sham (i.e., involving other computer-based activities), or alternative training programs	**Inattention symptoms, Working memory training**	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 303, *k* = 6 *g* = .04 CI (-.23 - .32) **U**	Clinician- or parent-rated	ADHD-RS, BRIEF, DBDR, Conners 3-P, CRS-R
	Inattention symptoms, Multiple cognitive training	Very low ⊕◯◯◯ (R, IC)	*n* = 381, *k* = 8 *g* = -.51 CI (-.72 - -.29) **I**	Clinician- or parent-rated	Cpmmers 3-P, CRS-R, BRIEF, DBDRS, SNAP-IV, ADHD-RS
Aufmerksamkeit. Elternurteil					
Bikic, et al., 2017 **Population:** children and adolescents with ADHD (5–18 years) **Intervention:** Organizational skills training (OST) delivered by humans in face-to-face **Comparison:** parent education, waitlist, Treatment as Usual (TAU)	**Inattention**	Very low ⊕◯◯◯ (R, IC)	*n* = 893, *k* = 10 *g* = .56 CI (.38 - .74) **I**	Visual analysis of funnel plot and Trim and Fill method suggest that obtained point estimate is lower than "true" ES. Differences in format intervention: 2 individuals, 1 group+ individual and the rest in group.	DBD-Inattention subscale, HPC-Inattention subscale, CSI-Inattention scale, Vanderbilt ADHD Diagnostic Parent Rating Scale-Inattention subscale, SNAP-Inattention subscale

				Same about randomized trials included.	
Chen, et al., 2021 **Population:** children and adolescents with ADHD (3-18 years and probably medicated) **Intervention:** cognitive training or executive function training targeting domains of neuropsychological deficit **Comparison:** control: TAU; waiting list, active/placebo/sham (i.e., involving other computer-based activities), or alternative training programs	**Inattention, Attention intervention**	Low ⨁⨁◯◯ (R, IP)	*n* = 105, *k* = 1 *g* = -1.46 CI (-1.90 - -1.03) **I**		SNAP-IV, BRIEF
	Inattention symptoms, Working memory training	Very low ⨁◯◯◯ (R, IC, IP)	*n* = 256, *k* = 5 *g* = .03 CI (-.30 - .37) **U**		ADHD-RS, BRIEF, DBDR, Conners 3-P, CRS-R
	Inattention symptoms, Multiple cognitive training	Very low ⨁◯◯◯ (R, IC)	*n* = 322, *k* = 7 *g* = -.48 CI (-.70 - -.26) **I**		CRS-R, BRIEF, Conners 3-P, ADHD-RS, DBDRS, SNAP-IV, CPRS-R
Aufmerksamkeit. Lehrer*innenurteil					
Bikic, et al., 2017 **Population:** children and adolescents with ADHD (5–18 years) **Intervention:** Organizational skills training (OST) delivered by humans in face-to-face **Comparison:** parent education, waitlist, Treatment as Usual (TAU)	**Inattention**	Very low ⨁◯◯◯ (R, IC)	*n* = 590, *k* = 6 *g* = .26 CI (.01 - .52) **I**	Differences in format intervention: 2 individuals, 1 group+ individual and the rest in group. Same about randomized trials included.	DBD-Inattention subscale, SNAP-Inattention scale, CSI-Inattention scale
Hyperaktivität/Impulsivität. Kombiniertes Urteil					

Chen, et al., 2021 **Population:** children and adolescents with ADHD (3-18 years and probably medicated) **Intervention:** cognitive training or executive function training targeting domains of neuropsychological deficit **Comparison:** control: TAU; waiting list, active/placebo/sham (i.e., involving other computer-based activities), or alternative training programs	**Hyperactivity/impulsivity, Working memory training**	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 303, *k* = 6 *g* = .13 CI (-.17 - .43) **U**		ADHD-RS, BRIEF, DBDR, Conners 3-P, CRS-R
	Hyperactivity/impulsivity, Multiple cognitive training	Very low ⊕◯◯◯ (R, IC)	*n* = 381, *k* = 8 *g* = -.31 CI (-.52 - -.09) **I**		CRS-R, BRIEF, ADHD-RS, Conners 3-P, SNAP-I, DBDRS, CPRS-R
Hyperaktivität/Impulsivität. Elternurteil					
Chen, et al., 2021 **Population:** children and adolescents with ADHD (3-18 years and probably medicated) **Intervention:** cognitive training or executive function training targeting domains of neuropsychological deficit **Comparison:** control: TAU; waiting list, active/placebo/sham (i.e., involving other computer-based activities), or alternative training programs	**Hyperactivity/impulsivity, Attention interventions**	Very low ⊕◯◯◯ (R, IP)	*n* = 105, *k* = 1 *g* = -.57 CI (-.99 - -.15) **I**		SNAP-IV, BRIEF
	Hyperactivity/impulsivity, Working memory training	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 256, *k* = 5 *g* = .06 CI (-.27 - .39) **U**		ADHD-RS, BRIEF, DBDR, Conners 3-P, CRS-R
	Hyperactivity/impulsivity, Multiple cognitive training	Very low ⊕◯◯◯ (R, IC)	*n* = 362, *k* = 7 *g* = -.29 CI (-.51 - -.08) **I**		CRS-R, BRIEF, ADHD-RS, Conners 3-P, SNAP-I, DBDRS, CPRS-R
Funktionalität. Elternurteil					
Bikic, et al., 2017	**Organizational skills**	Very low ⊕◯◯◯ (R, IC)	*n* = 697, *k* = 6 *g* = .83 CI (.32 - 1.34)	Differences in format intervention: 2	Children's Organizational Skills Scale (COSS),

Population: children and adolescents with ADHD (5–18 years) **Intervention:** Organizational skills training (OST) delivered by humans in face-to-face **Comparison:** parent education, waitlist, Treatment as Usual (TAU)			**I**	individuals, 1 group+ individual and the rest in group. Randomized trials INCLUDED and non-randomized studies reduce bias; open trials, quasi-experimental designed studies, case studies, or single-case designs NOT INCLUDED.	Homework Problem Checklist (HPC)-Materials Management Scale
Chen, et al., 2021 **Population:** children and adolescents with ADHD (3-18 years and probably medicated) **Intervention:** cognitive training or executive function training targeting domains of neuropsychological deficit **Comparison:** control: TAU; waiting list, active/placebo/sham (i.e., involving other computer-based activities), or alternative training programs	**Global Executive Composite (GEC), Attention interventions**	Very low ⊕◯◯◯ (R, IP)	*n* = 105, *k* = 1 *g* = -.82 CI (-1.22 - -.42) **I**		BRIEF
	Global Executive Composite (GEC), Working memory training	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 244, *k* = 5 *g* = .09 CI (-.16 - .34) **U**		BRIEF
	Global Executive Composite (GEC), Multiple cognitive training	Low ⊕⊕◯◯ (R)	*n* = 399, *k* = 7 *g* = -.50 CI (-.71 - -.29) **I**		BRIEF
Powell, et al., 2022 **Population:** children and adolescents with ADHD (<=18 years) **Intervention:** psychoeducational intervention focused	**Social skills**	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 423, *k* = 5 *SMD* = .39 CI (.19 - .59) **I**	Only RCTs	SSRS, SSIS, SCS

on social skill development (undertaken in parents, child or teachers) **Comparison:** "Pure" control group diagnosed with ADHD					
Funktionalität. Lehrer*innenurteil					
Bikic, et al., 2017 **Population:** children and adolescents with ADHD (5–18 years) **Intervention:** Organizational skills training (OST) delivered by humans in face-to-face **Comparison:** parent education, waitlist, Treatment as Usual (TAU)	**Organizational skills**	Very low ⊕◯◯◯ (R, IC)	*n* = 445, *k* = 4 *g* = .54 CI (.17 - .91) **I**	Differences in format intervention: 2 individuals, 1 group+ individual and the rest in group. Same about randomized trials included.	COSS, HPC-Teacher
Powell, et al., 2022 **Population:** children and adolescents with ADHD (<=18 years) **Intervention:** psychoeducational intervention focused on social skill development (undertaken in parents, child or teachers) **Comparison:** "Pure" control group diagnosed with ADHD	**Social skills**	Very low ⊕◯◯◯ (R, IP)	*n* = 329, *k* = 4 *SMD* = .32 CI (.10 - .54) **I**	Only RCTs	SSRS, SSIS, SCS
Verhalten. Elternurteil					

Chen, et al., 2021 **Population:** children and adolescents with ADHD (3-18 years and probably medicated) **Intervention:** cognitive training or executive function training targeting domains of neuropsychological deficit **Comparison:** control: TAU; waiting list, active/placebo/sham (i.e., involving other computer-based activities), or alternative training programs	**Behavioral Regulation Index (BRI), Attention interventions**	Very low ⊕◯◯◯ (R, IP)	*n* = 105, *k* = 1 *g* = -.50 CI (-.88 - .10) **U**		BRIEF
	Behavioral Regulation Index (BRI), Working memory training	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 146, *k* = 3 *g* = .05 CI (-.27 - .37) **U**		BRIEF
	Behavioral Regulation Index (BRI), Multiple cognitive training	Moderate ⊕⊕⊕◯ (IP)	*n* = 150, *k* = 2 *g* = -.21 CI (-.58 - .16) **U**		BRIEF
Metakognition. Elternurteil					
Chen, et al., 2021 **Population:** children and adolescents with ADHD (3-18 years and probably medicated) **Intervention:** cognitive training or executive function training targeting domains of neuropsychological deficit **Comparison:** control: TAU; waiting list, active/placebo/sham (i.e., involving other computer-based activities), or alternative training programs	**Metacognition Index (MI), Attention interventions**	Very low ⊕◯◯◯ (R, IP)	*n* = 105, *k* = 1 *g* = -.90 CI (-1.30 - -.50) **I**		BRIEF
	Metacognition Index (MI), Working memory training	Very low ⊕◯◯◯ (R, IP)	*n* = 168, *k* = 3 *g* = .25 CI (-.04 - .55) **U**		BRIEF
	Metacognition Index (MI), Multiple cognitive training	Low ⊕⊕◯◯ (R)	*n* = 190, *k* = 3 *g* = -.51 CI (-.83 - -.19) **I**	No significant effects on metacognition index, but subgroup analysis similarly revealed significant effect for multiple	BRIEF

				cognitive training	

Anmerkung. *n* = Anzahl der Versuchspersonen, *k* = Anzahl der inkludierten Primärstudien. R = risk of bias, IC = inconsistency, ID = indirectness, IP = imprecision, P = publication bias.

Summary of Findings Tabelle: RCTs

Referenz	Endpunkt	Risk of Bias	Effektstärke	Kommentare	Mess-instrument
Allgemeine Symptome. Elternurteil					
Döpfner et al., 2004 **Population: children with ADHD (6-10 years) Intervention: I: PE (multimodal). II: MED+PE or BT+PE. III: MED+PE+BT or BT or BT+PE. IV: MED+PE+BT or BT or MED+PE Comparison: no control group**	**Total symptoms, Within group, Phase 2 + 3 (PE/BT)**	Very high risk ● (CC, BP, BA)	*n* = 37 *d* = 1.0 CI (n.a.) **I**	Clinical implication based on p-value	PSC
	Total symptoms, Within group, Phase 2 + 3 (MED + PE/BT)	Very high risk ● (CC, BP, BA)	*n* = 38 *d* = .9 CI (n.a.) **I**	Clinical implication based on p-value	PSC
Allgemeine Symptome. Lehrer*innenurteil					
Döpfner et al., 2004 **Population: children with ADHD (6-10 years) Intervention: I: PE (multimodal). II: MED+PE or BT+PE. III: MED+PE+BT or BT or BT+PE. IV: MED+PE+BT or BT or MED+PE Comparison: no control group**	**Total symptoms, Within group, Phase 2 + 3 (PE/BT)**	Very high risk ● (CC, BP, BA)	*n* = 37 *d* = .8 CI (n.a.) **I**	Clinical implication based on p-value	TSC
	Total symptoms, Within group, Phase 2 + 3 (MED + PE/BT)	Very high risk ● (CC, BP, BA)	*n* = 38 *d* = 1.8 CI (n.a.) **I**	Clinical implication based on p-value	TSC
ADHS Symptome gesamt. Elternurteil					

Babocsai et al., 2018 **Population: children (7-11 years)** **Intervention: Sommertherapiecamp (STC - Multimodal Intensive Group Therapy Program for Children With ADHD Applying a Reward System** **Comparison: treatment as usual**	**Total ADHD symptoms, STC vs. TAU**	Very high risk ● (SG, BP, BA, ID)	*n* = 47 *ES* = n.a. CI (n.a.) **U**	Clinical implication based on p-value	DISYPS-II, FBB-ADHS
Döpfner et al., 2004 **Population: children with ADHD (6-10 years)** **Intervention: I: PE (multimodal). II: MED+PE or BT+PE. III: MED+PE+BT or BT or BT+PE. IV: MED+PE+BT or BT or MED+PE** **Comparison: no control group**	**ADHD symptoms, Within group, Phase I**	Very high risk ● (CC, BP, BA)	*n* = 75 *d* = 1.0 CI (n.a.) **I**	Clinical implication based on p-value	PSC-ADHD
	ADHD symptoms, Within group, Phase 2 + 3 (PE/BT)	Very high risk ● (CC, BP, BA)	*n* = 37 *d* = 1.1 CI (n.a.) **I**	Clinical implication based on p-value	PSC-ADHD
	ADHD symptoms, Within group, Phase 2 + 3 (MED + PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 38 *d* = 1.0 CI (n.a.) **I**	Clinical implication based on p-value	PSC-ADHD
Döpfner et al., 2014 **Population: 6-10 year olds in 1.-4. Grade with nonverbal IQ ≥ 80 meeting the DSM-III-R or ICD-10 criteria for ADHD** **Intervention: I: PE (multimodal). II: MED+PE or BT+PE: III: MED+PE+BT or BT or**	**ADHD symptoms, Within group Post-FU**	Very high risk ● (CC, BP, BA)	*n* = 34 *d* = .18 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; Clinical implication based on p-value	FBB-ADHS

BT+PE. FU: MED+PE+BT or BT or MED+PE Comparison: no control	**ADHD symptoms, Within group, Post-FU**	Very high risk ● (CC, BP, BA)	*n* = 32 *d* = .10 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; Clinical implication based on p-value	FBB-ADHS
	ADHD symptoms, Within group, Post-FU	Very high risk ● (CC, BP, BA)	*n* = 66 *d* = .14 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; Clinical implication based on p-value	FBB-ADHS
ADHS Symptome gesamt. Lehrer*innenurteil					
Döpfner et al., 2004 **Population: children with ADHD (6-10 years) Intervention: I: PE (multimodal). II: MED+PE or BT+PE. III: MED+PE+BT or BT or BT+PE. IV: MED+PE+BT or BT or MED+PE Comparison: no control group**	**ADHD symptoms, Within whole group, Phase I**	Very high risk ● (CC, BP, BA)	*n* = 75 *d* = 1.2 CI (n.a.) **I**	Clinical implication based on p-value	TSC-ADHD
	ADHD symptoms, Within group, Phase 2 + 3 (PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 37 *d* = 1.0 CI (n.a.) **I**	Clinical implication based on p-value	TSC-ADHD
	ADHD symptoms, Within group, Phase 2 + 3 (MED + PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 38 d = 2.0 CI (n.a.) **I**	Clinical implication based on p-value	TSC-ADHD
Döpfner et al., 2014 **Population: 6-10 year olds in 1.-4. Grade with nonverbal IQ ≥ 80**	**ADHD symptoms, Within group (no medication at FU),**	Very high risk ● (CC, BP, BA)	*n* = 25 *d* = .18 CI (n.a.) **U**	No remaining variables changed significantly between posttest	FBB-ADHS

meeting the DSM-III-R or ICD-10 criteria for ADHD Intervention: I: PE (multimodal). II: MED+PE or BT+PE: III: MED+PE+BT or BT or BT+PE. FU: MED+PE+BT or BT or MED+PE Comparison: no control	**Post-FU**			and follow-up, indicating treatment effects were maintained; Clinical implication based on p-value	
	ADHD symptoms, Within group (medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 28 *d* = -.61 CI (n.a.) **U**	Clinical implication based on p-value	FBB-ADHS
	ADHD symptoms, Within group (medication and no medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 53 *d* = -.31 CI (n.a.) **U**	Clinical implication based on p-value	FBB-ADHS
Aufmerksamkeit. Elternurteil					
Curtis et al., 2021 Population: children 8-12 years with (ADHD) combined type Intervention: structured Dyadic Behavior Therapy (SDBT) Comparison: Child-Centered Dyadic Therapy (CCDT), nondirective, experiential psychotherapy without contingency management methods	**Inattention, Between group, Posttreatment**	Very high risk ● (CC, BP)	*n* = 39 *ES* = .24 CI (n.a.) **I**	Clinical implication based on p-value	Parent ratings on DBRS
Döpfner et al., 2004 Population: children with ADHD (6-10 years) Intervention: I: PE (multimodal). II:	**Attention problems, Within whole group, Phase I**	Very high risk ● (CC, BP, BA)	*n* = 75 *d* = .9 CI (n.a.) **I**	Clinical implication based on p-value	CBCL Attention

MED+PE or BT+PE. III: MED+PE+BT or BT or BT+PE. IV: MED+PE+BT or BT or MED+PE Comparison: no control group	**Attention problems, Within group, Phase 2 + 3 (PE/ BT)**	Very high risk ● (CC, BP, BA)	*n* = 37 *d* = 1.0 CI (n.a.) **I**	Clinical implication based on p-value	CBCL Attention
	Attention problems, Within group, Phase 2 + 3 (MED + PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 38 d = .8 CI (n.a.) **I**	Clinical implication based on p-value	CBCL Attention
Döpfner et al., 2014 **Population: 6-10 year olds in 1.-4. Grade with nonverbal IQ ≥ 80 meeting the DSM-III-R or ICD-10 criteria for ADHD Intervention: I: PE (multimodal). II: MED+PE or BT+PE: III: MED+PE+BT or BT or BT+PE. FU: MED+PE+BT or BT or MED+PE Comparison: no control**	**Attention problems, Within group (no medication at FU), Post-FU**	Very high risk ● (CC, BP, BA)	*n* = 34 *d* = -.02 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	CBCL Attention
	Attention problems, Within group (medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 32 *d* = .06 CI (n.a.) **U**	Clinical implication based on p-value	CBCL Attention
	Attention problems, Within group (medication and no medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 66 *d* = .02 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	CBCL Attention
Aufmerksamkeit. Lehrer*innenurteil					
Döpfner et al., 2004 **Population: children with ADHD (6-10 years) Intervention: I: PE (multimodal). II:**	**Attention problems, Within whole group, Phase I**	Very high risk ● (CC, BP, BA)	*n* = 75 *d* = 1.1 CI (n.a.) **I**	Clinical implication based on p-value	TRF Attention Problems

MED+PE or BT+PE. III: MED+PE+BT or BT or BT+PE. IV: MED+PE+BT or BT or MED+PE Comparison: no control group	**Attention problems, Within group, Phase 2 + 3 (PE/ BT)**	Very high risk ● (CC, BP, BA)	*n* = 37 *d* = .7 CI (n.a.) **I**	Clinical implication based on p-value	TRF Attention
	Attention problems, Within group, Phase 2 + 3 (MED + PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 38 d = 1.2 CI (n.a.) **I**	Clinical implication based on p-value	TRF Attention
Döpfner et al., 2014 **Population: 6-10 year olds in 1.-4. Grade with nonverbal IQ ≥ 80 meeting the DSM-III-R or ICD-10 criteria for ADHD Intervention: I: PE (multimodal). II: MED+PE or BT+PE: III: MED+PE+BT or BT or BT+PE. FU: MED+PE+BT or BT or MED+PE Comparison: no control**	**Attention problems, Within group (no medication at FU), Post-FU**	Very high risk ● (CC, BP, BA)	*n* = 25 *d* = .22 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	TRF Attention
	Attention problems, Within group (medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 28 *d* = -.42 CI (n.a.) **U**	Clinical implication based on p-value	TRF Attention
	Attention problems, Within group (medication and no medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 53 *d* = -.14 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	TRF Attention
Hyperaktivität/Impulsivität. Elternurteil					
Curtis et al., 2021 **Population: children 8-12 years with (ADHD) combined type**	**Hyperactivity/impulsivity, Between group, Posttreatment**	Very high risk ● (CC, BP)	*n* = 39 *ES* = .38 CI (n.a.) **I**	Clinical implication based on p-value	Parent ratings on DBRS

Intervention: structured Dyadic Behavior Therapy (SDBT) Comparison: Child-Centered Dyadic Therapy (CCDT), nondirective, experiential psychotherapy without contingency management methods					
Verhaltensprobleme. Elternurteil					
Babocsai et al., 2018 **Population: children (7-11 years) Intervention: Sommertherapiecamp (STC - Multimodal Intensive Group Therapy Program for Children With ADHD Applying a Reward System Comparison: treatment as usual**	**Externalizing symptoms, STC vs. TAU**	Very high risk ● (SG, BP, BA, ID)	*n* = 47 *ES* = n.a. CI (n.a.) **U**	Clinical implication based on p-value	CBCL/4-17
	Total behavior symptoms, STC vs. TAU	Very high risk ● (SG, BP, BA, ID)	*n* = 47 *ES* = n.a. CI (n.a.) **U**	Clinical implication based on p-value	CBCL/4-17
	Total conduct disorder symptoms, STC vs. TAU	Very high risk ● (SG, BP, BA, ID)	*n* = 47 *ES* = n.a. CI (n.a.) **I**	Clinical implication based on p-value	DISYPS-II, FBB-SSV
Curtis et al., 2021 **Population: children 8-12 years with (ADHD) combined type Intervention: structured Dyadic Behavior Therapy (SDBT) Comparison: Child-Centered Dyadic Therapy (CCDT), nondirective, experiential psychotherapy without contingency management methods**	**Behavioral symptoms (overall), Between group, Posttreatment**	Very high risk ● (CC, BP)	*n* = 39 *ES* = .39 CI (n.a.) **I**	Study design: With regard to small sample size, sufficient statistical power achieved to assess differences between two groups in pilot study; clinical implication based on p-value	Parent ratings on DBRS
	Oppositionality, Between group, Posttreatment	Very high risk ● (CC, BP)	*n* = 39 *ES* = .24 CI (n.a.)	Clinical implication based on p-value	Parent ratings on DBRS

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Döpfner et al., 2004 **Population: children with ADHD (6-10 years) Intervention: I: PE (multimodal). II: MED+PE or BT+PE. III: MED+PE+BT or BT or BT+PE. IV: MED+PE+BT or BT or MED+PE Comparison: no control group**	**ODD/CS symptoms, Within whole group, Phase I**	Very high risk ● (CC, BP, BA)	*n* = 75 *d* = .5 CI (n.a.) **I**	Clinical implication based on p-value	PSC-ODD/CD
	ODD symptoms, Within group, Phase 2 + 3 (PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 37 *d* = .7 CI (n.a.) **I**	Clinical implication based on p-value	PSC-ODD/CD
	ODD symptoms, Within group, Phase 2 + 3 (MED + PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 38 *d* = .4 CI (n.a.) **U**	Clinical implication based on p-value	PSC-ODD/CD
	Behavior problems, Within whole group, Phase I	Very high risk ● (CC, BP, BA)	*n* = 75 *d* = 1.0 CI (n.a.) **I**	Clinical implication based on p-value	IPC-P
	Behavior problems, Within group, Phase 2 + 3 (PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 37 *d* = 1.0 CI (n.a.) **I**	Clinical implication based on p-value	IPC-P
	Behavior problems, Within group, Phase 2 + 3 (MED + PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 38 *d* = 1.1 CI (n.a.) **I**	Clinical implication based on p-value	IPC-P
	Externalizing, Within whole group, Phase I	Very high risk ● (CC, BP, BA)	*n* = 75 *d* = 1.0 CI (n.a.) **I**	Clinical implication based on p-value	CBCL Externalizing Problems

	Externalizing, Within group, Phase 2 + 3 (PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 37 *d* = 1.1 CI (n.a.) **I**	Clinical implication based on p-value	CBCL Externalizing
	Externalizing, Within group, Phase 2 + 3 (MED + PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 38 *d* = .8 CI (n.a.) **I**	Clinical implication based on p-value	CBCL Externalizing
Döpfner et al., 2014 **Population: 6-10 year olds in 1.-4. Grade with nonverbal IQ ≥ 80 meeting the DSM-III-R or ICD-10 criteria for ADHD** **Intervention: I: PE (multimodal). II: MED+PE or BT+PE: III: MED+PE+BT or BT or BT+PE. FU: MED+PE+BT or BT or MED+PE** **Comparison: no control**	**ODD symptoms, Within group (no medication at FU), Post-FU**	Very high risk ● (CC, BP, BA)	*n* = 34 *d* = -.2 CI (n.a.) **U**	Clinical implication based on p-value	FBB-SSV
	ODD symptoms, Within group (medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 32 *d* = -.11 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	FBB-SSV
	ODD symptoms, Within group (medication and no medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 66 *d* = -.16 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	FBB-SSV
	Total child behavior, Within group (no medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 34 *d* = .03 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained;	CBCL

				clinical implication based on p-value	
	Total child behavior, Within group (medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 32 *d* = .01 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	CBCL
	Total child behavior, Within group (medication and no medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 66 *d* = .02 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	CBCL
	Externalizing behavior, Within group (no medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 34 *d* = .01 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	CBCL Externalizing
	Externalizing behavior, Within group (medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 32 *d* = .03 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	CBCL Externalizing

	Externalizing behavior, Within group (medication and no medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 66 *d* = .02 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	CBCL Externalizing
Verhaltensprobleme. Kliniker*innenurteil					
Döpfner et al., 2014 **Population: 6-10 year olds in 1.-4. Grade with nonverbal IQ ≥ 80 meeting the DSM-III-R or ICD-10 criteria for ADHD** **Intervention: I: PE (multimodal). II: MED+PE or BT+PE: III: MED+PE+BT or BT or BT+PE. FU: MED+PE+BT or BT or MED+PE** **Comparison: no control**	**Behavior at school, Within group (no medication at FU), Post-FU**	Very high risk ● (CC, BP, BA)	*n* = 25 *d* = .07 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	8-item scale constructed, measuring children's behavior at home; completed by child's therapist based on parent interview data
	Behavior at school, Within group (medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 28 *d* = .18 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	8-item scale constructed, measuring children's behavior at home; completed by child's therapist based on parent interview data
	Behavior at school, Within group (medication and no medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 53 *d* = .13 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	8-item scale constructed, measuring children's behavior at home; completed by child's therapist based on parent interview data
	Behavior at home,	Very high risk ● (CC, BP, BA)	*n* = 34 *d* = .01 CI (n.a.)	No remaining variables changed significantly	8-item scale constructed, measuring children's

	Within group (no medication at FU), Post-FU		**U**	between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	behavior at home; completed by child's therapist based on parent interview data
	Behavior at home, Within group (medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 32 *d* = -.01 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	8-item scale constructed, measuring children's behavior at home; completed by child's therapist based on parent interview data
	Behavior at home, Within group (medication and no medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 66 *d* = .00 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	8-item scale constructed, measuring children's behavior at home; completed by child's therapist based on parent interview data
Verhaltensprobleme. Lehrer*innenurteil					
Döpfner, et al., 2004 **Population: children with ADHD (6-10 years) Intervention: I: PE (multimodal). II: MED+PE or BT+PE. III: MED+PE+BT or BT or BT+PE. IV: MED+PE+BT or BT or MED+PE Comparison: no control group**	**ODD/CS symptoms, Within whole group, Phase I**	Very high risk ● (CC, BP, BA)	*n* = 75 *d* = .7 CI (n.a.) **I**	Clinical implication based on p-value	TSC-ODD
	ODD symptoms, Within group, Phase 2 + 3 (PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 37 *d* = .3 CI (n.a.) **I**	Clinical implication based on p-value	TSC-ODD/CD
	ODD symptoms, Within group, Phase 2 + 3 (MED + PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 38 *d* = 1.0 CI (n.a.)	Clinical implication based on p-value	TSC-ODD/CD

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	Behavior problems, Within whole group, Phase I	Very high risk ● (CC, BP, BA)	*n* = 75 *d* = 1.1 CI (n.a.) I	Clinical implication based on p-value	IPC-T
	Behavior problems, Within group, Phase 2 + 3 (PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 37 *d* = .9 CI (n.a.) I	Clinical implication based on p-value	IPC-T
	Behavior problems, Within group, Phase 2 + 3 (MED + PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 38 *d* = 1.4 CI (n.a.) I	Clinical implication based on p-value	IPC-T
	Externalizing, Within whole group, Phase I	Very high risk ● (CC, BP, BA)	*n* = 75 *d* = .9 CI (n.a.) I	Clinical implication based on p-value	TRF Externalizing Problems
	Externalizing, Within group, Phase 2 + 3 (PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 37 *d* = .5 CI (n.a.) I	Clinical implication based on p-value	TRF Externalizing
	Externalizing, Within group, Phase 2 + 3 (MED + PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 38 *d* = 1.2 CI (n.a.) I	Clinical implication based on p-value	TRF Externalizing
Döpfner et al., 2014 **Population: 6-10 year olds in 1.-4. Grade with nonverbal IQ ≥ 80 meeting the DSM-III-R or ICD-10 criteria for ADHD**	**ODD symptoms, Within group (no medication at FU), Post-FU**	Very high risk ● (CC, BP, BA)	*n* = 25 *d* = -.16 CI (n.a.) U	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained;	FBB-SSV

Intervention: I: PE (multimodal). II: MED+PE or BT+PE: III: MED+PE+BT or BT or BT+PE. FU: MED+PE+BT or BT or MED+PE Comparison: no control				clinical implication based on p-value	
	ODD symptoms, Within group (medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 28 *d* = -.30 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	FBB-SSV
	ODD symptoms, Within group (medication and no medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 53 *d* = -.21 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	FBB-SSV
	Total child behavior, Within group (no medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 25 *d* = .14 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	TRF
	Total child behavior, Within group (medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 28 *d* = -.36 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	TRF

Total child behavior, Within group (medication and no medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 53 *d* = -.11 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	TRF
Externalizing behavior, Within group (no medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 25 *d* = .09 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	TRF Externalizing
Externalizing behavior, Within group (medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 28 *d* = -.29 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	TRF Externalizing
Externalizing behavior, Within group (medication and no medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 53 *d* = -.11 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	TRF Externalizing
Internalisierende Symptome. Elternurteil				

Babocsai et al., 2018 **Population: children (7-11 years)** **Intervention: Sommertherapiecamp (STC - Multimodal Intensive Group Therapy Program for Children With ADHD Applying a Reward System** **Comparison: treatment as usual**	**Internalizing symptoms, STC vs. TAU**	Very high risk ● (SG, BP, BA, ID)	*n* = 47 *ES* = n.a. CI (n.a.) **U**	Clinical implication based on p-value	CBCL/4-17
Döpfner et al., 2004 **Population: children with ADHD (6-10 years)** **Intervention: I: PE (multimodal). II: MED+PE or BT+PE. III: MED+PE+BT or BT or BT+PE. IV: MED+PE+BT or BT or MED+PE** **Comparison: no control group**	**Internalizing, Within whole group, Phase I**	Very high risk ● (CC, BP, BA)	*n* = 75 *d* = .6 CI (n.a.) **I**	Clinical implication based on p-value	CBCL Internalizing Problems
	Internalizing, Within group, Phase 2 + 3 (PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 37 *d* = .5 CI (n.a.) **I**	Clinical implication based on p-value	CBCL Internalizing Problems
	Internalizing, Within group, Phase 2 + 3 (MED + PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 38 *d* = .6 CI (n.a.) **I**	Clinical implication based on p-value	CBCL Internalizing Problems
Döpfner et al., 2014 **Population: 6-10 year olds in 1.-4. Grade with nonverbal IQ ≥ 80 meeting the DSM-III-R or ICD-10 criteria for ADHD** **Intervention: I: PE (multimodal). II: MED+PE or BT+PE: III: MED+PE+BT or BT or BT+PE. FU: MED+PE+BT or BT or MED+PE** **Comparison: no control**	**Internalizing behavior, Within group (no medication at FU), Post-FU**	Very high risk ● (CC, BP, BA)	*n* = 34 *d* = .01 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	CBCL Internalizing
	Internalizing behavior, Within group (medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 32 *d* = -.06 CI (n.a.)	No remaining variables changed significantly between posttest and follow-up,	CBCL Internalizing

			U	indicating treatment effects were maintained; clinical implication based on p-value	
	Internalizing behavior, Within group (medication and no medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 66 *d* = -.02 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	CBCL Internalizing
Internalisierende Symptome. Leherer*innenurteil					
Döpfner et al., 2004 **Population: children with ADHD (6-10 years) Intervention: I: PE (multimodal). II: MED+PE or BT+PE. III: MED+PE+BT or BT or BT+PE. IV: MED+PE+BT or BT or MED+PE Comparison: no control group**	**Internalizing, Within whole group, Phase I**	Very high risk ● (CC, BP, BA)	*n* = 75 *d* = .3 CI (n.a.) **I**	Clinical implication based on p-value	TRF Internalizing
	Internalizing, Within group, Phase 2 + 3 (PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 37 *d* = .3 CI (n.a.) **U**	Clinical implication based on p-value	TRF Internalizing
	Internalizing, Within group, Phase 2 + 3 (MED + PE/ BT)	Very high risk ● (CC, BP, BA)	*n* = 38 *d* = .6 CI (n.a.) **I**	Clinical implication based on p-value	TRF Internalizing
Döpfner et al., 2014 **Population: 6-10 year olds in 1.-4. Grade with nonverbal IQ ≥ 80 meeting the DSM-III-R or ICD-10 criteria for ADHD Intervention: I: PE (multimodal). II: MED+PE or BT+PE: III:**	**Internalizing behavior, Within group (no medication at FU), Post-FU**	Very high risk ● (CC, BP, BA)	*n* = 25 *d* = .27 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	TRF Internalizing

MED+PE+BT or BT or BT+PE. FU: MED+PE+BT or BT or MED+PE **Comparison: no control**	**Internalizing behavior, Within group (medication at FU), Post-FU**	Very high risk ● (CC, BP, BA)	*n* = 28 *d* = -.08 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	TRF Internalizing
	Internalizing behavior, Within group (medication and no medication at FU), Post-FU	Very high risk ● (CC, BP, BA)	*n* = 53 *d* = .08 CI (n.a.) **U**	No remaining variables changed significantly between posttest and follow-up, indicating treatment effects were maintained; clinical implication based on p-value	TRF Internalizing
Organisationale Fähigkeiten. Elternurteil					
DuPaul et al., 2018 **Population: middle School Students with ADHD** **Intervention: Challenging Horizons Program** **Comparison: commuity care**	**Organization skills: task planning**	Very high risk ● (BP, BA)	*n* = 130 *d* = -.4 CI (n.a.) **I**	Clinical implication based on p-value of group x time interaction	Children's organizational skill scale (COSS)
	Organization skills: organizing actions	Very high risk ● (BP, BA)	*n* = 130 *d* = -.58 CI (n.a.) **I**	Clinical implication based on p-value of group x time interaction	Children's organizational skill scale (COSS)
Langeberg et al., 2017 **Population: middle school students with ADHD** **Intervention: Homework, Organization and Planning Skills (HOPS) or Completing Homework by Improving**	**Task planning, HOPS vs. CHIEF**	Very high risk ● (BP, BA)	*n* = 274 *d* = -.05 CI (n.a.) **U**	Clinical implication based on significance of pairwise comparisons	Children's Organizational Skills Scale (COSS)
	Task planning, HOPS vs. WLC	Very high risk ● (BP, BA)	*n* = 274 *d* = -.79 CI (n.a.) **I**	Clinical implication based on significance of pairwise comparisons	Children's Organizational Skills Scale (COSS)

Efficiency and Focus (CHIEF) Comparison: HOPS/CHIEF/Waiting List	**Task planning, CHIEF vs. WLC**	Very high risk ● (BP, BA)	*n* = 274 *d* = -.72 CI (n.a.) **I**	Clinical implication based on significance of pairwise comparisons	Children's Organizational Skills Scale (COSS)
	Organized actions, HOPS vs. CHIEF	Very high risk ● (BP, BA)	*n* = 274 *d* = -.68 CI (n.a.) **I**	Clinical implication based on significance of pairwise comparisons	Children's Organizational Skills Scale (COSS)
	Organized actions, HOPS vs. WLC	Very high risk ● (BP, BA)	*n* = 274 *d* = -1.14 CI (n.a.) **I**	Clinical implication based on significance of pairwise comparisons	Children's Organizational Skills Scale (COSS)
	Organized actions, CHIEF vs. WLC	Very high risk ● (BP, BA)	*n* = 274 *d* = -.46 CI (n.a.) **I**	Clinical implication based on significance of pairwise comparisons	Children's Organizational Skills Scale (COSS)
	Material management, HOPS vs. CHIEF	Very high risk ● (BP, BA)	*n* = 274 *d* = -.24 CI (n.a.) **U**	Clinical implication based on significance of pairwise comparisons	Children's Organizational Skills Scale (COSS)
	Material management, HOPS vs. WLC	Very high risk ● (BP, BA)	*n* = 274 *d* = -.81 CI (n.a.) **I**	Clinical implication based on significance of pairwise comparisons	Children's Organizational Skills Scale (COSS)
	Material management, CHIEF vs. WLC	Very high risk ● (BP, BA)	*n* = 274 *d* = -.57 CI (n.a.) **I**	Clinical implication based on significance of pairwise comparisons	Children's Organizational Skills Scale (COSS)
Organisationale Fähigkeiten. Beobachtung					
Harrison et al., 2020	**Binder organization**	Very high risk ●	*n* = 55 *parial* η^2 = .23	Clinical implication based	Observation

Population: students (11-15 years old) with ADHD **Intervention: organization training, self-management, note-taking** **Comparison: accomodations (organizination support, extended time, copy of theacher notes)**		(BP, BA, ID, UM)	CI (n.a.) **I**	on p-value of group x time effects	
Organisationale Fähigkeiten. Lehrer*innenurteil					
Langeberg et al., 2017 **Population: middle school students with ADHD** **Intervention: Homework, Organization and Planning Skills (HOPS) or Completing Homework by Improving Efficiency and Focus (CHIEF)** **Comparison: HOPS/CHIEF/Waiting List**	**Task planning, HOPS vs. CHIEF**	High risk ◑ (BP)	*n* = 274 *d* = -.02 CI (n.a.) **U**	Clinical implication based on significance of pairwise comparisons	Children's Organizational Skills Scale (COSS)
	Task planning, HOPS vs. WLC	High risk ◑ (BP)	*n* = 274 *d* = -.06 CI (n.a.) **U**	Clinical implication based on significance of pairwise comparisons	Children's Organizational Skills Scale (COSS)
	Task planning, CHIEF vs. WLC	High risk ◑ (BP)	*n* = 274 *d* = -.09 CI (n.a.) **U**	Clinical implication based on significance of pairwise comparisons	Children's Organizational Skills Scale (COSS)
	Organized actions, HOPS vs. CHIEF	High risk ◑ (BP)	*n* = 274 *d* = -.43 CI (n.a.) **I**	Clinical implication based on significance of pairwise comparisons	Children's Organizational Skills Scale (COSS)
	Organized actions, HOPS vs. WLC	High risk ◑ (BP)	*n* = 274 *d* = -.55 CI (n.a.) **I**	Clinical implication based on significance of pairwise comparisons	Children's Organizational Skills Scale (COSS)
	Organized actions, CHIEF vs. WLC	High risk ◑ (BP)	*n* = 274 *d* = -.09 CI (n.a.)	Clinical implication based on significance of	Children's Organizational Skills Scale (COSS)

			U	pairwise comparisons	
	Material management, HOPS vs. CHIEF	High risk ◑ (BP)	*n* = 274 *d* = -.3 CI (n.a.) **U**	Clinical implication based on significance of pairwise comparisons	Children's Organizational Skills Scale (COSS)
	Material management, HOPS vs. WLC	High risk ◑ (BP)	*n* = 274 *d* = -.53 CI (n.a.) **I**	Clinical implication based on significance of pairwise comparisons	Children's Organizational Skills Scale (COSS)
	Material management, CHIEF vs. WLC	High risk ◑ (BP)	*n* = 274 *d* = -.18 CI (n.a.) **U**	Clinical implication based on significance of pairwise comparisons	Children's Organizational Skills Scale (COSS)
Hausaufgabenprobleme. Elternurteil					
DuPaul et al., 2018 **Population: middle School Students with ADHD** **Intervention: Challenging Horizons Program** **Comparison: commuity care**	**Homework problems**	Very high risk ● (BP, BA)	*n* = 130 *d* = -.44 CI (n.a.) **I**	Clinical implication based on p-value of group x time interaction	Homework problems checklist (HPC)
Langeberg et al., 2017 **Population: middle school students with ADHD** **Intervention: Homework, Organization and Planning Skills (HOPS) or Completing Homework by Improving**	**Homework problems total, HOPS vs. CHIEF**	Very high risk ● (BP, BA)	*n* = 274 *d* = .21 CI (n.a.) **U**	Clinical implication based on significance of pairwise comparisons	Homework problems checklist (HPC)
	Homework problems total, HOPS vs. WLC	Very high risk ● (BP, BA)	*n* = 274 *d* = 1.29 CI (n.a.) **I**	Clinical implication based on significance of pairwise comparisons	Homework problems checklist (HPC)

Efficiency and Focus (CHIEF) Comparison: HOPS/CHIEF/Waiting List	**Homework problems total, CHIEF vs. WLC**	Very high risk ● (BP, BA)	*n* = 274 *d* = 1.08 CI (n.a.) **I**	Clinical implication based on significance of pairwise comparisons	Homework problems checklist (HPC)
	Homework completion behavior, HOPS vs. CHIEF	Very high risk ● (BP, BA)	*n* = 274 *d* = -.19 CI (n.a.) **U**	Clinical implication based on significance of pairwise comparisons	Homework problems checklist (HPC)
	Homework completion behavior, HOPS vs. WLC	Very high risk ● (BP, BA)	*n* = 274 *d* = -1.27 CI (n.a.) **I**	Clinical implication based on significance of pairwise comparisons	Homework problems checklist (HPC)
	Homework completion behavior, CHIEF vs. WLC	Very high risk ● (BP, BA)	*n* = 274 *d* = -1.06 CI (n.a.) **I**	Clinical implication based on significance of pairwise comparisons	Homework problems checklist (HPC)
	Homework material management, HOPS vs. CHIEF	Very high risk ● (BP, BA)	*n* = 274 *d* = .07 CI (n.a.) **U**	Clinical implication based on significance of pairwise comparisons	Homework problems checklist (HPC)
	Homework material management, HOPS vs. WLC	Very high risk ● (BP, ID)	*n* = 274 *d* = -.87 CI (n.a.) **I**	Clinical implication based on significance of pairwise comparisons	Homework problems checklist (HPC)
	Homework material management, CHIEF vs. WLC	Very high risk ● (BP, BA)	*n* = 274 *d* = -.94 CI (n.a.) **I**	Clinical implication based on significance of pairwise comparisons	Homework problems checklist (HPC)
Hausaufgabenprobleme. Lehrer*innenurteil					
Langeberg et al., 2017	**Homework problems total, HOPS vs. CHIEF**	High risk ◑ (BP)	*n* = 274 *d* = -.1	Clinical implication based	Homework problems checklist (HPC)

Population: middle school students with ADHD **Intervention: Homework, Organization and Planning Skills (HOPS) or Completing Homework by Improving Efficiency and Focus (CHIEF)** **Comparison: HOPS/CHIEF/Waiting List**			CI (n.a.) **U**	on significance of pairwise comparisons	
	Homework problems total, HOPS vs. WLC	High risk ◑ (BP)	*n* = 274 *d* = -.15 CI (n.a.) **U**	Clinical implication based on significance of pairwise comparisons	Homework problems checklist (HPC)
	Homework problems total, CHIEF vs. WLC	High risk ◑ (BP)	*n* = 274 *d* = -.05 CI (n.a.) **U**	Clinical implication based on significance of pairwise comparisons	Homework problems checklist (HPC)
Andere funktionale Beeinträchtigungen					
DuPaul et al., 2018 **Population: middle School Students with ADHD** **Intervention: Challenging Horizons Program** **Comparison: commuity care**	**Academic problems**	Very high risk ● (BP, BA)	*n* = 130 *d* = -.53 CI (n.a.) **I**	Parent-rated; Clinical implication based on p-value of group x time interaction	Adolescent academic problems checklist (AAPC)
	GPA, Last measurement point	High risk ◑ (BP)	*n* = 130 *d* = .06 CI (n.a.) **U**	Clinical implication based on p-value of group x time interaction	n.a.
	Reading skills	High risk ◑ (BP)	*n* = 130 *d* = .37 CI (n.a.) **I**	Investigator rated; Clinical implication based on p-value of group differences	Woodcock-Johnson achievement test
	Math skills	High risk ◑ (BP)	*n* = 130 *d* = -.34 CI (n.a.) **C**	Investigator-rated; Clinical implication based on p-value of group differences	Woodcock-Johnson achievement test
	Writing skills	High risk ◑ (BP)	*n* = 130 *d* = -.18 CI (n.a.)	Investigator-rated; Clinical implication based	Woodcock-Johnson achievement test

			U	on p-value of group differences	
Harrison et al., 2020 **Population: students (11-15 years old) with ADHD** **Intervention: organization training, self-management, note-taking** **Comparison: accomodations (organizinization support, extended time, copy of theacher notes)**	**Engagement (in science lesson)**	Very high risk ● (BP, BA, ID, UM)	*n* = 55 *parial* η^2 = .07 CI (n.a.) **I**	Clinical implication based on p-value of group x time effects	Observation
	Engagement (in independent practice)	Very high risk ● (BP, BA, ID, UM)	*n* = 55 *parial* η^2 = .07 CI (n.a.) **U**	Clinical implication based on p-value of group x time effects	Observation
	Disruption (in science lesson)	Very high risk ● (BP, BA, UM)	*n* = 55 *parial* η^2 = .06 CI (n.a.) **U**	Clinical implication based on p-value of group x time effects	Observation
	Dispruption (in independent practice)	Very high risk ● (BP, BA, ID, UM)	*n* = 55 *parial* η^2 = .07 CI (n.a.) **U**	Clinical implication based on p-value of group x time effects	Observation
	Completion of notes (in science lesson)	Very high risk ● (BP, BA, ID, UM)	*n* = 55 *parial* η^2 = .42 CI (n.a.) **I**	Clinical implication based on p-value of group x time effects	Observation
	Completion of notes (in independent practice)	Very high risk ● (BP, BA, ID, UM)	*n* = 55 *parial* η^2 = .06 CI (n.a.) **U**	Clinical implication based on p-value of group x time effects	Observation
	Accuracy of notes (in science lesson)	Very high risk ● (BP, BA,ID, UM)	*n* = 55 *parial* η^2 = .51 CI (n.a.) **I**	Clinical implication based on p-value of group x time effects	Observation

	Accuracy of notes (in independent practice)	Very high risk ● (BP, BA, ID, UM)	*n* = 55 *parial* η^2 = .1 CI (n.a.) **U**	Clinical implication based on p-value of group x time effects	Observation
Langsamkeits-, exzessive Tagträumens- und Schläfrigkeits-Symptome (SCT)					
Smith et al., 2020 **Population: young adolescents (mean age not specified) diagnosed with ADHD** **Intervention: organizational skills and homework completion interventions** **Comparison: waitlist control group**	**Sluggish cognitive tempo (SCT) all, Group x time**	Very high risk ● (BP, BA)	*n* = 274* *d* = .410 CI (n.a.) **I**	*n analysed not reported. Clinicial implication based on p value	SCT includes symptoms of slowness, excessive daydreaming, and drowsiness
	Sluggish cognitive tempo (SCT) all, Group x time	Very high risk ● (BP, BA)	*n* = 274* *d* = .313 CI (n.a.) **U**	*n analysed not reported. Clinicial implication based on p value	SCT includes symptoms of slowness, excessive daydreaming, and drowsiness
	High score of sluggish cognitive tempo (SCT), Group x time	Very high risk ● (BP, BA)	*n* = 203* *d* = .517 CI (n.a.) **I**	*n analysed not reported, here 74% of total. Clinicial implication based on p value	SCT includes symptoms of slowness, excessive daydreaming, and drowsiness
	High score of sluggish cognitive tempo (SCT), Group x time	Very high risk ● (BP, BA)	*n* = 149* *d* = .384 CI (n.a.) **U**	*n analysed not reported, here 74% of total. Clinicial implication based on p value	SCT includes symptoms of slowness, excessive daydreaming, and drowsiness

Anmerkung. *n* = Anzahl der Versuchspersonen. SG = sequence generation, CC = concealment, BP = blinding participants, BA = blinding assessors, ID = incomplete data, OR = outcome reporting, CE = carry over effects, SX = stopped early, UM = unvalidated measures, OI = other issue.

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1.3.4. Psychosoziale Interventionen bei Erwachsenen mit ADHS

1.3.4.2. Bei welchen Personen sollen psychosoziale Interventionen erwogen werden?

1.3.4.2. B

Berücksichtigte Endpunktkategorien: Meta-Analysen

Endpunktkategorien	MAs	*m*	Gesamtaussagesicherheit der Evidenz
ADHS Symptome (KU)	1	2	Moderat
Hyperaktivität/Impulsivität (KL)	1	2	
Aufmerksamkeit (S)	1	2	
Soziale Funktionsfähigkeit (KL)	1	4	
Komorbide Symptome (KU)	1	6	
Klinischer Gesamteindruck (KL)	1	2	

Anmerkung. MAs = Anzahl der Meta-Analysen, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.

Berücksichtigte Endpunktkategorien: RCTs

Endpunktkategorien	RCTs	*m*	Gesamtaussagesicherheit der Evidenz
ADHS Kernsymptome (S)	1	1	Moderat
Depressive Symptome (S)	1	1	
Lebensqualität (S)	1	1	
Maladaptive Kognitionen (S)	1	2	

Anmerkung. RCTs = Anzahl der randomisierten kontrollierten Studien, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.

Summary of Findings Tabelle: Meta-Analysen

Referenz	Endpunkt	Aussagesicherheit (GRADE)	Effektstärke	Kommentare	Mess-instrument
ADHD Symptome. Kombiniertes Urteil					
Li et al., 2024 **Population:** Adults with ADHD **Intervention:** CBT and Pharmacotherapy	**Total ADHD Symptoms**	Moderate ⊕⊕⊕◯ (R)	*n* = 273, *k* = 6 SMD = -.43 CI (-.6 - -.27) **I**	No information regarding P	RATE, K-SADS, BCS, CSS, ADHD-RS, and CAARS

(mostly MPH & ATX) combined **Comparison:** Pharmacotherapy only (mostly MPH & ATX)	**Total ADHD Symptoms, Follow-up (3-9 months)**	Moderate ⊕⊕⊕◯ (R)	*n* = 282, *k* = 5 SMD = -.45 CI (-.7 - -.19) **I**	No information regarding P	RATE, K-SADS, BCS, CSS, ADHD-RS, and CAARS
Hyperaktivität/Impulsivität. Kliniker*innenurteil					
Li et al., 2024. **Population:** Adults with ADHD **Intervention:** CBT and Pharmacotherapy (mostly MPH & ATX) combined **Comparison:** Pharmacotherapy (mostly MPH & ATX) only	**Hyperactivity/Impulsivity**	Low ⊕⊕◯◯ (R,IC)	*n* = 193, *k* = 2 SMD = -.12 CI (-.38 - .14) **I**	No information regarding P	BCS, K-SADS, ADHD-RS
	Hyperactivity/Impulsivity, Follow-up (3-9 months)	Very low ⊕◯◯◯ (R)	*n* = 193, *k* = 2 *SMD* = -.12 CI (-.69 - .02) **U**	No information regarding P	BCS, K-SADS, ADHD-RS
Aufmerksamkeit. Selbsturteil					
Li et al., 2024 **Population:** Adults with ADHD **Intervention:** CBT and Pharmacotherapy (mostly MPH & ATX) combined **Comparison:** Pharmacotherapy (mostly MPH & ATX) only	**Inattention**	Moderate ⊕⊕⊕◯ (R)	*n* = 290, *k* = 4 *SMD* = -0.52 CI (-.75 - -.29) **I**	No information regarding P	CAARS-S, BCS
	Inattention, Follow-up (3-9 months)	Moderate ⊕⊕⊕◯ (R,IC)	*n* = 290, *k* = 4 *SMD* = -.41 CI (-.76 - -.06) **I**	No information regarding P	CAARS-S, BCS
Soziale Funktionsfähigkeit. Kliniker*innenurteil					
Li et al., 2024 **Population:** Adults with ADHD **Intervention:** CBT and Pharmacotherapy (mostly MPH & ATX) combined **Comparison:** Pharmacotherapy (mostly MPH & ATX) only	**Impaired social functioning**	Moderate ⊕⊕⊕◯ (R)	*n* = 149, *k* = 2 *SMD* = - 8.41 CI (-12.25 - - 4.57) **I**	No information regarding P	RATE
	Impaired social functioning, Follow-up (3-9 months)	Moderate ⊕⊕⊕◯ (R)	*n* = 149, *k* = 2 *SMD* = -9.02 CI (-12.89 - - 5.15)	No information regarding P	RATE

			I		
	Antisocial symptoms	Moderate ⊕⊕⊕◯ (R)	*n* = 149, *k* = 2 *SMD* = -1.25 CI (-2.02 - -.48) I	No information regarding P	RATE
	Antisocial symptoms, Follow-up (3-9 months)	Moderate ⊕⊕⊕◯ (R)	*n* = 149 , *k* = 2 *SMD*= -2.63 CI (-3.91 - -1.35) I	No information regarding P	RATE
Komorbide Symptome. Kombiniertes Urteil					
Li et al., 2024 **Population:** Adults with ADHD **Intervention:** CBT and Pharmacotherapy (mostly MPH & ATX) combined **Comparison:** Pharmacotherapy (mostly MPH & ATX) only	**Anxiety**	Moderate ⊕⊕⊕◯ (R)	*n* = 278, *k* = 4 *SMD* = - .6 CI (-.85 - -.65) I	No information regarding P	SAS, HAMA, BAI
	Anxiety, Follow-up (3-9 months)	Moderate ⊕⊕⊕◯ (R)	*n* = 247, *k* = 3 *SMD* = -.67 CI (-.91 - -.42) I	No information regarding P	SAS, HAMA, BAI
	Emotional Control	Moderate ⊕⊕⊕◯ (R)	*n* = 149, *k* = 2 *SMD* = -4.75 CI (-9.34 - -.17) I	No information regarding P	n.a
	Emotional Control, Follow-up (3-9 months)	Moderate ⊕⊕⊕◯ (R)	*n* = 149, *k* = 2 *SMD* = -20.36 CI (-15.2 - -5.53) I	No information regarding P	n.a
	Depression	Moderate ⊕⊕⊕◯ (R)	*n* = 278, *k* = 4 *SMD* = -.68	No information regarding P	SDS, BDI, HAMD

			CI (.94 - -.43) I		
	Depression, Follow-up (3-9 months)	Moderate ⊕⊕⊕◯ (R)	*n* = 274 , *k* = 3 *SMD*= -.78 CI (-1.16 - -.39) I	No information regarding P	SDS, BDI
Klinischer Gesamteindruck. Kliniker*innenurteil					
Li et al., 2024 **Population:** Adults with ADHD **Intervention:** CBT and Pharmacotherapy (mostly MPH & ATX) combined **Comparison:** Pharmacotherapy (mostly MPH & ATX) only	**Clinical Global Impression**	Moderate ⊕⊕⊕◯ (R)	*n* = 244, *k* = 3 *SMD* = -.76 CI (-1.02 - - .5) I		CGI
	Clinical Global Impression, Follow-up (3-9 months)	Moderate ⊕⊕⊕◯ (R)	*n* = 193, *k* = 2 *SMD* = -.74 CI (-1.06 - -.43) I		CGI

Anmerkung. *n* = Anzahl der Versuchspersonen, *k* = Anzahl der inkludierten Primärstudien. R = risk of bias, IC = inconsistency, ID = indirectness, IP = imprecision, P = publication bias.

Summary of Findings Tabelle: RCTs

Referenz	Endpunkt	Risk of Bias	Effektstärke	Kommentare	Mess-instrument
ADHD Kernsymptome. Selbsturteil					
Pan et al., 2024 **Population:** Adults with ADHD **Intervention:** CBT + Medication **Comparison:** Medication only	**ADHD core symptom**	Very high risk ● (BP, BA)	*n* = 98 *d* = .491 CI (.088 - .892) I	Group x time interaction.	ADHD-RS
Depressive Symptome. Selbsturteil					

Pan et al., 2024 **Population:** Adults with ADHD **Intervention:** CBT + Medication **Comparison:** Medication only	**Depressive Symptoms**	Very high risk ● (BP, BA)	*n* = 98 *d* = .570 CI (.164 - .973) **I**	Group x time interaction.	SDS (Self-Rating Depression Scale)
Lebensqualität. Selbsturteil					
Pan et al., 2024 **Population:** Adults with ADHD **Intervention:** CBT + Medication **Comparison:** Medication only	**Quality of Life**	Very high risk ● (BP,BA)	*n* = 98 *d* = .433 CI (-.827 - -.022) **I**	Group x time interaction.	WHOQOL-BRIEF (World Health Organization Quality of Life-Brief Version)
Maladaptive Kognitionen. Selbsturteil					
Pan et al., 2024 **Population:** Adults with ADHD **Intervention:** CBT + Medication **Comparison:** Medication only	**Maladaptive cognitions (Automatic Thoughts)**	Very high risk ● (BP, BA)	*n* = 98 *d* = .387 CI (-.014 - .786) **U**	group x time interaction	ATQ (Automatic Thoughts Questionnaire)
	Maladaptive cognitions (Dysfunctional Attitudes)	Very high risk ● (BP, BA)	n = 98 d = .395 CI (-.006 - .794) **U**	group x time interaction	DAS (Dysfunctional Attitudes Scales)

Anmerkung. *n* = Anzahl der Versuchspersonen. SG = sequence generation, CC = concealment, BP = blinding participants, BA = blinding assessors, ID = incomplete data, OR = outcome reporting, CE = carry over effects, SX = stopped early, UM = unvalidated measures, OI = other issue.

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1.3.4.3. Welche psychosozialen Interventionen sollen bei Erwachsenen mit ADHS angewendet werden?

1.3.4.3. B

Berücksichtigte Endpunktkategorien: Meta-Analysen
Kognitiv behaviorale Therapie (CBT, DBT, MBCT):

Endpunktkategorien	MAs	*m*	Gesamtaussagesicherheit der Evidenz
ADHS Symptome gesamt (S)	5	11	Schwach/sehr schwach
ADHS Symptome gesamt (KL)	4	9	
Aufmerksamkeit (S)	2	3	
Aufmerksamkeit (KL)	1	1	
Aufmerksamkeit (KU)	1	1	
Hyperaktivität/Impulsivität (S)	2	3	
Hyperaktivität/Impulsivität (KL)	1	1	
Hyperaktivität/Impulsivität (KU)	1	1	
Klinischer Gesamteindruck (KL)	2	3	
Funktionalität (S)	1	2	
Selbstwertgefühl (U)	2	8	
Lebensqualität (U)	2	10	
Komorbiditäten (KU)	1	5	
Komorbiditäten (S)	2	7	
Komorbiditäten (KL)	1	4	
Komorbiditäten (U)	1	30	

Anmerkung. MAs = Anzahl der Meta-Analysen, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.

Berücksichtigte Endpunktkategorien: Meta-Analysen
Verschiedene psychosoziale Interventionen kombiniert:

Endpunktkategorien	MAs	*m*	Gesamtaussagesicherheit der Evidenz
ADHS Symptome gesamt (S)	2	4	Schwach/sehr schwach
ADHS Symptome gesamt (KL)	1	3	
Aufmerksamkeit (S)	1	2	
Aufmerksamkeit (KL)	1	2	
Hyperaktivität/Impulsivität (S)	1	2	
Hyperaktivität/Impulsivität (KL)	1	2	
Klinischer Gesamteindruck (KL)	1	2	
Funktionalität (S)	1	2	
Lebensqualität (U)	1	1	
Komorbiditäten (KU)	2	4	
Komorbiditäten (S)	1	3	
Komorbiditäten (KL)	1	3	

Anmerkung. MAs = Anzahl der Meta-Analysen, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.

Berücksichtigte Endpunktkategorien: RCTs
Kognitiv behaviorale Therapie (CBT)

Endpunktkategorien	RCTs	*m*	Gesamtaussagesicherheit der Evidenz
ADHS Symptome gesamt (S)	5	8	Schwach/sehr schwach
ADHD Symptome gesamt (KL)	2	5	
Aufmerksamkeit (S)	3	4	
Aufmerksamkeit (KL)	2	5	
Hyperaktivität/Impulsivität (S)	2	2	
Hyperaktivität/Impulsivität (KL)	1	2	
Klinischer Gesamteindruck (KL)	1	3	
Funktionalität. (S)	2	2	
Selbstwertgefühl (S)	2	4	
Lebensqualität (S)	2	5	
Wohlbefinden (U)	1	1	
Soziale Fähigkeiten	2	2	
ADHS Wissen (U)	1	1	
Organisationale und akademische Skills (S)	3	11	
Organisationale und akademische Skills (KL)	2	3	
Komorbiditäten (S)	2	2	
Komorbiditäten (U)	3	10	

Anmerkung. RCTs = Anzahl der randomisierten kontrollierten Studien, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.

Summary of findings Tabelle: Meta-Analysen
Kognitiv behaviorale Therapie (CBT, DBT, MBCT):

Referenz	Endpunkt	Aussagesicherheit (GRADE)	Effektstärke	Kommentare	Mess-instrument
ADHS Symptome gesamt. Selbsturteil					
Knouse et al., 2017 **Population:** adults with ADHD, medicated and unmedicated, > 18 years **Intervention:** cognitive behavioral	**ADHD symptoms**	Moderate ⊕⊕⊕◯ (IC)	*n* = 896, *k* = 19 *g* = .65 CI (.44 - .86) **I**	Controlled and open trials; treatment compared with active control group showed significantly smaller effect sizes (g = 0.35) than treatment with not active	n.a.

treatment (CBT, DBT, MBCT, psychoeducation, OTMB, iCBT, group rehabilitation), individual or group therapy **Comparison:** active or passive control				control group (g = 0.79).	
	ADHD symptoms, Pre-posttreatment	Moderate ⊕⊕⊕◯ (IC)	*n* = 658, *k* = 31 *g* = 1.00 CI (.84 - 1.16) **I**	Controlled and open trials; medication status significant moderator of treatment effect size (three studies treating unmedicated participants g = 1.33, six studies treating only medicated participants g = 0.20, 22 studies treating mixed medicated and unmedicated participants (g = 0.89).	n.a.
Liu et al., 2023 **Population:** adults with ADHD, parallel stable medication, > 18 years **Intervention:** cognitive behavioral therapy (CBT, MBCT, DBT, internet based CBT); individual, group or online setting **Comparison:** treatment as usual, waitlist, active control (nondirective therapy or with no specific strategy intervention)	**ADHD total symptoms**	Very Low ⊕◯◯◯ (R, IC)	*n* = 2090, k = 26 *SMD* = -.43 CI (-.52 - -.34) **I**	Trim and fill corrected value used; high quality of evidence in the studies	CAARS, BCSS, ADHS-RS, ASRS, BADDS

	ADHD core symptoms, CBT vs. control	Very low ⊕◯◯◯ (R, IP)	*n* = n.a., *k* = 20 *SMD* = .55 CI (-1.24 - 0.14) **U**	RCTs	n.a.
Ostinelli et al., 2025 **Population:** adults (aged ≥18 years) with a formal diagnosis of ADHD **Intervention:** CBT, DBT, Mindfulness, Psychoeducation, Relaxation therapy (at least four sessions for psychological therapies) **Comparison**: psychological placebo (sham), TAU, waitlist	**ADHD core symptoms, DBT vs. control**	Very low ⊕◯◯◯ (R, IP)	*n* = n.a., *k* = 8 *SMD* = -.51 CI (-1.17 - .16) **U**	RCTs	n.a.
	ADHD core symptoms, Mindfulness vs. control	Very low ⊕◯◯◯ (R, IP)	*n* = 260, *k* = 7 *SMD* = -.08 CI (-.79 - .64) **U**	RCTs	n.a.
	ADHD core symptoms, Psychoeducation vs. Control	Very low ⊕◯◯◯ (R, IP)	*n* = n.a., *k* = 6 *SMD* = .14 CI (-.65 - .94) **U**	RCTs	n.a.
	ADHD core symp-toms, Relaxation therapy vs. control	Low ⊕⊕◯◯ ®	*n* = n.a., *k* = 2 *SMD* = .86 CI (.07 - 1.65) **C**	RCTs	n.a.
Tourjman et al., 2022 **Population:** adults with ADHD, > 21 years **Intervention:** CBT, MBCT, internet therapy, meta-cognitive therapy (group or individual) **Comparison:** waitlist, treatment as usual,	**ADHD, CBT vs. control**	Moderate ⊕⊕⊕◯ (R)	*n* = n.a., *k* = 7 *SMD* = .83 CI (.52 - 1.14) **I**	Result of the three-meta-analyses. No N reported, only number of effect sizes (n = 35).	CAARS, ADHS-RS, CSS, BSC, RATE-S, BAS, ON-TOP

relaxation training and emotional support or group support					
Young et al., 2020 **Population:** adults with ADHD, medicated and unmedicated, > 18 years **Intervention:** cognitive behavioural therapy, individual or group **Comparison:** waitlist, active control (psychoeducation, PMR)	**ADHD symptoms, CBT vs. waiting list**	Low ⊕⊕◯◯ (R, IC)	*n* = 260, *k* = 5 *SMD* = .76 CI (.21 - 1.31) **I**		K-SADS, ADHD-CCS, ADHD-RS, ASRS, ADHD checklist
	ADHD symptoms, CBT vs. active control	Low ⊕⊕◯◯ (R, IC)	*n* = 260, *k* = 5 *SMD* = .76 CI (.21 - 1.31) **I**		ADHD-RS, AISRS
ADHS Symptome gesamt. Kliniker*innenurteil					
Knouse et. al., 2017 **Population**: adults with ADHD, medicated and unmedicated, > 18 years **Intervention**: cognitive behavioral treatment (CBT, DBT, MBCT, psychoeducation, OTMB, iCBT, group rehabilitation), individual or group therapy **Comparison:** active or passive control	**ADHD symptoms**	High ⊕⊕⊕⊕	*n* = 444, *k* = 6 *g* = .57 CI (.25 - .89) **I**	Randomized vs. nonrandomized trials included, treatment compared with active control group showed significantly smaller effect sizes (g = 0.20) than treatment with not active control group (g = 0.78).	n.a.
	ADHD symptoms, Pre- vs. posttreatment	High ⊕⊕⊕⊕	*n* = n.a., *k* = 7 *g* = 1.40 CI (1.10 - 1.71) **I**	Randomized vs. nonrandomized trials included	n.a.

Liu et al., 2023 **Population:** adults with ADHD, parallel stable medication, >18 years **Intervention:** cognitive behavioral therapy (CBT, MBCT, DBT, internet-based CBT); individual and group setting or online therapy **Comparison**: treatment as usual, waitlist, active control (nondirective therapy or with no specific strategy intervention)	**ADHD total symptoms**	Very low ⊕◯◯◯ (R, IC)	*n* = 1113, *k* = 10 *SMD* = -.34 CI (-.47 - -.22) **U**	Trim and fill corrected value used; high quality of evidence in the studies	CAARS, BCSS, ADHS-RS, AISRS
Ostinelli et al., 2025 **Population:** adults (aged ≥18 years) with a formal diagnosis of ADHD **Intervention:** CBT, DBT, Mindfulness, Psychoeducation, Relaxation therapy (at least four sessions for psychological therapies) **Comparison**: psychological placebo (sham), TAU, waitlist	**ADHD core symptoms, CBT vs. control**	Moderate ⊕⊕⊕◯ (R)	*n* = n.a., *k* = 20 *SMD* = .76 CI (.26 - 1.26) **I**		n.a.
	ADHD core symptoms, DBT vs. control	Low ⊕⊕◯◯ (R, IP)	*n* = n.a., *k* = 8 *SMD* =.20 CI (-.17 - .57) **U**		n.a.
	ADHD core symptoms, Mindfulness vs. control	Moderate ⊕⊕⊕◯ (R)	*n* = n.a., *k* = 7 *SMD* = -.08 CI (-.79 - .64) **I**		n.a.
	ADHD core symptoms, Psychoeducation vs. control	Moderate ⊕⊕⊕◯ (R)	*n* = n.a., *k* = 6 *SMD* = .14 CI (-.65 - .94)		n.a.

			I		
	ADHD core symp-toms, Relaxation therapy vs. placebo	Low ⊕⊕◯◯ (R, IP)	*n* = n.a., *k* = 2 *SMD* = -.24 CI (-1.01 - .53) **U**		n.a.
Tourjman et. al., 2022 **Population**: adults with ADHD, > 21 years **Intervention:** CBT, MBCT, internet therapy, meta-cognitive therapy (group or individual) **Comparison:** waitlist, treatment as usual, relaxation training and emotional support or group support	**ADHD, CBT vs. control**	Moderate ⊕⊕⊕◯ (R)	*n* = n.a., *k* = 4 *SMD* = .51 CI (.18 - .84) **I**	Result of the three-meta-analysis. Number of effect sizes (n = 18).	WRAADDS, CGI, AISRS
Aufmerksamkeit. Selbsturteil					
Knouse et al., 2017 **Population:** adults with ADHD, medicated and unmedicated, > 18 years **Intervention:** cognitive behavioral treatment (CBT, DBT, MBCT, psychoeducation, OTMB, iCBT, group rehabilitation), individual or	**Inattention**	Moderate ⊕⊕⊕◯ (IC)	*n* = n.a., *k* = 11 *g* = .77 CI (.48 - 1.07) **I**	Randomized vs. nonrandomized (controlled and open trials) included, medication allowed, treatment compared with active control group showed significantly smaller effect sizes (g = 0.26) than treatment with not active control group (g = 0.95).	n.a.

group therapy **Comparison:** active or passive control	**Inattention,** **Pre- vs. posttreatment**	Moderate ⊕⊕⊕◯ (IC)	*n* = 396, *k* = 20 *g* = 1.16 CI (.94 - 1.38) **I**	Randomized vs. nonrandomized (controlled and open trials) included, medication allowed, studies excluded if participants received new medication.	n.a.
Liu et al., 2023 **Population:** adults with ADHD, parallel stable medication, >18 years **Intervention:** cognitive behavioral therapy (CBT, MBCT, DBT, internet-based CBT); individual and group setting or online therapy **Comparison**: treatment as usual, waitlist, active control (nondirective therapy or with no specific strategy intervention)	**Inattention symptoms**	Very low ⊕◯◯◯ (R, IC)	*n* = 1530, *k* = 18 *SMD* = -.37 CI (-.47 - -.27) **I**	Trim and fill corrected value used; moderate quality of evidence in the studies.	CAARS, BCSS, ADHS-RS, AISRS
Aufmerksamkeit. Kliniker*innenurteil					
Liu et al., 2023 **Population:** adults with ADHD, parallel stable medication, >18 years **Intervention:** cognitive behavioral therapy (CBT, MBCT, DBT,	**Inattention symptoms**	Very low ⊕◯◯◯ (R, IC)	*n* = 990, *k* = 8 *SMD* = -.27 CI (-.40 - -.14) **I**	Trim and fill corrected value used; moderate quality of evidence in the studies	CAARS, BCSS, ADHS-RS, AISRS

internet-based CBT); individual and group setting or online therapy **Comparison**: treatment as usual, waitlist, active control (nondirective therapy or with no specific strategy intervention)					
Aufmerksamkeit. Kombiniertes Urteil					
Tourjman et al., 2022 **Population**: adults with ADHD, > 21 years **Intervention:** CBT, MBCT, internet therapy, meta-cognitive therapy (group or individual) **Comparison:** waitlist, treatment as usual, relaxation training and emotional support or group support	**Inattention** **CBT vs. control**	Low ⊕⊕◯◯ (R)	*n* = 13, *k* = 6 *SMD* = .76 CI (.41 - 1.11) **I**	Result of the three-meta-analysis. No N reported, only number of effect sizes (n=13)	CAARS, ADHD-SR, WRAADDS, BCS, CSS, AISRS-IN, BAS, ON-TOP, RATE-S, CGI
Hyperaktivität/Impulsivität. Selbsturteil					
Knouse et al., 2017 **Population:** adults with ADHD, medicated and unmedicated, > 18 years **Intervention:** cognitive behavioral treatment (CBT, DBT, MBCT, psychoeducation,	**Hyperactivity/impulsivity**	High ⊕⊕⊕⊕	*n* = n.a., *k* = 9 *g* = .33 CI (.13 - .53) **I**	Randomized vs. nonrandomized (controlled and open trials) included, treatment compared with active control group showed significantly smaller effect sizes (g = 0.26) than treatment with not active	n.a.

OTMB, iCBT, group rehabilitation), individual or group therapy **Comparison:** active or passive control				control group (g = 0.95).	
	Hyperactivity/impulsivity, Pre-posttreatment	High ⊕⊕⊕⊕	*n* = 338, *k* = 18 *g* = .68 CI (.48 - .87) **I**	Randomized vs. nonrandomized (controlled and open trials) included, treatment compared with active control group showed significantly smaller effect sizes (g = 0.26) than treatment with not active control group (g = 0.95).	n.a.
Liu et al., 2023 **Population**: adults with ADHD, parallel stable medication, >18 years **Intervention**: cognitive behavioral therapy (CBT, MBCT, DBT, internet-based CBT); individual and group setting or online therapy **Comparison**: treatment as usual, waitlist, active control (nondirective therapy or with no specific strategy intervention)	**Hyperactivity/impulsivity**	Low ⊕⊕◯◯ (R, IC)	*n* = 854, *k* = 6 *SMD* = -.29 CI (-.54 - -.05) **I**	Moderate quality of evidence in the studies	CAARS, BCSS, ADHS-RS, AISRS
Hyperaktivität/Impulsivität. Kliniker*innenurteil					
Liu et al., 2023 **Population**: adults with ADHD,	**Hyperactivity/Impulsivity**	Low ⊕⊕◯◯ (R, IC)	*n* = 854, *k* = 6 *SMD = -.29* CI (-.54 - -.05)	Moderate quality of evidence in studies	CAARS, BCSS, ADHS-RS, AISRS

parallel stable medication, >18 years **Intervention**: cognitive behavioral therapy (CBT, MBCT, DBT, internet-based CBT); individual and group setting or online therapy **Comparison**: treatment as usual, waitlist, active control (nondirective therapy or with no specific strategy intervention)			I		
Hyperactivität/Impulsivität. Kombiniertes Urteil					
Tourjman et al., 2022 **Population**: adults with ADHD, > 21 years **Intervention:** CBT, MBCT, internet therapy, meta-cognitive therapy (group or individual) **Comparison:** waitlist, treatment as usual, relaxation training and emotional support or group support	**Hyperactivity/Impulsivity CBT vs. control**	Moderate ⊕⊕⊕◯ (R)	*n* = n.a., *k* = 7 *SMD* = .51 CI (.18 - .84) I	Result of the three-meta-analysis.	CAARS, ADHD-SR, WRAADDS, BCS, CSS, AISRS-IN, BAS, ON-TOP, RATE-S, CGI
Klinischer Gesamteindruck. Kliniker*innenurteil					
Knouse et al., 2017 **Population:** adults with ADHD, medicated and unmedicated, > 18	**CGI, Treatment vs. control**	Low ⊕⊕◯◯ (IC)	*n* = n.a., *k* = 5 g = .51 CI (.13 - .88) I	Randomized vs. nonrandomized (controlled and open trials), treatment compared with active control	n.a.

years **Intervention:** cognitive behavioral treatment (CBT, DBT, MBCT, psychoeducation, OTMB, iCBT, group rehabilitation), individual or group therapy **Comparison:** active or passive control				group significantly smaller effect sizes (g = 0.13) than treatment with not active control group (g = 0.80).	
	CGI, Pre-posttreatment	High ⊕⊕⊕⊕	*n* = n.a., *k* = 7 *g* = 1.12 CI (.79 - 1.43) **I**	Randomized vs. nonrandomized (controlled and open trials), medication allowed, studies excluded if participants received new medication.	n.a.
Liu et al., 2023 **Population:** adults with ADHD, parallel stable medication, >18 years **Intervention:** cognitive behavioral therapy (CBT, MBCT, DBT, internet-based CBT); individual and group setting or online therapy **Comparison:** treatment as usual, waitlist, active control (nondirective therapy or with no specific strategy intervention)	**Clinical global impression (CGI)**	Low ⊕⊕◯◯ (IC)	*n* = 779, *k* = 7 *SMD* = -.34 CI (-.48 - -.19) **I**	Trim and fill corrected value used; high quality of evidence in studies	n.a.
Funktionalität. Selbsturteil					
Knouse et al., 2017	**Functioning**	Moderate ⊕⊕⊕◯ (R)	*n* = n.a., *k* = 10 g = .51 CI (.23 - .79)	Randomized vs. nonrandomized (controlled and open trials),	n.a.

Population: adults with ADHD, medicated and unmedicated, > 18 years **Intervention:** cognitive behavioral treatment (CBT, DBT, MBCT, psychoeducation, OTMB, iCBT, group rehabilitation), individual or group therapy **Comparison:** active or passive control			I	studies excluded if participants received new medication, randomization status only significant moderator of self-reported functioning, when effect size for nonrandomized study (g = 1.29, n = 1) was larger than for randomized studies (g =.40; n=9).	
	Functioning, Pre-posttreatment	Low ⊕⊕◯◯ (IC)	*n* = 389, *k* = 17 *g* = .73 CI (.46 - 1.00) I	Randomized vs. nonrandomized (controlled and open trials), medication allowed, studies excluded if participants received new medication.	n.a.
Selbstwertgefühl. Unbekanntes Urteil					
Liu et al., 2023 **Population:** adults with ADHD, parallel stable medication, >18 years **Intervention:** cognitive behavioral therapy (CBT, MBCT, DBT, internet-based CBT); individual and group setting or online therapy **Comparison:** treatment as	**Self-esteem**	Low ⊕⊕◯◯ (R)	*n* = 337, *k* = 4 *SMD* = 0.38 CI (.01 - .76) I	Moderate quality of evidence in studies	CAARS

usual, waitlist, active control (nondirective therapy or with no specific strategy intervention)					
López-Pinar et. al., 2020 **Population:** adults with ADHD and comorbid internalizing symptoms, medicated and unmedicated **Intervention:** non-pharmacological treatment (CBT, MBCT, NF, DBT, psychoeducation, cognitive training, hypnotherapy), individual or group **Comparison:** waitlist, treatment as usual, active control	**Self-esteem, CBT, Between group**	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 124, *k* = 2 *SMD* = .42 CI (-.33 - 1.17) **U**		n.a.
	Self-esteem, CBT, Within group	Very low ⊕◯◯◯ (R, IC)	*n* = 180, *k* = 5 *SMD* = .62 CI (.31 - .92) **I**	RCTs and uncontrolled single-group studies	n.a.
	Self-esteem, CBT, Within group, Follow-up	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 60, *k* = 2 *SMD* = 1.04 CI (.45 - 1.64) **I**	RCTs and uncontrolled single-group studies	n.a.
	Self-esteem, DBT, Between group	Very low ⊕◯◯◯ (R, IP)	*n* = 341, *k* = 2 *SMD* = -.11 CI (-.28 - .06) **U**		n.a.
	Self-esteem, DBT, Between group, Follow-up	Very low ⊕◯◯◯ (R, IP)	*n* = 243, *k* = 2 *SMD* = -.08 CI (-.31 - .14) **U**		n.a.
	Self-esteem, DBT, Within group	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 171, *k* = 2 *SMD* = .27 CI (-.04 - .57) **U**	RCTs and uncontrolled single-group studies	n.a.
	Self-esteem, DBT, Within group, Follow-up	Low ⊕⊕◯◯ (R)	*n* = 126, *k* = 2 *SMD* = .48 CI (.34 - .63)	RCTs and uncontrolled single-group studies	n.a.

			I		
Lebensqualität. Unbekanntes Urteil					
Liu et al., 2023 **Population:** adults with ADHD, parallel stable medication, >18 years **Intervention:** cognitive behavioral therapy (CBT, MBCT, DBT, internet-based CBT); individual and group setting or online therapy **Comparison:** treatment as usual, waitlist, active control (nondirective therapy or with no specific strategy intervention)	**Quality of Life**	Low ⊕⊕◯◯ (R)	*n* = 654, *k* = 9 *SMD* = 0.36 CI (.13 - .59) I	Moderate quality of evidence in studies	CAARS, BCSS, ADHD-RS
López-Pinar et. al., 2020 **Population:** adults with ADHD and comorbid internalizing symptoms, medicated and unmedicated **Intervention:** non-pharmacological treatment (CBT, MBCT, NF, DBT, psychoeducation, cognitive training, hypnotherapy), individual or group **Comparison:** waitlist, treatment	**Quality of Life, CBT, Between group**	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 152, *k* = 4 *SMD* = .07 CI (-.18 - .32) U		n.a.
	Quality of Life, CBT vs. TAU, Between group, Follow-up	Very low ⊕◯◯◯ (R, IP)	*n* = 57, *k* = 1 *SMD* = .39 CI (.01 - .78) I		n.a.
	Quality of Life, CBT, Within group	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 75, *k* = 4 *SMD* = .28 CI (.09 - .48) I	RCTs and uncontrolled single-group studies	n.a.
	Quality of Life, CBT,	Very low	*n* = 25, *k* = 1	RCTs and uncontrolled	n.a.

as usual, active control	**Within group, Follow-up**	⊕◯◯◯ (R, IP)	*SMD* = .57 CI (.22 - .92) **I**	single-group studies	
	Quality of Life, DBT vs. active control, Between group	Very low ⊕◯◯◯ (R, IP)	*n* = 32, *k* = 1 *SMD* = .84 CI (.25 - 1.43) **I**		n.a.
	Quality of Life, DBT, Between group, Follow-up	Very low ⊕◯◯◯ (R, IP)	*n* = 33, *k* = 1 *SMD* = .23 CI (-.30 - .76) **U**		n.a.
	Quality of Life, DBT, Within group	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 60, *k* = 2 *SMD* = .61 CI (.06 - 1.16) **I**	RCTs and uncontrolled single-group studies	n.a.
	Quality of Life, DBT, Within group, Follow-up	Very low ⊕◯◯◯ (R, IP)	*n* = 52, *k* = 2 *SMD* = .40 CI (.17 - .64) **I**	RCTs and uncontrolled single-group studies	n.a.
	Quality of Life, MBCT, Within group	Very low ⊕◯◯◯ (R, IP)	*n* = 21, *k* = 1 *SMD* = 1.44 CI (.85 - 2.03) **I**	RCTs and uncontrolled single-group studies	n.a.
Komorbiditäten. Kombiniertes Urteil					
Guo et. al., 2022 **Population:** adults with ADHD an comorbid depression, anxiety or emotional dysregulation, medicated and	**Emotional dysregulation, CBT, Posttreatment**	Low ⊕⊕◯◯ (R)	*n* = 750, *k* = 6 *SMD* = .26 CI (.06 - .45) **I**	Self- and observer-rating, number of participants probably lower, n self-reported and partly no differentiation how many self- and observer ratings exactly	n.a.

unmedicated, > 18 years **Intervention:** cognitive behavioral therapy (CBT), mindfulness-based therapies (MBT), dialectical behavior therapy (DBT), cognitive therapy (CT), psychoeducation (PsyEd), neurofeedback (NFB), hypnotherapy (HT) **Comparison:** waitlist, treatment as usual, active control				collected in a study possible.	
	Depression, CBT, Posttreatment	Low ⨁⨁◯◯ (R)	*n* = 706, *k* = 10 *SMD* = .42 CI (.19 - .66) I	Authors state significant effect, but no significance-niveau. Number of participants probably lower, n self-reported and partly no differentiation how many self- and observer ratings exactly collected in a study possible.	n.a.
	Anxiety, CBT, Posttreatment	Low ⨁⨁◯◯ (R)	*n* = 495, *k* = 8 *SMD* = .33 CI (.15 - .50) I	Self- and observer-rating, number of participants probably lower, n self-reported and partly no differentiation how many self- and observer ratings exactly collected in a study possible.	n.a.
	Depression, CBT, Follow-up	Very low ⨁◯◯◯ (R, IC)	*n* = 235, *k* = 5 *SMD* = .59 CI (.04 - 1.15) I	Self- and observer-rating, number of participants probably lower, n self-reported and partly no differentiation how many self- and observer ratings exactly collected in a study possible.	n.a.
	Anxiety, CBT, Follow-up	Low ⨁⨁◯◯ (R)	*n* = 235, *k* = 5 *SMD* = .47	Self- and observer-rating,	n.a.

			CI (.12 - .82) I	number of participants probably lower, n self-reported and partly no differentiation how many self- and observer ratings exactly collected in a study possible.	
Komorbiditäten. Selbsturteil					
Guo et. al., 2022 **Population:** adults with ADHD an comorbid depression, anxiety or emotional dysregulation, medicated and unmedicated, > 18 years **Intervention:** cognitive behavioral therapy (CBT), mindfulness-based therapies (MBT), dialectical behavior therapy (DBT), cognitive therapy (CT), psychoeducation (PsyEd), neurofeedback (NFB), hypnotherapy (HT) **Comparison:** waitlist, treatment as usual, active control	**Emotional dysregulation, CBT, Posttreatment**	Low ⊕⊕◯◯ (R)	*n* = 707, *k* = 5 *SMD* = .30 CI (.03 - .57) I	Number of participants probably lower, n self-reported and partly no differentiation how many self- and observer ratings exactly collected in a study possible.	n.a.
	Depression, CBT, Posttreatment	Low ⊕⊕◯◯ (R)	*n* = 646, *k* = 9 *SMD* = .30 CI (.09 - .51) I	Number of participants probably lower, n self-reported and partly no differentiation how many self- and observer ratings exactly collected in a study possible.	n.a.
	Anxiety, CBT, Posttreatment	Low ⊕⊕◯◯ (R)	*n* = 347, *k* = 6 *SMD* = .27 CI (.08 - .47) I	Number of participants probably lower, n self-reported and partly no differentiation how many self- and observer ratings exactly collected in a study possible.	n.a.

	Emotional dysregulation, CBT, Follow-up	Very low ⊕◯◯◯ (R, IP)	*n* = 59, *k* = 2 *SMD* = .85 CI (.41 - 1.30) **I**	Number of participants probably lower, n self-reported and partly no differentiation how many self- and observer ratings exactly collected in a study possible.	n.a.
	Anxiety MBT, Posttreatment	Very low ⊕◯◯◯ (R, IP)	*n* = 56, *k* = 1 *SMD* = .75 CI (.20 - 1.31) **I**	Number of participants probably lower, n self-reported and partly no differentiation how many self- and observer ratings exactly collected in a study possible.	n.a.
Liu et al., 2023 **Population:** adults with ADHD, parallel stable medication, >18 years **Intervention:** cognitive behavioral therapy (CBT, MBCT, DBT, internet-based CBT); individual and group setting or online therapy **Comparison:** treatment as usual, waitlist, active control (nondirective therapy or with no specific strategy intervention)	**Comorbid depression**	Very low ⊕◯◯◯ (R, IC)	*n* = 1610, *k* = 19 *SMD* = -.24 CI (-.34 - -.14) **I**	Trim and fill corrected value used; moderate quality of evidence in studies.	BCSS, K-SADS
	Comorbid anxiety	Very low ⊕◯◯◯ (R, IC)	*n* = 888, *k* = 13 *SMD* = -.52 CI (-.79 - -.26) **I**	Moderate quality of evidence in studies.	BCSS, K-SADS

Komorbiditäten. Kliniker*innenurteil

Guo et. al., 2022 **Population:** adults with ADHD an comorbid depression, anxiety or emotional dysregulation, medicated and unmedicated, > 18 years **Intervention:** cognitive behavioral therapy (CBT), mindfulness-based therapies (MBT), dialectical behavior therapy (DBT), cognitive therapy (CT), psychoeducation (PsyEd), neurofeedback (NFB), hypnotherapy (HT) **Comparison:** waitlist, treatment as usual, active control	**Depression, CBT, Posttreatment**	Very low ⊕◯◯◯ (R, IP)	*n* = 59, *k* = 2 *SMD* = 1.03 CI (.54 - 1.51) **I**	Number of participants probably lower, n self-reported and partly no differentiation how many self- and observer ratings exactly collected in a study possible.	n.a.
	Anxiety, CBT, Posttreatment	Very low ⊕◯◯◯ (R, IP)	*n* = 93, *k* = 3 *SMD* = .54 CI (.05 - 1.03) **I**	Number of participants probably lower, n self-reported and partly no differentiation how many self- and observer ratings exactly collected in a study possible.	n.a.
	Depression, CBT, Follow-up	Very low ⊕◯◯◯ (R, IP)	*n* = 46, *k* = 1 *SMD* = .74 CI (.13 - 1.35) **I**	Number of participants probably lower, n self-reported and partly no differentiation how many self- and observer ratings exactly collected in a study possible.	n.a.
	Anxiety, CBT, Follow-up	Low ⊕⊕◯◯ (R, IP)	*n* = 46, *k* = 1 *SMD* = .76 CI (.15 - 1.37) **I**	Number of participants probably lower, n self-reported and partly no differentiation how many self- and observer ratings exactly collected in a study possible.	n.a.

Komorbiditäten. Unbekanntes Urteil

	Depression, CBT, Between group	Very low ⊕◯◯◯ (R, IC)	*n* = 344, *k* = 8 *SMD* = .27 CI (.02 - .52) I		n.a.
	Depression, CBT, Between group, Follow-up	Low ⊕⊕◯◯ (R)	*n* = 131, *k* = 3 *SMD* = .52 CI (.24 - .80) I		n.a.
López-Pinar et. al., 2020 **Population:** adults with ADHD and comorbid internalizing symptoms, medicated and unmedicated **Intervention:** non-pharmacological treatment (CBT, MBCT, NF, DBT, psychoeducation, cognitive training, hypnotherapy), individual or group **Comparison:** waitlist, treatment as usual, active control	**Depression, CBT, Within group**	Very low ⊕◯◯◯ (R, IC)	*n* = 363, *k* = 14 *SMD* = .54 CI (.35 - .72) I	RCTs and uncontrolled single-group studies included.	n.a.
	Depression, CBT, Within group, Follow-up	Low ⊕⊕◯◯ (R)	*n* = 117, *k* = 5 *SMD* = .72 CI (.48 - .96) I	RCTs and uncontrolled single-group studies included.	n.a.
	Anxiety, CBT, Between group	Very low ⊕◯◯◯ (R, IC)	*n* = 325, *k* = 7 *SMD* = .31 CI (.01 - .62) I		n.a.
	Anxiety, CBT, Between group, Follow-up	Low ⊕⊕◯◯ (R)	*n* = 133, *k* = 3 *SMD* = .73 CI (.45 - 1.02) I		n.a.
	Anxiety, CBT, Within group	Very low ⊕◯◯◯ (R, IC)	*n* = 325, *k* = 12 *SMD* = .49 CI (.25 - .72) I	RCTs and uncontrolled single-group studies included.	n.a.
	Anxiety, CBT, Within group,	Very low ⊕◯◯◯ (R, IC)	*n* = 117, *k* = 5 *SMD* = .74	RCTs and uncontrolled single-group	n.a.

Follow-up		CI (.28 - 1.21) **I**	studies included.	
Emotional dysregulation, CBT, Between group	Very low ⊕◯◯◯ (R, IP)	*n* = 102, *k* = 2 *SMD* = .21 CI (-.09 - .52) **U**		n.a.
Emotional dysregulation, CBT vs. TAU, Between group, Follow-up	Very low ⊕◯◯◯ (R, IP)	*n* = 88, *k* = 2 *SMD* = .64 CI (.30 - .98) **I**		n.a.
Emotional dysregulation, CBT, Within group	Very low ⊕◯◯◯ (R, IP)	*n* = 51, *k* = 2 *SMD* = .38 CI (.16 - .60) **I**	RCTs and uncontrolled single-group studies included.	n.a.
Emotional dysregulation, CBT, Within group, Follow-up	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 39, *k* = 2 *SMD* = .73 CI (.42 - 1.03) **I**	RCTs and uncontrolled single-group studies included.	n.a.
Depression, DBT, Between group	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 282, *k* = 3 *SMD* = -.06 CI (-.21 - .10) **U**		n.a.
Depression, DBT, Between group, Follow-up	Very low ⊕◯◯◯ (R, IP)	*n* = 278, *k* = 3 *SMD* = -.04 CI (-.23 - .14) **U**		n.a.
Depression, DBT, Within group	Low ⊕⊕◯◯ (R)	*n* = 342, *k* = 6 *SMD* = .36 CI (.24 - .48) **I**	RCTs and uncontrolled single-group studies included.	n.a.

Depression, DBT, Within group, Follow-up	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 221, *k* = 4 *SMD* = .33 CI (.13 - .53) **I**	RCTs and uncontrolled single-group studies included.	n.a.
Anxiety, DBT, Between group	Very low ⊕◯◯◯ (R, IP)	*n* = 32, *k* = 1 *SMD* = .41 CI (-.14 - .96) **U**		n.a.
Anxiety, DBT, Between group, Follow-up	Very low ⊕◯◯◯ (R, IP)	*n* = 33, *k* = 1 *SMD* = .31 CI (-.24 - .86) **U**		n.a.
Anxiety, DBT, Within group	Very low ⊕◯◯◯ (R, IP)	*n* = 88, *k* = 2 *SMD* = .14 CI (-.02 - .30) **U**	RCTs and uncontrolled single-group studies included.	n.a.
Anxiety, DBT, Within group, Follow-up	Very low ⊕◯◯◯ (R, IP)	*n* = 65, *k* = 2 *SMD* = .11 CI (-.11 - .33) **U**	RCTs and uncontrolled single-group studies included.	n.a.
Depression, MBCT, Between group	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 212, *k* = 3 *SMD* = .14 CI (-.24 - .52) **U**		n.a.
Depression, MBCT, Between group, Follow-up	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 196, *k* = 2 *SMD* = .00 CI (-.60 - .06) **U**		n.a.
Depression MBCT, Within group	Low ⊕⊕◯◯ (R)	*n* = 171, *k* = 5 *SMD* = .33 CI (.17 - .50)	RCTs and uncontrolled single-group studies included.	n.a.

		I		
Depression, MBCT, Within group, Follow-up	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 60, *k* = 2 *SMD* = .53 CI (-.46 - 1.52) **U**	RCTs and uncontrolled single-group studies included.	n.a.
Anxiety, MBCT, Between group	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 212, *k* = 3 *SMD* = .43 CI (-.30 - 1.16) **U**		n.a.
Anxiety, MBCT, Between group, Follow-up	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 196, *k* = 2 *SMD* = .50 CI (-.47 - 1.47) **U**		n.a.
Anxiety, MBCT, Within group	Very low ⊕◯◯◯ (R, IC)	*n* = 171, *k* = 5 *SMD* = .64 CI (.32 - .96) **I**	RCTs and uncontrolled single-group studies included.	n.a.
Anxiety, MBCT, Within group, Follow-up	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 60, *k* = 2 *SMD* = .59 CI (-.51 - 1.68) **U**	RCTs and uncontrolled single-group studies included.	n.a.
Emotional dysregulation, MBCT vs. wait list, Between group	Very low ⊕◯◯◯ (R, IP)	*n* = 52, *k* = 2 *SMD* = .46 CI (.15 - .75) **I**		n.a.
Emotional dysregulation, MBCT, Within group	Very low ⊕◯◯◯ (R, IP)	*n* = 52, *k* = 2 *SMD* = .55 CI (.23 - .68)	RCTs and uncontrolled single-group	n.a.

			I	studies included.	

Anmerkung. *n* = Anzahl der Versuchspersonen, *k* = Anzahl der inkludierten Primärstudien. R = risk of bias, IC = inconsistency, ID = indirectness, IP = imprecision, P = publication bias.

Summary of Findings Tabelle: Meta-Analysen

Multiple psychosoziale Interventionen kombiniert:

Referenz	Endpunkt	Aussagesicherheit (GRADE)	Effektstärke	Kommentare	Mess-instrument
ADHS Symptome. Selbsturteil					
Lopez-Pinar et. al., 2018 **Population:** adults with ADHD, > 18 years, medicated or unmedicated **Intervention:** psychosocial treatment specifically designed for ADHD (CBT, MBCT, Biofeedback, DBT) **Comparison:** active control (non-specific intervention), waitlist, treatment as usual	**ADHD total symptoms, Treated and controls, Long-term**	Very Low ⊕◯◯◯ (R, IC)	*n* = 680, *k* = 12 *SMD* = .86 CI (.66 – 1.07) **I**	RCTs + three uncontrolled single-group studies; 50% of treatment groups CBT and 25% DBT; MBCT, Biofeedback (BFB), or combination of CBT and DBT applied for 8.33%. Higher percentage of participants on medication predicted higher ES on between-groups and within-subject.	n.a.
	ADHD total symptoms, Between group, Long-term	Low ⊕⊕◯◯ (IC, IP)	*n* = 513, *k* = 8 *SMD* = .40 CI (-.05 - .85) **U**	Trim and fill cor-rected values	n.a.
	ADHD total symptoms, Within group, Long-term	Very Low ⊕◯◯◯ (R, IC)	*n* = 409, *k* = 14 *SMD* = 1.09 CI (.85 – 1.32)	RCTs and non RCTs	n.a.

			I		
Tourjman et. al., 2022 **Population:** adults with ADHD, > 21 years **Intervention:** CBT, MBCT, internet therapy, meta-cognitive therapy (group or individual) **Comparison:** waitlist, treatment as usual, relaxation training and emotional support or group support	**ADHD total symptoms, All interventions, Long-term**	Low ⊕⊕◯◯ (R, P)	*n* = 52, *k* = 7 *SMD* = .74 CI (.49 - .99) I	Result for adult population of the three-meta-analysis, No N reported, only number of effect sizes (n=52).	CAARS, ADHD-SR, BCS, WRAADDS, CSS, AISRS-IN, BAS, ON-TOP, RATE-S, CGI
ADHS Symptome. Kliniker*innenurteil					
Lopez-Pinar et. al., 2018 **Population:** adults with ADHD, > 18 years, medicated or unmedicated **Intervention:** psychosocial treatment specifically designed for ADHD (CBT, MBCT, Biofeedback, DBT) **Comparison:** active control (non-specific intervention), waitlist, treatment as usual	**ADHD total symptoms, All interventions, Long-term**	Low ⊕⊕◯◯ (IC)	*n* = 393, *k* = 4 *SMD* = .98 CI (.68 - 1.27) I		n.a.
	ADHD total symptoms, Between group, Long-term	Very Low ⊕◯◯◯ (IC, IP)	*n* = 382, *k* = 5 *SMD* = .07 CI (-.39 - .53) U	Trim ad fill corrected values	n.a.
	ADHD total symptoms, Within group, Long-term	High ⊕⊕⊕⊕	*n* = 197, *k* = 5 *SMD* = 1.18 CI (.90 - 1.46) I		n.a.
Aufmerksamkeit. Selbsturteil					
Lopez-Pinar et. al., 2018	**Inattention, Between group, Long-term**	Very Low ⊕◯◯◯ (R, IC)	*n* = 446, *k* = 7 *SMD* = .36	Trim and fill corrected values used	n.a.

			CI (-.01 - .73) **I**		
Population: adults with ADHD, > 18 years, medicated or unmedicated **Intervention:** psychosocial treatment specifically designed for ADHD (CBT, MBCT, Biofeedback, DBT) **Comparison:** active control (non-specific intervention), waitlist, treatment as usual	**Inattention, Within group, Long-term**	Moderate ⊕⊕⊕◯ (R)	*n* = 243, *k* = 8 *SMD* = 1.32 CI (.99 - 1.64) **I**	Trim and fill corrected values used	n.a.
Aufmerksamkeit. Kliniker*innenurteil					
Lopez-Pinar et. al., 2018 **Population:** adults with ADHD, > 18 years, medicated or unmedicated **Intervention:** psychosocial treatment specifically designed for ADHD (CBT, MBCT, Biofeedback, DBT) **Comparison:** active control (non-specific intervention), waitlist, treatment as usual	**Inattention, Between group, Long-term**	Very Low ⊕◯◯◯ (IC, IP)	*n* = 282, *k* = 3 *SMD* = .14 CI (-.29 - .58) **U**		n.a.
	Inattention, Within group, Long-term	High ⊕⊕⊕⊕	*n* = 153, *k* = 3 *SMD* = .95 CI (.72 - 1.19) **I**	Trim an fill corrected values used	n.a.
Hyperaktivität/Impulsivität. Selbsturteil					
Lopez-Pinar et. al., 2018 **Population:** adults with ADHD, > 18	**Hyperactivity/Impulsivity, Between group, Long-term**	Very Low ⊕◯◯◯ (R, IC)	*n* = 406, *k* = 6 *SMD* = .66 CI (.18 – 1.14) **I**	Trim an fill corrected values used	n.a.

years, medicated or unmedicated **Intervention:** psychosocial treatment specifically designed for ADHD (CBT, MBCT, Biofeedback, DBT) **Comparison:** active control (non-specific intervention), waitlist, treatment as usual	**Hyperactivi-ty/Impulsivit, Within group, Long-term**	Low ⊕⊕◯◯ (R, IC)	*n* = 227, *k* = 7 *SMD* = .83 CI (.59 – 1.08) **I**		n.a.
Hyperaktivität/Impulsivität. Kliniker*innenurteil					
Lopez-Pinar et. al., 2018 **Population:** adults with ADHD, > 18 years, medicated or unmedicated **Intervention:** psychosocial treatment specifically designed for ADHD (CBT, MBCT, Biofeedback, DBT) **Comparison:** active control (non-specific intervention), waitlist, treatment as usual	**Hyperactivity/Impulsivity, Between group, Long-term**	Very Low ⊕◯◯◯ (IC, IP)	*n* = 291, *k* = 3 *SMD* = .16 CI (-.27 - .59) **U**	Trim an fill corrected values used	n.a.
	Hyperactivi-ty/Impulsivity, Within group, Long-term	High ⊕⊕⊕⊕	*n* = 149, *k* = 3 *SMD* = .96 CI (.50 - 1.42) **I**	Trim an fill corrected values used	n.a.
Klinischer Gesamteindruck. Kliniker*innenurteil					
Lopez-Pinar et. al., 2018 **Population:** adults with ADHD, > 18 years, medicated or unmedicated **Intervention:** psychosocial treatment specifically	**CGI, Between group, Long-term**	Moderate ⊕⊕⊕◯ (IC)	*n* = 392, *k* = 5 *SMD* = .44 CI (.14 - .74) **I**		n.a.
	CGI, Within group, Long-term	High ⊕⊕⊕⊕	*n* = 194, *k* = 5 *SMD* = 1.20 CI (.93 - 1.48)		n.a.

designed for ADHD (CBT, MBCT, Biofeedback, DBT) **Comparison:** active control (non-specific intervention), waitlist, treatment as usual			I		
Funktionalität. Selbsturteil					
Lopez-Pinar et. al., 2018 **Population:** adults with ADHD, > 18 years, medicated or unmedicated **Intervention:** psychosocial treatment specifically designed for ADHD (CBT, MBCT, Biofeedback, DBT) **Comparison:** active control (non-specific intervention), waitlist, treatment as usual	**Global functioning, Between group, Long-term**	Low ⊕⊕◯◯ (R, IC)	*n* = 102, *k* = 3 *SMD* = .76 CI (.23 - 1.28) I		n.a.
	Global functioning, Between group, Long-term	Very Low ⊕◯◯◯ (R, IC, IP)	*n* = 102, *k* = 4 *SMD* = .58 CI (.25 - .92) I	RCTs and non RCTs	n.a.
Lebensqualität. Unbekanntes Urteil					
Lopez-Pinar et. al., 2018 **Population:** adults with ADHD, > 18 years, medicated or unmedicated **Intervention:** psychosocial treatment specifically designed for ADHD (CBT, MBCT, Biofeedback, DBT) **Comparison:** active control (non-specific	**Quality of Life, All interventions (CBT, DBT, CT), Between group**	Very Low ⊕◯◯◯ (R, IP)	*n* = 217, *k* = 6 *SMD* = .17 CI (-.03 - .37) U	Number of sessions negatively predicted efficacy on within-group QoL (coefficient = −0.06, 95% CI = [−0.11, 0.01]; SE = 0.02; p < .01).	n.a.

intervention), waitlist, treatment as usual					
Komorbiditäten. Kombiniertes Urteil					
Guo et. al., 2022 **Population:** Adults with ADHD an comorbid depression, anxiety or emotional dysregulation, medicated and unmedicated, > 18 years **Intervention:** Non-pharmacological treatment (cognitive behavioral therapy (CBT), mindfulness-based therapies (MBT), dialectical behavior therapy (DBT), cognitive therapy (CT), psychoeducation (PsyEd), neurofeedback (NFB), hypnotherapy (HT) **Comparison:** waitlist, treatment as usual, active control	**Anxiety, Post-treatment**	Very Low ⊕◯◯◯ (R, IC, IP)	*n* = 819, *k* = 13 *SMD* = .21 CI (-.07 - .48) **U**	Follow-up: no significant effects	n.a.
	Depression, Post-treatment	Low ⊕⊕◯◯ (R)	*n* = 1191, *k* = 17 *SMD* = .39 CI (.22 - .56) **I**	Follow-up: no significant effects	n.a.
	Emotional dysregulation, Post-treatment	Very Low ⊕◯◯◯ (R, P)	*n* = 853, *k* = 7 *SMD* = .21 CI (.02 - .41) **I**	Heterogeneity of measurement, follow-up: no significant effects	n.a.
Lopez-Pinar et. al., 2018 **Population:** adults with ADHD, > 18 years, medicated or unmedicated **Intervention:** psychosocial treatment specifically designed for ADHD	**Emotional dysregulation, Between group all interventions (CBT, MBCT), Follow-up**	Low ⊕⊕◯◯ (R)	*n* = 208, *k* = 4 *SMD* = .44 CI (.28 - .61) **I**		n.a.

(CBT, MBCT, Biofeedback, DBT) **Comparison:** active control (non-specific intervention), waitlist, treatment as usual					
Komorbiditäten. Selbsturteil					
Guo et. al., 2022 **Population:** Adults with ADHD an comorbid depression, anxiety or emotional dysregulation, medicated and unmedicated, > 18 years **Intervention:** Non-pharmacological treatment (cognitive behavioral therapy (CBT), mindfulness-based therapies (MBT), dialectical behavior therapy (DBT), cognitive therapy (CT), psychoeducation (PsyEd), neurofeedback (NFB), hypnotherapy (HT) **Comparison:** waitlist, treatment as usual, active control	**Emotional dysregulation, Post-treatment**	Low ⊕⊕◯◯ (R)	*n* = 810, *k* = 6 *SMD* = .22 CI (.01 - .44) **I**	Number of participants probably lower, n self-reported and partly no differentiation possible regarding number of exact self- and observer ratings collected in a study	n.a.
	Depression, Post-treatment	Low ⊕⊕◯◯ (R)	*n* = 1131, *k* = 16 *SMD* = .34 CI (.18 - .50) **I**	Number of participants probably lower, n self-reported and partly no differentiation possible regarding number of exact self- and observer ratings collected in a study	n.a.
	Anxiety, Post-treatment	Very Low ⊕◯◯◯ (R, IC)	*n* = 671, *k* = 11 *SMD* = .13 CI (.18 - .45) **I**	Number of participants probably lower, n self-reported and partly no differentiation possible	n.a.

				regarding number of exact self- and observer ratings collected in a study	
Komorbiditäten. Kliniker*innenurteil					
Guo et. al., 2022 **Population:** Adults with ADHD an comorbid depression, anxiety or emotional dysregulation, medicated and unmedicated, > 18 years **Intervention:** Non-pharmacological treatment (cognitive behavioral therapy (CBT), mindfulness-based therapies (MBT), dialectical behavior therapy (DBT), cognitive therapy (CT), psychoeducation (PsyEd), neurofeedback (NFB), hypnotherapy (HT) **Comparison:** waitlist, treatment as usual, active control	**Emotional dysregulation, Post-treatment**	Moderate ⊕⊕⊕◯ (R)	*n* = 661, *k* = 5 *SMD* = .21 CI (.16 - .59) **I**	Number of participants probably lower, n self-reported and partly no differentiation possible regarding number of exact self- and observer ratings collected in a study	n.a.
	Depression, Post-treatment	Very Low ⊕◯◯◯ (R, IP)	*n* = 91, *k* = 2 *SMD* = 1.03 CI (.54 - 1.51) **I**	Number of participants probably lower, n self-reported and partly no differentiation possible regarding number of exact self- and observer ratings collected in a study	n.a.
	Anxiety, Post-treatment	Low ⊕⊕◯◯ (R)	*n* = 179, *k* = 3 *SMD* = .54 CI (.05 - 1.03) **I**	Number of participants probably lower, n self-reported and partly no differentiation possible regarding	n.a.

			number of exact self- and observer ratings collected in a study		

Anmerkung. *n* = Anzahl der Versuchspersonen, *k* = Anzahl der inkludierten Primärstudien. R = risk of bias, IC = inconsistency, ID = indirectness, IP = imprecision, P = publication bias.

Summary of Findings Tabelle: RCTs
Kognitiv behaviorale Therapie (CPT):

Referenz	Endpunkt	Risk of Bias	Effektstärke	Kommentare	Mess-instrument
ADHS Symptome gesamt. Selbsturteil					
Anastopoulos et al., 2021 **Population:** college students with ADHD 18 - 30 years **Intervention:** ACCESS treatment immediately (cognitive-behavior therapy program delivered via group treatment and individual mentoring across two semesters) **Comparison:** Delayed Treatment Control (DTC): one-year delayed basis.	**ADHD total symptoms**	High Risk ◑ (BP)	*n* = 250 *d* = .39 CI (.15 - .65) **I**	Reductions in ADHD symptoms were evident at end of active phase and remained stable throughout maintenance phase of intervention	CAARS, Total ADHD scores
Cherkasova et al., 2020 **Population:** adults with ADHD **Intervention:** CBT (12 manualized group sessions) accompanied by individual coaching + medication (long acting methylphenidate (Biphentin or Concerta) or amphetamine	**ADHD symptoms, Following treatment**	High Risk ◑ (CC, BA, BP)	*n* = 88 *d* = .99 CI (n.a.) **I**		Barkley's Current ADHD Symptoms Scale (CSS)
	ADHD symptoms, 3 month follow-up	Very high risk ● (CC, BP, BA)	*n* = 88 *d* = .64 CI (n.a.) **I**		Barkley's Current ADHD Symptoms Scale (CSS)

medication (Adderall XR or Vyvanse)) **Comparison:** CBT (12 manualized group sessions) accompanied by individual coaching (without medication)	**ADHD symptoms, 6 month follow-up**	Very high risk ● (CC, BP, BA)	*n* = 88 *d* = .65 CI (n.a.) **I**		Barkley's Current ADHD Symptoms Scale (CSS)
Gutman et al., 2020 **Population:** adults with self-reported diagnosis of ADHD (20 - 55years), female **Intervention:** intervention based on five-part approach (Gutman & Szczepanski, 2005): helped participants to establish routines, organize personal physical environments, enhance time management skills, monitor and regulate internal and external sensory, develop effective stress management skills. 7 consecutive weeks consisted of individual 1-hr sessions that took place in home and community environments (e.g., work, school, grocery store) **Comparison:** no intervention or contact from research team during the 7-wk intervention	**Total ADHD symptoms**	Very high risk ● (BP, BA, CE)	*n* = 23 *d* = -2.17 CI (n.a.) **I**	Disbalance of medication status between intervention and control groups.	ASRS
Pan et al., 2022 **Population:** adults with ADHD **Intervention:** BT **Comparison:** treatment as usual	**Total ADHD symptoms**	Very high risk ● (BP, BA)	*n* = 98 *d* = .34 CI (.07 - .5.89) **I**	Value for T2 (after the 12-week CBT-treatment). Follow-Up values also reported in study.	ADHD-RS

	Total ADHD symptoms	Very high risk ● (BP, BA)	*n* = 98 *d* = .31 CI (-.37 - 10.73) **U**	Value for T2 (after the 12-week CBT-treatment). Follow-Up values also reported in study.	CAARS-total
Young et al., 2017 **Population:** adults with ADHD **Intervention:** CBT + Medication **Comparison:** medication only	**ADHD symptoms**	Very high risk ● (BP, BA)	*n* = 95 *d* = .55 CI (n.a.) **I**		RATE-S
ADHD Symptome gesamt. Kliniker*innenurteil					
Cherkasova et al., 2020 **Population**: Adults with ADHD **Intervention**: CBT (12 manualized group sessions) accompanied by individual coaching + medication (long acting MPH (Biphentin or Concerta) or amphetamine (Adderall XR or Vyvanse)) **Comparison:** CBT (12 manualized group sessions) accompanied by individual coaching (without medication)	**ADHD symptoms, Following treatment**	Very high risk ● (CC, BP, BA)	*n* = 88 *d* = .64 CI (n.a.) **I**		n.a.
	ADHD symptoms, 3-month follow-up	Very high risk ● (CC, BP, BA)	*n* = 88 *d* = .56 CI (n.a) **I**		n.a.
	ADHD symptoms, 6 month follow-up	Very high risk ● (CC, BP, BA)	*n* = 88 *d* = -.14 CI (n.a) **U**		n.a.
Lam et al., 2019 **Population**: Adults with ADHD **Intervention**: group CBT (+ MPH or + placebo) **Comparison:** individual clinical management (+ MPH or + placebo)	**Total ADHD symptoms**	High Risk ◑ (BP)	*n* = 251 *MD* = -.50 CI (-1.9 - .90) **U**	Data incomplete due to loss at follow up, but authors state: nevertheless, psychosocial and clinical baseline characteristics of subsample assessed descriptively	CAARS-O:L

				similar to baseline participants	
	Decrease in total ADHD symptoms >=30%	High Risk ◑ (BP)	*n* = 251 *OR* = 1.26 CI (.75 - 2.12) **U**	Data incomplete due to loss at follow up, but authors state: nevertheless, psychosocial and clinical baseline characteristics of subsample assessed descriptively similar to baseline participants	CAARS-O:L
Aufmerksamkeit. Selbsturteil					
Anastopoulos et al., 2021 **Population:** college students with ADHD 18 - 30 years **Intervention:** ACCESS treatment immediately (cognitive-behavior therapy program delivered via group treatment and individual mentoring across two semesters) **Comparison:** Delayed Treatment Control: one-year delayed basis.	**Inattention Symptoms**	High Risk ◑ (BP)	*n* = 250 *d* = .50 CI (.25 - .76) **I**	Reductions in ADHD symptoms were evident at end of active phase and remained stable throughout maintenance phase of intervention	CAARS
Pan et al., 2022 **Population**: Adults with ADHD **Intervention**: CBT **Comparison:** Treatment as usual	**Inattention**	Very high risk ● (BP, BA)	*n* = 98 *d* = .46 CI (.62 - 4.47) **I**	Value for T2 (after the 12-week CBT-treatment). Follow-Up values also reported in the study.	ADHD-RS

Solanto et al., 2018 **Population**: Adults with ADHD **Intervention**: group CBT (+ MPH or + placebo) **Comparison:** individual clinical management (+ MPH or + placebo)	**Inattention/memory, Participants below age of 50**	Very high risk ● (BP, BA)	*n* = 55 *MD* = .48 CI (.70 - 9) **I**	Effect size measure: difference between least square mean change scores	CAARS-Self-IN
	Inatten-tion/memory, Participants above age of 50	Very high risk ● (BP, BA)	*n* = 26 *MD* = 5.8 CI (-.30 - 12) **U**	Effect size measure: difference between least square mean change scores	CAARS-Self-IN
Aufmerksamkeit. Kliniker*innenurteil					
Lam et al., 2019 **Population:** adults with ADHD **Intervention:** manualized 12-week CBT **Comparison:** parallel support group	**Inatten-tion/memory problems**	High Risk ◑ (BP)	*n* = 251 *MD* = -.70 CI (-2.2 - .80) **U**	Data incomplete due to loss at follow up, but authors state: nevertheless, psychosocial and clinical baseline characteristics of subsample assessed descriptively similar to baseline participants	CAARS-O:L
Solanto et al., 2018 **Population:** adults with ADHD **Intervention:** group CBT (+ MPH or + placebo) **Comparison:** individual clinical management (+ MPH or + placebo)	**Inattention, Participants below age of 50**	High Risk ◑ (BP)	*n* = 55 *MD* = 3.67 CI (1.48 - 5.86) **I**	Effect size measure: difference between least square mean change scores	AISRS-IN
	Inattention, Participants above age of 50	High Risk ◑ (BP)	*n* = 26 *MD* = 1.1 CI (-2.1 - 4.3) **U**	Effect size measure: difference between least square mean change scores	AISRS-IN
	Inattention/memory, Participants below age of 50	Very high risk ● (BP, BA)	*n* = 55 *MD* = 5.19 CI (.30 - 10.1) **I**	Effect size measure: difference between least square mean change scores	CAARS-Obs-IN

	Inatten-tion/memory, Participants above age of 50	Very high risk ● (BP, BA)	*n* = 26 *MD* = 4.6 CI (-2.5 - 11.7) **U**	Effect size measure: difference between least square mean change scores	CAARS-Obs-IN
Hyperaktivität/Impulsivität. Selbsturteil					
Anastopoulos et al., 2021 **Population:** college students with ADHD 18 - 30 years **Intervention:** ACCESS treatment immediately (cognitive-behavior therapy program delivered via group treatment and individual mentoring across two semesters) **Comparison:** Delayed Treatment Control (DTC): one-year delayed basis.	**Hyperactive-impulsive symptoms**	High Risk ◑ (BP)	*n* = 250 *d* = .16 CI (-.09 - .41) **U**		CAARS HI scores
Pan et al., 2022 **Population:** adults with ADHD **Intervention:** CBT **Comparison:** medication only	**Impulsivity/hyperactivity**	Very high risk ● (BP, BA)	*n* = 250 *d* = .14 CI (-.92 - 2.23) **U**	Value for T2 (after the 12-week CBT-treatment). Follow-up values reported in study.	ADHD-RS
Hyperaktivität/Impulsivität. Kliniker*innenurteil					
Lam et al., 2019 **Population:** adults with ADHD **Intervention:** manualized 12-week CBT **Comparison:** parallel support group	**Hyperactivity/impulsivity**	High Risk ◑ (BP)	*n* = 251 *MD* = -1.4 CI (-2.9 - .10) **U**	Data incomplete due to loss at follow up, but authors state: nevertheless, psychosocial and clinical baseline characteristics of subsample assessed descriptively	CAARS-O:L

				similar to baseline participants	
	Impulsivity and emotional lability	High Risk ◑ (BP)	*n* = 251 *MD* = -.80 CI (-2.2 - .70) **U**	Data incomplete due to loss at follow up, but authors state: nevertheless, psychosocial and clinical baseline characteristics of subsample assessed descriptively similar to baseline participants	CAARS-O:L
Klinischer Gesamteindruck. Kliniker*innenurteil					
Lam et al., 2019 **Population:** adults with ADHD **Intervention:** manualized 12-week CBT **Comparison:** parallel support group	**CGI severity**	High Risk ◑ (BP)	*n* = 251 *OR* = 0.81 CI (0.51 - 1.28) **U**	Data incomplete due to loss at follow up, but authors state: nevertheless, psychosocial and clinical baseline characteristics of subsample assessed descriptively similar to baseline participants	CAARS-O:L
	CGI global change	High Risk ◑ (BP)	*n* = 251 *OR* = 0.76 CI (0.48 - 1.21) **U**	Data incomplete due to loss at follow up, but authors state: nevertheless, psychosocial and clinical baseline characteristics of subsample assessed descriptively similar to baseline participants	CAARS-O:L

	CGI global assessment of effectiveness	High Risk ◑ (BP)	*n* = 251 *OR* = 1.63 CI (1.03 - 2.59) **I**	Data incomplete due to loss at follow up, but authors state: nevertheless, psychosocial and clinical baseline characteristics of subsample assessed descriptively similar to baseline participants	CAARS-O:L
Funktionalität. Selbsturteil					
Eddy et al., 2021 **Population:** emerging adults with ADHD attending college (18-30 years) **Intervention:** ACCESS (CBT programm including: SEMESTER 1 (active phase) 8 weekly group sessions (90m each) + concurrently weekly individual mentoring sessions (30 min). SEMESTER 2 (maintenance phase) **Comparison:** delayed treatment condition (DTC).	**Daily life performance with ADHD**	Very high risk ● (BP, ID)	*n* = 250 *d* = 0.72 CI (0.46 - 0.97) **I**	Participants received ACCRSS after 2 semesters	AIM-A Performance/Daily functioning
Gutman et al., 2020 **Population:** adults with self-reported diagnosis of ADHD (20 - 55years), female **Intervention:** intervention based on five-part approach (Gutman & Szczepanski, 2005): helped participants to establish routines, organize personal physical	**Performance**	Very high risk ● (BP, BA, CE)	*n* = 23 *d* = 3.04 CI (n.a) **I**	No information regarding concealment, disbalance of medication status between intervention and control groups.	COPM

environments, enhance time management skills, monitor and regulate internal and external sensory, develop effective stress management skills. 7 consecutive weeks consisted of individual 1-hr sessions that took place in home and community environments (e.g., work, school, grocery store) **Comparison:** no intervention or contact from research team during the 7-wk intervention					
Selbstwertgefühl. Selbsturteil					
Cherkasova et al., 2020 **Population**: Adults with ADHD **Intervention**: CBT (12 manualized group sessions) accompanied by individual coaching + medication (long acting MPH (Biphentin or Concerta) or amphetamine (Adderall XR or Vyvanse)) **Comparison:** CBT (12 manualized group sessions) accompanied by individual coaching (without medication)	**Self-esteem, Following treatment**	Very high risk ● (CC, BP, BA)	*n* = 88 *d* = 0.67 CI (n.a.) **I**		Index of Self-Esteem (ISE)
	Self-esteem, 3 month follow-up	Very high risk ● (CC, BP, BA)	*n* = 88 *d* = 0.48 CI (n.a.) **U**		Index of Self-Esteem (ISE)
	Self-esteem, 6 month follow-up	Very high risk ● (CC, BP, BA)	*n* = 88 *d* = 0.61 CI (n.a.) **I**		Index of Self-Esteem (ISE)
Pan et al., 2022 **Population:** adults with ADHD **Intervention:** CBT **Comparison:** medication only	**Self-esteem**	Very high risk ● (BP, BA)	*n* = 98 *d* = -0.16 CI (-2.33 - 0.83) **U**	Value for T2 (after the 12-week CBT-treatment). Follow-up values reported in study.	SES

Lebensqualität. Selbsturteil					
Gutman et al., 2020 **Population:** adults with self-reported diagnosis of ADHD (20 - 55years), female **Intervention:** intervention based on five-part approach (Gutman & Szczepanski, 2005): helped participants to establish routines, organize personal physical environments, enhance time management skills, monitor and regulate internal and external sensory, develop effective stress management skills. 7 consecutive weeks consisted of individual 1-hr sessions that took place in home and community environments (e.g., work, school, grocery store) **Comparison:** no intervention or contact from research team during the 7-wk intervention	**Satisfaction**	Very high risk ● (BP, BA, CE)	*n* = 23 *d* = 2.82 CI (n.a) **I**	No information regarding concealment, disbalance of medication status between intervention and control groups.	COPM
Pan et al., 2022 **Population:** adults with ADHD **Intervention:** CBT **Comparison:** medication only	**QoL – physical**	Very high risk ● (BP, BA)	*n* = 98 *d* = -0.21 CI (-8.15 - 1.72) **U**	Value for T2 (after the 12-week CBT-treatment). Follow-up values reported in study.	WHOQOL-BREF
	QoL – psychological	Very high risk ● (BP, BA)	*n* = 98 *d* = -0.38 CI (-9.60 - -0.59) **I**	Value for T2 (after the 12-week CBT-treatment). Follow-up values reported in study.	WHOQOL-BREF

	QoL – social	Very high risk ● (BP, BA)	*n* = 98 *d* = -0.42 CI (-11.34 - -1.28) **I**	Value for T2 (after the 12-week CBT-treatment). Follow-up values reported in study.	WHOQOL-BREF
	QoL – environmental	Very high risk ● (BP, BA)	*n* = 98 *d* = -0.15 CI (-6.07 - 2.36) **U**	Value for T2 (after the 12-week CBT-treatment). Follow-up values reported in study.	WHOQOL-BREF
Wohlbefinden. Unbekanntes Urteil					
Eddy et al., 2021 **Population:** emerging adults with ADHD attending college (18-30 years) **Intervention:** ACCESS (CBT programm includng: SEMESTER 1 (active phase) 8 weekly group sessions (90m each) + concurrently weekly individual mentoring sessions (30 min). SEMESTER 2 (maintenance phase) **Comparison:** delayed treatment condition (DTC).	**General well being**	Very high risk ● (BP, ID)	*n* = 250 *d* = 0.26 CI (0.01 - 0.51) **I**	Participants received ACCRSS after 2 semesters	AIM-A General Well Being
Soziale Fähigkeiten. Unbekanntes Urteil					
Eddy et al., 2021 **Population:** emerging adults with ADHD attending college (18-30 years) **Intervention:** ACCESS (CBT programm including: SEMESTER 1 (active phase) 8 weekly group sessions (90m each) + concurrently	**Interpersonal relationships**	Very high risk ● (BP, ID)	*n* = 250 *d* = 0.12 CI (-0.13 - 0.37) **U**	Participants received ACCRSS after 2 semesters	AIM-A Relationships and Communications

weekly individual mentoring sessions (30 min). SEMESTER 2 (maintenance phase) **Comparison:** delayed treatment condition (DTC).					
Young et al., 2017 **Population:** adults with ADHD **Intervention:** CBT + Medication **Comparison:** medication only	**Social functioning**	Very high risk ● (BP, BA)	*n* = 95 *d* = .41 CI (n.a.) **I**		RATE-S
ADHS Wissen. Unbekanntes Urteil					
Anastopoulos et al., 2021 **Population:** college students with ADHD 18 - 30 years **Intervention:** ACCESS treatment immediately (cognitive-behavior therapy program delivered via group treatment and individual mentoring across two semesters) **Comparison:** Delayed Treatment Control (DTC): one-year delayed basis.	**ADHD knowledge**	High Risk ◑ (BP)	*n* = 250 *d* = 1.21 CI (0.94 - 1.48) **I**	Improvements in clinical change mechanisms evident at end of active phase and remained stable throughout maintenance phase of ACCESS	TOAK scores
Organisationale und akademische Fähigkeiten. Selbsturteil					
Cherkasova et al., 2020 **Population**: Adults with ADHD	**Organizational skills, Following treatment**	Very high risk ● (CC, BP, BA)	*n* = 88 *d* = 1.02 CI (n.a.) **I**		Organization and Activation for Work (OAW)

Intervention: CBT (12 manualized group sessions) accompanied by individual coaching + medication (long acting MPH (Biphentin or Concerta) or amphetamine (Adderall XR or Vyvanse)) **Comparison:** CBT (12 manualized group sessions) accompanied by individual coaching (without medication)	**Organizational skills, 3 month follow-up**	Very high risk ● (CC, BP, BA)	*n* = 88 *d* = 0.69 CI (n.a.) **I**		Organization and Activation for Work (OAW)
	Organizational skills, 6 month follow-up	Very high risk ● (CC, BP, BA)	*n* = 88 *d* = 0.53 CI (n.a.) **U**		Organization and Activation for Work (OAW)
Eddy et al., 2021 **Population:** emerging adults with ADHD attending college (18-30 years) **Intervention:** ACCESS (CBT programm including: SEMESTER 1 (active phase) 8 weekly group sessions (90m each) + concurrently weekly individual mentoring sessions (30 min). SEMESTER 2 (maintenance phase) **Comparison:** delayed treatment condition (DTC).	**Academic skills and strategies - Motivation**	Very high risk ● (BP, ID)	*n* = 250 *d* = 0.37 CI (0.12 - 0.62) **I**	Participants received ACCRSS after 2 semesters	Learning and study strategies inventory 2 (LASSI-2)
	Academic skills and strategies – Time management	Very high risk ● (BP, ID)	*n* = 250 *d* = 0.48 CI (0.23 - 0.73) **I**	Participants received ACCRSS after 2 semesters	Learning and study strategies inventory 2 (LASSI-2)
	Academic skills and strategies – Test strategies	Very high risk ● (BP, ID)	*n* = 250 *d* = 0.58 CI (0.32 - 0.83) **I**	Participants received ACCRSS after 2 semesters	Learning and study strategies inventory 2 (LASSI-2)
	Academic skills and strategies – Study aids	Very high risk ● (BP, ID)	*n* = 250 *d* = 0.29 CI (0.04 - 0.54) **I**	Participants received ACCRSS after 2 semesters	Learning and study strategies inventory 2 (LASSI-2)
	Grade point average (GPA)	Very high risk ● (BP, ID)	*n* = 250 *d* = 0.01 CI (-0.24 - 0.26) **U**	Participants received ACCRSS after 2 semesters	Participants semester Grade Point Avarages (GPA) ranging from 0.0 to 4.0

	Earned credits	Very high risk ● (BP, ID)	*n* = 250 *d* = 0.05 CI (-0.20 - 0.30) **U**	Participants received ACCRSS after 2 semesters	Number of credits attempted per semester
Solanto et al., 2018 **Population:** adults with ADHD **Intervention:** group CBT (+ MPH or + placebo) **Comparison:** individual clinical management (+ MPH or + placebo)	**Time management, organization & planning, Participants below age 50**	Very high risk ● (BP, BA)	*n* = 55 *MD* = -10.10 CI (-20.20 - 0.06) **U**	Effect size measure: "Difference between Least Square Mean Change scores"; blinded rater	ON-TOP
	Time management, organization & planning, Participants above age 50	Very high risk ● (BP, BA)	*n* = 26 *MD* = -6.90 CI (-21.40 - 7.60) **U**	Effect size measure: "Difference between Least Square Mean Change scores"; blinded rater	ON-TOP
Organisationale und akademische Fähigkeiten. Kliniker*innenurteil					
Anastopoulos et al., 2021 **Population:** college students with ADHD 18 - 30 years **Intervention:** ACCESS treatment immediately (cognitive-behavior therapy program delivered via group treatment and individual mentoring across two semesters) **Comparison:** Delayed Treatment Control (DTC): one-year delayed basis.	**Use of behavioral strategies**	High Risk ◑ (BP)	*n* = 250 *d* = 0.81 CI (0.56 - 1.07) **I**	Improvements in clinical change mechanisms evident at end of active phase and remained stable throughout maintenance phase of ACCESS	SFS scores
Solanto et al., 2018 **Population:** adults with ADHD **Intervention:** group CBT (+ MPH or + placebo)	**Time management, organization & planning, Participants below age 50**	High Risk ◑ (BP)	*n* = 55 *MD* = 2.89 CI (1.40 - 4.40) **I**	Effect size measure: "Difference between Least Square Mean Change scores"; blinded rater	AISRS-TMOP

Comparison: individual clinical management (+ MPH or + placebo)	**Time management, organization & planning, Participants above age 50**	High Risk ◑ (BP)	*n* = 26 *MD* = 0.90 CI (-1.30 - 3.10) **U**	Effect size measure: "Difference between Least Square Mean Change scores"; blinded rater	AISRS-IN
Komorbiditäten. Selbsturteil					
Gutman et al., 2020 **Population:** adults with self-reported diagnosis of ADHD (20 - 55years), female **Intervention:** intervention based on five-part approach (Gutman & Szczepanski, 2005): helped participants to establish routines, organize personal physical environments, enhance time management skills, monitor and regulate internal and external sensory, develop effective stress management skills. 7 consecutive weeks consisted of individual 1-hr sessions that took place in home and community environments (e.g., work, school, grocery store) **Comparison:** no intervention or contact from research team during the 7-wk intervention	**Perceived stress**	Very high risk ● (BP, BA, CE)	*n* = 23 *d* = -2.66 CI (n.a.) **I**	No information regarding concealment, disbalance of medication status between intervention and control groups.	PSS
Lam et al., 2019 **Population:** adults with ADHD **Intervention:** manualized 12-week CBT **Comparison:** parallel Support group	**Problems with self-concept**	High Risk ◑ (BP)	*n* = 251 *MD* = -.30 CI (-1.3 - .70) **U**	Data incomplete due to loss at follow-up, but authors state: nevertheless, psychosocial and clinical baseline characteristics of	CAARS-O:L

				subsample assessed descriptively similar to baseline participants	
Komorbiditäten. Unbekanntes Urteil					
Anastopoulos et al., 2021 **Population:** college students with ADHD 18 - 30 years **Intervention:** ACCESS treatment immediately (cognitive-behavior therapy program delivered via group treatment and individual mentoring across two semesters) **Comparison:** Delayed Treatment Control (DTC): one-year delayed basis.	**Depression symptoms**	High Risk ◑ (BP)	*n* = 250 *d* = .24 CI (-.01 - .49) **U**	Although emotional functioning did not improve, clinically interesting that depression and anxiety levels seemed to stabilize for ACCESS participants, while worsening for DTC participants	BDI-II
	Anxiety	High Risk ◑ (BP)	*n* = 250 *d* = .33 CI (.08 - .58) **I**	Although emotional functioning did not improve, clinically interesting that depression and anxiety levels seemed to stabilize for ACCESS participants, while worsening for DTC participants	BAI scores
	Maladaptive thinking	High Risk ◑ (BP)	*n* = 250 *d* = .50 CI (.25 - .75) **I**	Improvements in clinical change mechanisms were evident at end of active phase and remained stable throughout maintenance phase of ACCESS	ACS-CV scores

Pan et al., 2022 **Population**: Adults with ADHD **Intervention**: CBT **Comparison:** Medication only	**Anxiety**	Very high risk ● (BP, BA)	*n* = 98 *d* = .68 CI (2.52 - 7.52) **I**	Value for T2 (after 12-week CBT-treatment). Follow-up values reported in study.	SAS
	State anxiety	Very high risk ● (BP, BA)	*n* = 98 *d* = .50 CI (1.88 - 9.13) **I**	Value for T2 (after 12-week CBT-treatment). Follow-up values reported in study.	STAI
	Trait anxiety	Very high risk ● (BP, BA)	*n* = 98 *d* = .52 CI (1.7 - 7.68) **I**	Value for T2 (after 12-week CBT-treatment). Follow-up values reported in study.	STAI
	Dysfunctional attitudes	Very high risk ● (BP, BA)	*n* = 98 *d* = .19 CI (-3.07 - 11.52) **U**	Value for T2 (after 12-week CBT-treatment). Follow-up values reported in study.	DAS
	Thoughts	Very high risk ● (BP, BA)	*n* = 98 *d* = .22 CI (-2.09 - 9.99) **U**	Value for T2 (after 12-week CBT-treatment). Follow-up values reported in study.	ATQ
Young et al., 2017 **Population**: Adults with ADHD **Intervention**: CBT + Medication **Comparison:** Medication only	**Emotional control**	Very high risk ● (BP, BA)	*n* = 95 *d* = .32 CI (n.a.) **I**		RATE-S
	Antisocial scale	Very high risk ● (BP, BA)	*n* = 95 *d* = .50 CI (n.a.) **I**		RATE-S

Anmerkung. *n* = Anzahl der Versuchspersonen. SG = sequence generation, CC = concealment, BP = blinding participants, BA = blinding assessors, ID = incomplete data, OR = outcome reporting, CE = carry over effects, SX = stopped early, UM = unvalidated measures, OI = other issue.

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1.3.4.4. In welchem Format sollten psychosoziale Interventionen bei Erwachsenen mit ADHS angeboten werden?

1.3.4.4. A

Berücksichtigte Endpunktkategorien: Meta-Analysen
Kognitiv behaviorale Therapie (CBT, DBT, MBCT):

Endpunktkategorien	MAs	*m*	Gesamtaussagesicherheit der Evidenz
ADHS Symptome gesamt (S)	4	6	Schwach/sehr schwach
ADHS Symptome gesamt (KL)	3	4	
Aufmerksamkeit (S)	2	3	
Aufmerksamkeit (KL)	1	1	
Aufmerksamkeit (KU)	1	1	
Hyperaktivität/Impulsivität (S)	2	3	
Hyperaktivität/Impulsivität (KL)	1	1	
Hyperaktivität/Impulsivität (KU)	1	1	
Klinischer Gesamteindruck (KL)	2	3	
Funktionalität (S)	1	2	
Selbstwertgefühl (U)	1	1	
Lebensqualität (U)	1	1	

Anmerkung. MAs = Anzahl der Meta-Analysen, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.

Berücksichtigte Endpunktkategorien: Meta-Analysen
Verschiedene psychosoziale Interventionen kombiniert:

Endpunktkategorien	MAs	*m*	Gesamtaussagesicherheit der Evidenz
ADHS Symptome gesamt (S)	3	9	Schwach/ sehr schwach
ADHS Symptome gesamt (KL)	2	8	
Aufmerksamkeit (S)	1	2	
Aufmerksamkeit (KL)	1	2	
Hyperaktivität/Impulsivität (S)	1	2	
Hyperaktivität/Impulsivität (KL)	1	2	
Klinischer Gesamteindruck (KL)	1	2	
Funktionalität (S)	1	2	

Anmerkung. MAs = Anzahl der Meta-Analysen, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.

Berücksichtigte Endpunktkategorien: RCTs
Kognitiv behaviorale Therapie (CBT):

Endpunktkategorien	RCTs	*m*	Gesamtaussagesicherheit der Evidenz
ADHS Symptome gesamt (S)	6	8	Schwach/ sehr schwach
ADHD Symptome gesamt (KL)	2	5	

Aufmerksamkeit (S)	3	4
Aufmerksamkeit (KL)	2	5
Hyperaktivität/Impulsivität (S)	2	2
Hyperaktivität/Impulsivität (KL)	1	2
Klinischer Gesamteindruck (KL)	1	3
Funktionalität (S)	2	2
Selbstwertgefühl (S)	2	4
Lebensqualität (S)	2	5
Wohlbefinden (U)	1	1
Soziale Fähigkeiten	2	2
ADHS Wissen (U)	1	1
Organisationale und akademische Skills (S)	3	11
Organisationale und akademische Skills (KL)	2	3
Komorbiditäten (S)	2	2
Komorbiditäten (U)	3	10

Anmerkung. RCTs = Anzahl der randomisierten kontrollierten Studien, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.

Summary of Findings Tabelle: Meta-Analysen
Kognitiv behaviorale Therapie (CBT, DBT, MBCT):

Referenz	Endpunkt	Aussagesicherheit (GRADE)	Effektstärke	Kommentare	Mess-instrument
ADHS Symptome gesamt. Selbsturteil					
Knouse et al., 2017 **Population:** adults with ADHD, medicated and unmedicated, > 18 years **Intervention:** cognitive behavioral treatment (CBT, DBT, MBCT, psychoeducation, OTMB, iCBT, group rehabilitation), individual or group therapy **Comparison:** active or passive control	**ADHD symptoms**	Moderate ⊕⊕⊕◯ (IC)	*n* = 896, *k* = 19 *g* = .65 CI (.44 - .86) **I**	Controlled and open trials; treatment compared with active control group showed significantly smaller effect sizes (g = 0.35) than treatment with not active control group (g = 0.79).	n.a.
	ADHD symptoms, Pre-posttreatment	Moderate ⊕⊕⊕◯ (IC)	*n* = 658, *k* = 31 *g* = 1.00 CI (.84 - 1.16) **I**	Controlled and open trials; medication status significant moderator of treatment effect size (three studies treating	n.a.

				unmedicated participants g = 1.33, six studies treating only medicated participants g = 0.20, 22 studies treating mixed medicated and unmedicated participants (g = 0.89).	
Liu et al., 2023 **Population:** adults with ADHD, parallel stable medication, > 18 years **Intervention:** cognitive behavioral therapy (CBT, MBCT, DBT, internet based CBT); individual, group or online setting **Comparison:** treatment as usual, waitlist, active control (nondirective therapy or with no specific strategy intervention)	**ADHD total symptoms**	Very Low ⊕◯◯◯ (R, IC)	*n* = 2090, k = 26 *SMD* = -.43 CI (-.52 - -.34) **I**	Trim and fill corrected value used; high quality of evidence in the studies	CAARS, BCSS, ADHS-RS, ASRS, BADDS
Tourjman et al., 2022 **Population:** adults with ADHD, > 21 years **Intervention:** CBT, MBCT, internet therapy, meta-cognitive therapy (group or individual) **Comparison:** waitlist, treatment as usual, relaxation training and emotional	**ADHD, CBT vs. control**	Moderate ⊕⊕⊕◯ (R)	*n* = n.a., *k* = 7 *SMD* = .83 CI (.52 - 1.14) **I**	Result of the three-meta-analyses. No N reported, only number of effect sizes (n=35).	CAARS, ADHS-RS, CSS, BSC, RATE-S, BAS, ON-TOP

support or group support					
Young et al., 2020 **Population:** adults with ADHD, medicated and unmedicated, > 18 years **Intervention:** cognitive behavioural therapy, individual or group **Comparison:** waitlist, active control (psychoeducation, PMR)	**ADHD symptoms, CBT vs. waiting list**	Low ⊕⊕◯◯ (R, IC)	*n* = 260, *k* = 5 *SMD* = .76 CI (.21 - 1.31) **I**		K-SADS, ADHD-CCS, ADHD-RS, ASRS, ADHD checklist
	ADHD symptoms, CBT vs. active control	Low ⊕⊕◯◯ (R, IC)	*n* = 260, *k* = 5 *SMD* = .76 CI (.21 - 1.31) **I**		ADHD-RS, AISRS
ADHS Symptome gesamt. Kliniker*innenurteil					
Knouse et. al., 2017 **Population**: adults with ADHD, medicated and unmedicated, > 18 years **Intervention**: cognitive behavioral treatment (CBT, DBT, MBCT, psychoeducation, OTMB, iCBT, group rehabilitation), individual or group therapy **Comparison:** active or passive control	**ADHD symptoms**	High ⊕⊕⊕⊕	*n* = 444, *k* = 6 *g* = .57 CI (.25 - .89) **I**	Randomized vs. nonrandomized trials included, treatment compared with active control group showed significantly smaller effect sizes (g = 0.20) than treatment with not active control group (g = 0.78).	n.a.
	ADHD symptoms, Pre- vs. posttreatment	High ⊕⊕⊕⊕	*n* = n.a., *k* = 7 *g* = 1.40 CI (1.10 - 1.71) **I**	Randomized vs. nonrandomized trials included	n.a.
Liu et al., 2023 **Population:** adults with ADHD, parallel stable medication, >18 years **Intervention:** cognitive	**ADHD total symptoms**	Very low ⊕◯◯◯ (R, IC)	*n* = 1113, *k* = 10 *SMD* = -.34 CI (-.47 - -.22) **U**	Trim and fill corrected value used; high quality of evidence in the studies	CAARS, BCSS, ADHS-RS, AISRS

behavioral therapy (CBT, MBCT, DBT, internet-based CBT); individual and group setting or online therapy **Comparison**: treatment as usual, waitlist, active control (nondirective therapy or with no specific strategy intervention)					
Tourjman et. al., 2022 **Population**: adults with ADHD, > 21 years **Intervention:** CBT, MBCT, internet therapy, meta-cognitive therapy (group or individual) **Comparison:** waitlist, treatment as usual, relaxation training and emotional support or group support	**ADHD, CBT vs. control**	Moderate ⊕⊕⊕◯ (R)	*n* = n.a., *k* = 4 *SMD* = .51 CI (.18 - .84) **I**	Result of the three-meta-analysis. Number of effect sizes (n = 18).	WRAADDS, CGI, AISRS
Aufmerksamkeit. Selbsturteil					
Knouse et al., 2017 **Population:** adults with ADHD, medicated and unmedicated, > 18 years **Intervention:** cognitive behavioral treatment (CBT, DBT, MBCT, psychoeducation, OTMB, iCBT, group	**Inattention**	Moderate ⊕⊕⊕◯ (IC)	*n* = n.a., *k* = 11 *g* = .77 CI (.48 - 1.07) **I**	Randomized vs. nonrandomized (controlled and open trials) included, medication allowed, treatment compared with active control group showed significantly smaller effect sizes (g = 0.26) than treatment with not active	n.a.

rehabilitation), individual or group therapy **Comparison:** active or passive control				control group (g = 0.95).	
	Inattention, Pre- vs. posttreatment	Moderate ⊕⊕⊕◯ (IC)	*n* = 396, *k* = 20 *g* = 1.16 CI (.94 - 1.38) **I**	Randomized vs. nonrandomized (controlled and open trials) included, medication allowed, studies excluded if participants received new medication.	n.a.
Liu et al., 2023 **Population:** adults with ADHD, parallel stable medication, >18 years **Intervention:** cognitive behavioral therapy (CBT, MBCT, DBT, internet-based CBT); individual and group setting or online therapy **Comparison**: treatment as usual, waitlist, active control (nondirective therapy or with no specific strategy intervention)	**Inattention symptoms**	Very low ⊕◯◯◯ (R, IC)	*n* = 1530, *k* = 18 *SMD* = -.37 CI (-.47 - -.27) **I**	Trim and fill corrected value used; moderate quality of evidence in the studies.	CAARS, BCSS, ADHS-RS, AISRS
Aufmerksamkeit. Kliniker*innenurteil					
Liu et al., 2023 **Population:** adults with ADHD, parallel stable medication, >18 years **Intervention:** cognitive behavioral therapy (CBT, MBCT, DBT, internet-based	**Inattention symptoms**	Very low ⊕◯◯◯ (R, IC)	*n* = 990, *k* = 8 *SMD* = -.27 CI (-.40 - -.14) **I**	Trim and fill corrected value used; moderate quality of evidence in the studies	CAARS, BCSS, ADHS-RS, AISRS

CBT); individual and group setting or online therapy **Comparison**: treatment as usual, waitlist, active control (nondirective therapy or with no specific strategy intervention)					
Aufmerksamkeit. Kombiniertes Urteil					
Tourjman et al., 2022 **Population**: adults with ADHD, > 21 years **Intervention:** CBT, MBCT, internet therapy, meta-cognitive therapy (group or individual) **Comparison:** waitlist, treatment as usual, relaxation training and emotional support or group support	**Inattention** **CBT vs. control**	Low ⊕⊕◯◯ (R)	n = n.a., k = 6 SMD = .76 CI (.41 – 1.11) **I**	Result of the three-meta-analysis. No N reported, only number of effect sizes (n = 13)	CAARS, ADHD-SR, WRAADDS, BCS, CSS, AISRS-IN, BAS, ON-TOP, RATE-S, CGI
Hyperaktivität/Impulsivität. Selbsturteil					
Knouse et al., 2017 **Population:** adults with ADHD, medicated and unmedicated, > 18 years **Intervention:** cognitive behavioral treatment (CBT, DBT, MBCT, psychoeducation, OTMB, iCBT, group rehabilitation), individual or group therapy **Comparison:**	**Hyperactivity/impulsivity**	High ⊕⊕⊕⊕	*n* = n.a., *k* = 9 *g* = .33 CI (.13 - .53) **I**	Randomized vs. nonrandomized (controlled and open trials) included, treatment compared with active control group showed significantly smaller effect sizes (g = 0.26) than treatment with not active control group (g = 0.95).	n.a.
	Hyperactivity/impulsivity, Pre-posttreatment	High ⊕⊕⊕⊕	*n* = 338, *k* = 18 *g* = .68	Randomized vs. nonrandomized (controlled and	n.a.

active or passive control			CI (.48 - .87) **I**	open trials) included, treatment compared with active control group showed significantly smaller effect sizes (g = 0.26) than treatment with not active control group (g = 0.95).	
Liu et al., 2023 **Population**: adults with ADHD, parallel stable medication, >18 years **Intervention**: cognitive behavioral therapy (CBT, MBCT, DBT, internet-based CBT); individual and group setting or online therapy **Comparison**: treatment as usual, waitlist, active control (nondirective therapy or with no specific strategy intervention)	**Hyperactivity/impulsivity**	Low ⊕⊕◯◯ (R, IC)	*n* = 854, *k* = 6 *SMD* = -.29 CI (-.54 - -.05) **I**	Moderate quality of evidence in the studies	CAARS, BCSS, ADHS-RS, AISRS
Hyperaktivität/Impulsivität. Kliniker*innenurteil					
Liu et al., 2023 **Population**: adults with ADHD, parallel stable medication, >18 years **Intervention**: cognitive behavioral therapy (CBT, MBCT, DBT, internet-based CBT); individual	**Hyperactivity/Impulsivity**	Low ⊕⊕◯◯ (R, IC)	*n* =854, *k* = 6 *SMD = -.29* CI (-.54 - -.05) **I**	Moderate quality of evidence in studies	CAARS, BCSS, ADHS-RS, AISRS

and group setting or online therapy **Comparison**: treatment as usual, waitlist, active control (nondirective therapy or with no specific strategy intervention)					
Hyperaktivität/Impulsivität. Kombiniertes Urteil					
Tourjman et al., 2022 **Population**: adults with ADHD, > 21 years **Intervention:** CBT, MBCT, internet therapy, meta-cognitive therapy (group or individual) **Comparison:** waitlist, treatment as usual, relaxation training and emotional support or group support	**Hyperactivity/Impulsivity CBT vs. control**	Moderate ⊕⊕⊕◯ (R)	*n* = n.a., *k* = 7 *SMD* = .51 CI (.18 - .84) **I**	Result of the three-meta-analysis.	CAARS, ADHD-SR, WRAADDS, BCS, CSS, AISRS-IN, BAS, ON-TOP, RATE-S, CGI
Klinischer Gesamteindruck. Kliniker*innenurteil					
Knouse et al., 2017 **Population:** adults with ADHD, medicated and unmedicated, > 18 years **Intervention:** cognitive behavioral treatment (CBT, DBT, MBCT, psychoeducation, OTMB, iCBT, group rehabilitation), individual or group therapy **Comparison:** active or passive control	**CGI**	Low ⊕⊕◯◯ (IC)	*n* = n.a., *k* = 5 g = .51 CI (.13 - .88) **I**	Randomized vs. nonrandomized (controlled and open trials), treatment compared with active control group significantly smaller effect sizes (g = 0.13) than treatment with not active control group (g = 0.80).	n.a.
	CGI, Pre-posttreatment	High ⊕⊕⊕⊕	*n* = n.a., *k* = 7 g = 1.12 CI (.79 - 1.43)	Randomized vs. nonrandomized (controlled and open trials), medication	n.a.

			I	allowed, studies excluded if participants received new medication.	
Liu et al., 2023 **Population:** adults with ADHD, parallel stable medication, >18 years **Intervention:** cognitive behavioral therapy (CBT, MBCT, DBT, internet-based CBT); individual and group setting or online therapy **Comparison:** treatment as usual, waitlist, active control (nondirective therapy or with no specific strategy intervention)	**Clinical global impression (CGI)**	Low ⊕⊕◯◯ (IC)	*n* = 779, *k* = 7 *SMD* = -.34 CI (-.48 - -.19) I	Trim and fill corrected value used; high quality of evidence in studies	n.a.
Funktionalität. Selbsturteil					
Knouse et al., 2017 **Population:** adults with ADHD, medicated and unmedicated, > 18 years **Intervention:** cognitive behavioral treatment (CBT, DBT, MBCT, psychoeducation, OTMB, iCBT, group rehabilitation), individual or group therapy **Comparison:** active or passive control	**Functioning**	Moderate ⊕⊕⊕◯ (R)	*n* = n.a., *k* = 10 g = .51 CI (.23 - .79) I	Randomized vs. nonrandomized (controlled and open trials), studies excluded if participants received new medication, randomization status only significant moderator of self-reported functioning, when effect size for nonrandomized study (g = 1.29, n = 1) was larger than for randomized	n.a.

				studies (g =.40; n=9).	
	Functioning, Pre-posttreatment	Low ⊕⊕◯◯ (IC)	*n* = 389, *k* = 17 g = .73 CI (.46 - 1.00) **I**	Randomized vs. nonrandomized (controlled and open trials), medication allowed, studies excluded if participants received new medication.	n.a.
Selbstwertgefühl. Unbekanntes Urteil					
Liu et al., 2023 **Population:** adults with ADHD, parallel stable medication, >18 years **Intervention:** cognitive behavioral therapy (CBT, MBCT, DBT, internet-based CBT); individual and group setting or online therapy **Comparison:** treatment as usual, waitlist, active control (nondirective therapy or with no specific strategy intervention)	**Self-esteem**	Low ⊕⊕◯◯ (R)	*n* = 337, *k* = 4 *SMD* = 0.38 CI (.01 - .76) **I**	Moderate quality of evidence in studies	CAARS
Lebensqualität. Unbekanntes Urteil					
Liu et al., 2023 **Population:** adults with ADHD, parallel stable medication, >18 years **Intervention:** cognitive behavioral therapy (CBT, MBCT, DBT,	**Quality of Life**	Low ⊕⊕◯◯ (R)	*n* = 654, *k* = 9 *SMD* = 0.36 CI (.13 - .59) **I**	Moderate quality of evidence in studies	CAARS, BCSS, ADHD-RS

internet-based CBT); individual and group setting or online therapy **Comparison:** treatment as usual, waitlist, active control (nondirective therapy or with no specific strategy intervention)					

Anmerkung. *n* = Anzahl der Versuchspersonen, *k* = Anzahl der inkludierten Primärstudien. R = risk of bias, IC = inconsistency, ID = indirectness, IP = imprecision, P = publication bias.

Summary of Findings Tabelle: Meta-Analysen
Multiple psychosoziale Interventionen kombiniert:

Referenz	Endpunkt	Aussagesicherheit (GRADE)	Effektstärke	Kommentare	Mess-instrument
ADHS Symptome. Selbsturteil					
Lopez-Pinar et. al., 2018 **Population:** adults with ADHD, > 18 years, medicated or unmedicated **Intervention:** psychosocial treatment specifically designed for ADHD (CBT, MBCT, Biofeedback, DBT) **Comparison:** active control (non-specific intervention), waitlist, treatment as usual	**ADHD total symptoms, Treated and controls, Long-term**	Very Low ⊕◯◯◯ (R, IC)	*n* = 680, *k* = 12 *SMD* = .86 CI (.66 – 1.07) **I**	RCTs + three uncontrolled single-group studies; 50% of treatment groups CBT and 25% DBT; MBCT, Biofeedback (BFB), or combination of CBT and DBT applied for 8.33%. Higher percentage of participants on medication predicted higher ES on between-groups and within-subject.	n.a.
	ADHD total symptoms, Between group, Long-term	Low ⊕⊕◯◯ (IC, IP)	*n* = 513, *k* = 8 *SMD* = .40 CI (-.05 - .85) **U**	Trim and fill cor-rected values	n.a.

	ADHD total symptoms, Within group, Long-term	Very Low ⊕◯◯◯ (R, IC)	*n* = 409, *k* = 14 *SMD* = 1.09 CI (.85 – 1.32) **I**	RCTs and non RCTs	n.a.
Ostinelli et al., 2025 **Population:** adults (aged ≥18 years) with a formal diagnosis of ADHD **Intervention:** CBT, DBT, Mindfulness, Psychoeducation, Relaxation therapy (at least four sessions for psychological therapies) **Comparison**: psychological placebo (sham), TAU, waitlist	**ADHD core symptoms, CBT vs. control**	Very low ⊕◯◯◯ (R, IP)	*n* = n.a., *k* = 20 *SMD* = .55 CI (-1.24 - 0.14) **U**	RCTs	n.a.
	ADHD core symptoms, DBT vs. control	Very low ⊕◯◯◯ (R, IP)	*n* = n.a., *k* = 8 *SMD* = -.51 CI (-1.17 - .16) **U**	RCTs	n.a.
	ADHD core symptoms, Mindfulness vs. control	Very low ⊕◯◯◯ (R, IP)	*n* = 260, *k* = 7 *SMD* = -.08 CI (-.79 - .64) **U**	RCTs	n.a.
	ADHD core symptoms, Psychoeducation vs. Control	Very low ⊕◯◯◯ (R, IP)	*n* = n.a., *k* = 6 *SMD* = .14 CI (-.65 - .94) **U**	RCTs	n.a.
	ADHD core symp-toms, Relaxation therapy vs. control	Low ⊕⊕◯◯ (R)	*n* = n.a., *k* = 2 *SMD* = .86 CI (.07 - 1.65) **C**	RCTs	n.a.
Tourjman et. al., 2022 **Population:** adults with ADHD, > 21 years **Intervention:** CBT, MBCT, internet therapy, meta-cognitive therapy	**ADHD total symptoms, All interventions, Long-term**	Low ⊕⊕◯◯ (R, P)	*n* = 52, *k* = 7 *SMD* = .74 CI (.49 - .99) **I**	Result for adult population of the three-meta-analysis, No N reported, only number of effect sizes (n=52).	CAARS, ADHD-SR, BCS, WRAADDS, CSS, AISRS-IN, BAS, ON-TOP, RATE-S, CGI

(group or individual) **Comparison:** waitlist, treatment as usual, relaxation training and emotional support or group support					
ADHS Symptome. Kliniker*innenurteil					
Lopez-Pinar et. al., 2018 **Population:** adults with ADHD, > 18 years, medicated or unmedicated **Intervention:** psychosocial treatment specifically designed for ADHD (CBT, MBCT, Biofeedback, DBT) **Comparison:** active control (non-specific intervention), waitlist, treatment as usual	**ADHD total symptoms, All interventions, Long-term**	Low ⊕⊕◯◯ (IC)	*n* = 393, *k* = 4 *SMD* = .98 CI (.68 - 1.27) **I**		n.a.
	ADHD total symptoms, Between group, Long-term	Very Low ⊕◯◯◯ (IC, IP)	*n* = 382, *k* = 5 *SMD* = .07 CI (-.39 - .53) **U**	Trim ad fill corrected values	n.a.
	ADHD total symptoms, Within group, Long-term	High ⊕⊕⊕⊕	*n* = 197, *k* = 5 *SMD* = 1.18 CI (.90 - 1.46) **I**		n.a.
Ostinelli et al., 2025 **Population:** adults (aged ≥18 years) with a formal diagnosis of ADHD **Intervention:** CBT, DBT, Mindfulness, Psychoeducation, Relaxation therapy (at least four sessions for psychological therapies) **Comparison**: psychological placebo (sham), TAU, waitlist	**ADHD core symptoms, CBT vs. control**	Moderate ⊕⊕⊕◯ (R)	*n* = n.a., *k* = 20 *SMD* = .76 CI (.26 - 1.26) **I**		n.a.
	ADHD core symptoms, DBT vs. control	Low ⊕⊕◯◯ (R, IP)	*n* = n.a., *k* = 8 *SMD* =.20 CI (-.17 - .57) **U**		n.a.
	ADHD core symptoms, Mindfulness vs. control	Moderate ⊕⊕⊕◯ (R)	*n* = n.a., *k* = 7 *SMD* = -.08 CI (-.79 - .64) **I**		n.a.
	ADHD core symptoms, Psychoeducation vs. control	Moderate ⊕⊕⊕◯ (R)	*n* = n.a., *k* = 6 *SMD* = .14 CI (-.65 - .94)		n.a.

			I		
	ADHD core symp-toms, Relaxation therapy vs. placebo	Low ⊕⊕◯◯ (R, IP)	*n* = n.a., *k* = 2 *SMD* = -.24 CI (-1.01 - .53) **U**		n.a.
Aufmerksamkeit. Selbsturteil					
Lopez-Pinar et. al., 2018 **Population:** adults with ADHD, > 18 years, medicated or unmedicated **Intervention:** psychosocial treatment specifically designed for ADHD (CBT, MBCT, Biofeedback, DBT) **Comparison:** active control (non-specific intervention), waitlist, treatment as usual	**Inattention, Between group, Long-term**	Very Low ⊕◯◯◯ (R, IC)	*n* = 446, *k* = 7 *SMD* = .36 CI (-.01 - .73) **I**	Trim and fill corrected values used	n.a.
	Inattention, Within group, Long-term	Moderate ⊕⊕⊕◯ (R)	*n* = 243, *k* = 8 *SMD* = 1.32 CI (.99 - 1.64) **I**	Trim and fill corrected values used	n.a.
Aufmerksamkeit. Kliniker*innenurteil					
Lopez-Pinar et. al., 2018 **Population:** adults with ADHD, > 18 years, medicated or unmedicated **Intervention:** psychosocial treatment specifically designed for ADHD (CBT, MBCT, Biofeedback, DBT) **Comparison:** active control (non-specific intervention), waitlist, treatment as usual	**Inattention, Between group, Long-term**	Very Low ⊕◯◯◯ (IC, IP)	*n* = 282, *k* = 3 *SMD* = .14 CI (-.29 - .58) **U**		n.a.
	Inattention, Within group, Long-term	High ⊕⊕⊕⊕	*n* = 153, *k* = 3 *SMD* = .95 CI (.72 - 1.19) **I**	Trim an fill corrected values used	n.a.

Hyperaktivität/Impulsivität. Selbsturteil					
Lopez-Pinar et. al., 2018 **Population:** adults with ADHD, > 18 years, medicated or unmedicated **Intervention:** psychosocial treatment specifically designed for ADHD (CBT, MBCT, Biofeedback, DBT) **Comparison:** active control (non-specific intervention), waitlist, treatment as usual	**Hyperactivity/Impulsivity, Between group, Long-term**	Very Low ⊕◯◯◯ (R, IC)	*n* = 406, *k* = 6 *SMD* = .66 CI (.18 – 1.14) **I**	Trim an fill corrected values used	n.a.
	Hyperactivi-ty/Impulsivit, Within group, Long-term	Low ⊕⊕◯◯ (R, IC)	*n* = 227, *k* = 7 *SMD* = .83 CI (.59 – 1.08) **I**		n.a.
Hyperaktivität/Impulsivität. Kliniker*innenurteil					
Lopez-Pinar et. al., 2018 **Population:** adults with ADHD, > 18 years, medicated or unmedicated **Intervention:** psychosocial treatment specifically designed for ADHD (CBT, MBCT, Biofeedback, DBT) **Comparison:** active control (non-specific intervention), waitlist, treatment as usual	**Hyperactivity/Impulsivity , Between group, Long-term**	Very Low ⊕◯◯◯ (IC, IP)	*n* = 291, *k* = 3 *SMD* = .16 CI (-.27 - .59) **U**	Trim an fill corrected values used	n.a.
	Hyperactivi-ty/Impulsivity, Within group, Long-term	High ⊕⊕⊕⊕	*n* = 149, *k* = 3 *SMD* = .96 CI (.50 - 1.42) **I**	Trim an fill corrected values used	n.a.
Klinischer Gesamteindruck. Kliniker*innenurteil					
Lopez-Pinar et. al., 2018 **Population:** adults with ADHD, > 18 years, medicated or unmedicated **Intervention:** psychosocial	**CGI, Between group, Long-term**	Moderate ⊕⊕⊕◯ (IC)	*n* = 392, *k* = 5 *SMD* = .44 CI (.14 - .74) **I**		n.a.
	CGI, Within group, Long-term	High ⊕⊕⊕⊕	*n* = 194, *k* = 5 *SMD* = 1.20		n.a.

treatment specifically designed for ADHD (CBT, MBCT, Biofeedback, DBT) **Comparison:** active control (non-specific intervention), waitlist, treatment as usual			CI (.93 - 1.48) I		
Funktionalität. Selbsturteil					
Lopez-Pinar et. al., 2018 **Population:** adults with ADHD, > 18 years, medicated or unmedicated **Intervention:** psychosocial treatment specifically designed for ADHD (CBT, MBCT, Biofeedback, DBT) **Comparison:** active control (non-specific intervention), waitlist, treatment as usual	**Global functioning, Between group, Long-term**	Low ⊕⊕◯◯ (R, IC)	*n* = 102, *k* = 3 *SMD* = .76 CI (.23 - 1.28) I		n.a.
	Global functioning, Between group, Long-term	Very Low ⊕◯◯◯ (R, IC, IP)	*n* = 102, *k* = 4 *SMD* = .58 CI (.25 - .92) I	RCTs and non RCTs	n.a.

Anmerkung. *n* = Anzahl der Versuchspersonen, *k* = Anzahl der inkludierten Primärstudien. R = risk of bias, IC = inconsistency, ID = indirectness, IP = imprecision, P = publication bias.

Summary of Findings Tabelle: RCTs
Kognitiv behaviorale Therapie (CPT):

Referenz	Endpunkt	Risk of Bias	Effektstärke	Kommentare	Mess-instrument
ADHS Symptome gesamt. Selbsturteil					
Anastopoulos et al., 2021 **Population:** college students with ADHD 18 - 30 years **Intervention:** ACCESS treatment immediately (cognitive-behavior	**ADHD total symptoms**	High Risk ◑ (BP)	*n* = 250 *d* = .39 CI (.15 - .65) I	Reductions in ADHD symptoms were evident at end of active phase and remained stable throughout maintenance phase of intervention	CAARS, Total ADHD scores

therapy program delivered via group treatment and individual mentoring across two semesters) **Comparison:** Delayed Treatment Control (DTC): one-year delayed basis.					
Cherkasova et al., 2020 **Population:** adults with ADHD **Intervention:** CBT (12 manualized group sessions) accompanied by individual coaching + medication (long acting methylphenidate (Biphentin or Concerta) or amphetamine medication (Adderall XR or Vyvanse)) **Comparison:** CBT (12 manualized group sessions) accompanied by individual coaching (without medication)	**ADHD symptoms, Following treatment**	High Risk ◑ (CC, BA, BP)	*n* = 88 *d* = .99 CI (n.a.) **I**		Barkley's Current ADHD Symptoms Scale (CSS)
	ADHD symptoms, 3 month follow-up	Very high risk ● (CC, BP, BA)	*n* = 88 *d* = .64 CI (n.a.) **I**		Barkley's Current ADHD Symptoms Scale (CSS)
	ADHD symptoms, 6 month follow-up	Very high risk ● (CC, BP, BA)	*n* = 88 *d* = .65 CI (n.a.) **I**		Barkley's Current ADHD Symptoms Scale (CSS)
Gutman et al., 2020 **Population:** adults with self-reported diagnosis of ADHD (20 - 55years), female **Intervention:** intervention based on five-part approach (Gutman & Szczepanski, 2005): helped participants to establish routines, organize personal physical environments, enhance time management skills, monitor and regulate internal and external sensory, develop effective stress management skills. 7 consecutive weeks consisted of individual 1-hr sessions that took place in home and community	**Total ADHD symptoms**	Very high risk ● (BP, BA, CE)	*n* = 23 *d* = -2.17 CI (n.a.) **I**	Disbalance of medication status between intervention and control groups.	ASRS

environments (e.g., work, school, grocery store) **Comparison:** no intervention or contact from research team during the 7-wk intervention					
Pan et al., 2022 **Population:** adults with ADHD **Intervention:** CBT **Comparison:** treatment as usual	**Total ADHD symptoms**	Very high risk ● (BP, BA)	*n* = 98 *d* = .34 CI (.07 - .5.89) **I**	Value for T2 (after the 12-week CBT-treatment). Follow-Up values also reported in study.	ADHD-RS
Pan et al., 2022 **Population:** adults with ADHD **Intervention:** CBT + Medication **Comparison:** treatment as usual	**Total ADHD symptoms**	Very high risk ● (BP, BA)	*n* = 98 *d* = .31 CI (-.37 - .10.73) **U**	Value for T2 (after the 12-week CBT-treatment). Follow-Up values also reported in study.	CAARS-total
Young et al., 2017 **Population:** adults with ADHD **Intervention:** CBT + Medication **Comparison:** medication only	**ADHD symptoms**	Very high risk ● (BP, BA)	*n* = 95 *d* = .55 CI (n.a.) **I**		RATE-S
ADHD Symptome gesamt. Kliniker*innenurteil					
Cherkasova et al., 2020 **Population**: Adults with ADHD **Intervention**: CBT (12 manualized group sessions) accompanied by individual coaching + medication (long acting MPH (Biphentin or Concerta) or	**ADHD symptoms, Following treatment**	Very high risk ● (CC, BP, BA)	*n* = 88 *d* = .64 CI (n.a.) **I**		n.a.
	ADHD symptoms, 3-month follow-up	Very high risk ● (CC, BP, BA)	*n* = 88 *d* = .56 CI (n.a) **I**		n.a.

amphetamine (Adderall XR or Vyvanse)) **Comparison:** CBT (12 manualized group sessions) accompanied by individual coaching (without medication)	**ADHD symptoms, 6 month follow-up**	Very high risk ● (CC, BP, BA)	*n* = 88 *d* = -.14 CI (n.a) **U**		n.a.
Lam et al., 2019 **Population**: Adults with ADHD **Intervention**: group CBT (+ MPH or + placebo) **Comparison:** individual clinical management (+ MPH or + placebo)	**Total ADHD symptoms**	High Risk ◑ (BP)	*n* = 251 *MD* = -.50 CI (-1.9 - .90) **U**	Data incomplete due to loss at follow up, but authors state: nevertheless, psychosocial and clinical baseline characteristics of subsample assessed descriptively similar to baseline participants	CAARS-O:L
	Decrease in total ADHD symptoms >=30%	High Risk ◑ (BP)	*n* = 251 *OR* = 1.26 CI (.75 - 2.12) **U**	Data incomplete due to loss at follow up, but authors state: nevertheless, psychosocial and clinical baseline characteristics of subsample assessed descriptively similar to baseline participants	CAARS-O:L
Aufmerksamkeit. Selbsturteil					
Anastopoulos et al., 2021 **Population:** college students with ADHD 18 - 30 years **Intervention:** ACCESS treatment immediately (cognitive-behavior therapy program delivered via group treatment and individual mentoring across two semesters) **Comparison:** Delayed Treatment Control	**Inattention Symptoms**	High Risk ◑ (BP)	*n* = 250 *d* = .50 CI (.25 - .76) **I**	Reductions in ADHD symptoms were evident at end of active phase and remained stable throughout maintenance phase of intervention	CAARS

(DTC): one-year delayed basis.					
Pan et al., 2022 **Population**: Adults with ADHD **Intervention**: CBT + Medication **Comparison:** Treatment as usual	**Inattention**	Very high risk ● (BP, BA)	*n* = 98 *d* = .46 CI (.62 - 4.47) **I**	Value for T2 (after the 12-week CBT-treatment). Follow-Up values also reported in the study.	ADHD-RS
Solanto et al., 2018 **Population**: Adults with ADHD **Intervention**: group CBT (+ MPH or + placebo) **Comparison:** individual clinical management (+ MPH or + placebo)	**Inattention/memory, Participants below age of 50**	Very high risk ● (BP, BA)	*n* = 55 *MD* = .48 CI (.70 - 9) **I**	Effect size measure: difference between least square mean change scores	CAARS-Self-IN
	Inatten-tion/memory, Participants above age of 50	Very high risk ● (BP, BA)	*n* = 26 *MD* = 5.8 CI (-.30 - 12) **U**	Effect size measure: difference between least square mean change scores	CAARS-Self-IN
Aufmerksamkeit. Kliniker*innenurteil					
Lam et al., 2019 **Population:** adults with ADHD **Intervention:** manualized 12-week CBT **Comparison:** parallel support group	**Inatten-tion/memory problems**	High Risk ◑ (BP)	*n* = 251 *MD* = -.70 CI (-2.2 - .80) **U**	Data incomplete due to loss at follow up, but authors state: nevertheless, psychosocial and clinical baseline characteristics of subsample assessed descriptively similar to baseline participants	CAARS-O:L
Solanto et al., 2018 **Population:** adults with ADHD **Intervention:** group CBT (+ MPH or + placebo)	**Inattention, Participants below age of 50**	High Risk ◑ (BP)	*n* = 55 *MD* = 3.67 CI (1.48 - 5.86) **I**	Effect size measure: difference between least square mean change scores	AISRS-IN

Comparison: individual clinical management (+ MPH or + placebo)	**Inattention, Participants above age of 50**	High Risk ◑ (BP)	*n* = 26 *MD* = 1.1 CI (-2.1 - 4.3) **U**	Effect size measure: difference between least square mean change scores	AISRS-IN
	Inattention/memory, Participants below age of 50	Very high risk ● (BP, BA)	*n* = 55 *MD* = 5.19 CI (.30 - 10.1) **I**	Effect size measure: difference between least square mean change scores	CAARS-Obs-IN
	Inattention/memory, Participants above age of 50	Very high risk ● (BP, BA)	*n* = 26 *MD* = 4.6 CI (-2.5 - 11.7) **U**	Effect size measure: difference between least square mean change scores	CAARS-Obs-IN
Hyperaktivität/Impulsivität. Selbsturteil					
Anastopoulos et al., 2021 **Population:** college students with ADHD 18 - 30 years **Intervention:** ACCESS treatment immediately (cognitive-behavior therapy program delivered via group treatment and individual mentoring across two semesters) **Comparison:** Delayed Treatment Control (DTC): one-year delayed basis.	**Hyperactive-impulsive symptoms**	High Risk ◑ (BP)	*n* = 250 *d* = .16 CI (-.09 - .41) **U**		CAARS HI scores
Pan et al., 2022 **Population:** adults with ADHD **Intervention:** CBT + Medication **Comparison:** medication only	**Impulsivity/hyperactivity**	Very high risk ● (BP, BA)	*n* = 250 *d* = .14 CI (-.92 - 2.23) **U**	Value for T2 (after the 12-week CBT-treatment). Follow-up values reported in study.	ADHD-RS
Hyperaktivität/Impulsivität. Kliniker*innenurteil					

Lam et al., 2019 **Population:** adults with ADHD **Intervention:** manualized 12-week CBT **Comparison:** parallel support group	**Hyperactivity/impulsivity**	High Risk ◑ (BP)	*n* = 251 *MD* = -1.4 CI (-2.9 - .10) **U**	Data incomplete due to loss at follow up, but authors state: nevertheless, psychosocial and clinical baseline characteristics of subsample assessed descriptively similar to baseline participants	CAARS-O:L
	Impulsivity and emotional lability	High Risk ◑ (BP)	*n* = 251 *MD* = -.80 CI (-2.2 - .70) **U**	Data incomplete due to loss at follow up, but authors state: nevertheless, psychosocial and clinical baseline characteristics of subsample assessed descriptively similar to baseline participants	CAARS-O:L
Klinischer Gesamteindruck. Kliniker*innenurteil → Ab hier auch Grading					
Lam et al., 2019 **Population:** adults with ADHD **Intervention:** manualized 12-week CBT **Comparison:** parallel support group	**CGI severity**	High Risk ◑ (BP)	*n* = 251 *OR* = 0.81 CI (0.51 - 1.28) **U**	Data incomplete due to loss at follow up, but authors state: nevertheless, psychosocial and clinical baseline characteristics of subsample assessed descriptively similar to baseline participants	CAARS-O:L
	CGI global change	High Risk ◑ (BP)	*n* = 251 *OR* = 0.76 CI (0.48 - 1.21) **U**	Data incomplete due to loss at follow up, but authors state: nevertheless, psychosocial and clinical baseline characteristics of subsample assessed	CAARS-O:L

				descriptively similar to baseline participants	
	CGI global assessment of effectiveness	High Risk ◑ (BP)	*n* = 251 *OR* = 1.63 CI (1.03 - 2.59) I	Data incomplete due to loss at follow up, but authors state: nevertheless, psychosocial and clinical baseline characteristics of subsample assessed descriptively similar to baseline participants	CAARS-O:L
Funktionalität. Selbsturteil					
Eddy et al., 2021 **Population:** emerging adults with ADHD attending college (18-30 years) **Intervention:** ACCESS (CBT programm including: SEMESTER 1 (active phase) 8 weekly group sessions (90m each) + concurrently weekly individual mentoring sessions (30 min). SEMESTER 2 (maintenance phase) **Comparison:** delayed treatment condition (DTC).	**Daily life performance with ADHD**	Very high risk ● (BP, ID)	*n* = 250 *d* = 0.72 CI (0.46 - 0.97) I	Participants received ACCRSS after 2 semesters	AIM-A Performance/Daily functioning
Gutman et al., 2020 **Population:** adults with self-reported diagnosis of ADHD (20 - 55years), female **Intervention:** intervention based on five-part approach (Gutman & Szczepanski, 2005): helped participants to establish	**Performance**	Very high risk ● (BP, BA, CE)	*n* = 23 *d* = 3.04 CI (n.a) I	No information regarding concealment, disbalance of medication status between intervention and control groups.	COPM

routines, organize personal physical environments, enhance time management skills, monitor and regulate internal and external sensory, develop effective stress management skills. 7 consecutive weeks consisted of individual 1-hr sessions that took place in home and community environments (e.g., work, school, grocery store) **Comparison:** no intervention or contact from research team during the 7-wk intervention					
Selbstwertgefühl. Selbsturteil					
Cherkasova et al., 2020 **Population**: Adults with ADHD **Intervention**: CBT (12 manualized group sessions) accompanied by individual coaching + medication (long acting MPH (Biphentin or Concerta) or amphetamine (Adderall XR or Vyvanse)) **Comparison:** CBT (12 manualized group sessions) accompanied by individual coaching (without medication)	**Self-esteem, Following treatment**	Very high risk ● (CC, BP, BA)	*n* = 88 *d* = 0.67 CI (n.a.) **I**		Index of Self-Esteem (ISE)
	Self-esteem, 3 month follow-up	Very high risk ● (CC, BP, BA)	*n* = 88 *d* = 0.48 CI (n.a.) **U**		Index of Self-Esteem (ISE)
	Self-esteem, 6 month follow-up	Very high risk ● (CC, BP, BA)	*n* = 88 *d* = 0.61 CI (n.a.) **I**		Index of Self-Esteem (ISE)
Pan et al., 2022 **Population:** adults with ADHD **Intervention:** CBT **Comparison:** medication only	**Self-esteem**	Very high risk ● (BP, BA)	*n* = 98 *d* = -0.16 CI (-2.33 - 0.83) **U**	Value for T2 (after the 12-week CBT-treatment). Follow-up values reported in study.	SES
Lebensqualität. Selbsturteil					

Gutman et al., 2020 **Population:** adults with self-reported diagnosis of ADHD (20 - 55years), female **Intervention:** intervention based on five-part approach (Gutman & Szczepanski, 2005): helped participants to establish routines, organize personal physical environments, enhance time management skills, monitor and regulate internal and external sensory, develop effective stress management skills. 7 consecutive weeks consisted of individual 1-hr sessions that took place in home and community environments (e.g., work, school, grocery store) **Comparison:** no intervention or contact from research team during the 7-wk intervention	**Satisfaction**	Very high risk ● (BP, BA, CE)	*n* = 23 *d* = 2.82 CI (n.a) **I**	No information regarding concealment, disbalance of medication status between intervention and control groups.	COPM
Pan et al., 2022 **Population:** adults with ADHD **Intervention:** CBT **Comparison:** medication only	**QoL – physical**	Very high risk ● (BP, BA)	*n* = 98 *d* = -0.21 CI (-8.15 - 1.72) **U**	Value for T2 (after the 12-week CBT-treatment). Follow-up values reported in study.	WHOQOL-BREF
	QoL – psychological	Very high risk ● (BP, BA)	*n* = 98 *d* = -0.38 CI (-9.60 - -0.59) **I**	Value for T2 (after the 12-week CBT-treatment). Follow-up values reported in study.	WHOQOL-BREF
	QoL – social	Very high risk ● (BP, BA)	*n* = 98 *d* = -0.42 CI (-11.34 - -1.28) **I**	Value for T2 (after the 12-week CBT-treatment). Follow-up values reported in study.	WHOQOL-BREF

	QoL – environmental	Very high risk ● (BP, BA)	*n* = 98 *d* = -0.15 CI (-6.07 - 2.36) **U**	Value for T2 (after the 12-week CBT-treatment). Follow-up values reported in study.	WHOQOL-BREF
Wohlbefinden. Unbekanntes Urteil					
Eddy et al., 2021 **Population:** emerging adults with ADHD attending college (18-30 years) **Intervention:** ACCESS (CBT programm includng: SEMESTER 1 (active phase) 8 weekly group sessions (90m each) + concurrently weekly individual mentoring sessions (30 min). SEMESTER 2 (maintenance phase) **Comparison:** delayed treatment condition (DTC).	**General well being**	Very high risk ● (BP, ID)	*n* = 250 *d* = 0.26 CI (0.01 - 0.51) **I**	Participants received ACCRSS after 2 semesters	AIM-A General Well Being
Soziale Fähigkeiten. Unbekanntes Urteil					
Eddy et al., 2021 **Population:** emerging adults with ADHD attending college (18-30 years) **Intervention:** ACCESS (CBT programm including: SEMESTER 1 (active phase) 8 weekly group sessions (90m each) + concurrently weekly individual mentoring sessions (30 min). SEMESTER 2 (maintenance phase) **Comparison:** delayed treatment condition (DTC).	**Interpersonal relationships**	Very high risk ● (BP, ID)	*n* = 250 *d* = 0.12 CI (-0.13 - 0.37) **U**	Participants received ACCRSS after 2 semesters	AIM-A Relationships and Communications

Young et al., 2017 **Population:** adults with ADHD **Intervention:** CBT + Medication **Comparison:** medication only	**Social functioning**	Very high risk ● (BP, BA)	*n* = 95 *d* = .41 CI (n.a.) **I**		RATE-S
ADHS Wissen. Unbekanntes Urteil					
Anastopoulos et al., 2021 **Population:** college students with ADHD 18 - 30 years **Intervention:** ACCESS treatment immediately (cognitive-behavior therapy program delivered via group treatment and individual mentoring across two semesters) **Comparison:** Delayed Treatment Control (DTC): one-year delayed basis.	**ADHD knowledge**	High Risk ◑ (BP)	*n* = 250 *d* = 1.21 CI (0.94 - 1.48) **I**	Improvements in clinical change mechanisms evident at end of active phase and remained stable throughout maintenance phase of ACCESS	TOAK scores
Organisationale und akademische Fähigkeiten. Selbsturteil					
Cherkasova et al., 2020 **Population**: Adults with ADHD **Intervention**: CBT (12 manualized group sessions) accompanied by individual coaching + medication (long acting MPH (Biphentin or Concerta) or amphetamine (Adderall XR or Vyvanse)) **Comparison:** CBT (12 manualized group sessions) accompanied by individual coaching (without medication)	**Organizational skills, Following treatment**	Very high risk ● (CC, BP, BA)	*n* = 88 *d* = 1.02 CI (n.a.) **I**		Organization and Activation for Work (OAW)
	Organizational skills, 3 month follow-up	Very high risk ● (CC, BP, BA)	*n* = 88 *d* = 0.69 CI (n.a.) **I**		Organization and Activation for Work (OAW)
	Organizational skills, 6 month follow-up	Very high risk ● (CC, BP, BA)	*n* = 88 *d* = 0.53 CI (n.a.) **U**		Organization and Activation for Work (OAW)

Eddy et al., 2021 **Population:** emerging adults with ADHD attending college (18-30 years) **Intervention:** ACCESS (CBT programm including: SEMESTER 1 (active phase) 8 weekly group sessions (90m each) + concurrently weekly individual mentoring sessions (30 min). SEMESTER 2 (maintenance phase) **Comparison:** delayed treatment condition (DTC).	**Academic skills and strategies - Motivation**	Very high risk ● (BP, ID)	*n* = 250 *d* = 0.37 CI (0.12 - 0.62) **I**	Participants received ACCRSS after 2 semesters	Learning and study strategies inventory 2 (LASSI-2)
	Academic skills and strategies – Time management	Very high risk ● (BP, ID)	*n* = 250 *d* = 0.48 CI (0.23 - 0.73) **I**	Participants received ACCRSS after 2 semesters	Learning and study strategies inventory 2 (LASSI-2)
	Academic skills and strategies – Test strategies	Very high risk ● (BP, ID)	*n* = 250 *d* = 0.58 CI (0.32 - 0.83) **I**	Participants received ACCRSS after 2 semesters	Learning and study strategies inventory 2 (LASSI-2)
	Academic skills and strategies – Study aids	Very high risk ● (BP, ID)	*n* = 250 *d* = 0.29 CI (0.04 - 0.54) **I**	Participants received ACCRSS after 2 semesters	Learning and study strategies inventory 2 (LASSI-2)
	Grade point average (GPA)	Very high risk ● (BP, ID)	*n* = 250 *d* = 0.01 CI (-0.24 - 0.26) **U**	Participants received ACCRSS after 2 semesters	Participants semester Grade Point Avarages (GPA) ranging from 0.0 to 4.0
	Earned credits	Very high risk ● (BP, ID)	*n* = 250 *d* = 0.05 CI (-0.20 - 0.30) **U**	Participants received ACCRSS after 2 semesters	Number of credits attempted per semester
Solanto et al., 2018 **Population:** adults with ADHD **Intervention:** group CBT (+ MPH or + placebo) **Comparison:** individual clinical management (+ MPH or + placebo)	**Time management, organization & planning, Participants below age 50**	Very high risk ● (BP, BA)	*n* = 55 *MD* = -10.10 CI (-20.20 - 0.06) **U**	Effect size measure: "Difference between Least Square Mean Change scores"; blinded rater	ON-TOP
	Time management, organization & planning, Participants above age 50	Very high risk ● (BP, BA)	*n* = 26 *MD* = -6.90 CI (-21.40 - 7.60) **U**	Effect size measure: "Difference between Least Square Mean Change scores"; blinded rater	ON-TOP

Organisationale und akademische Fähigkeiten. Kliniker*innenurteil					
Anastopoulos et al., 2021 **Population:** college students with ADHD 18 - 30 years **Intervention:** ACCESS treatment immediately (cognitive-behavior therapy program delivered via group treatment and individual mentoring across two semesters) **Comparison:** Delayed Treatment Control (DTC): one-year delayed basis.	**Use of behavioral strategies**	High Risk ◑ (BP)	*n* = 250 *d* = 0.81 CI (0.56 - 1.07) **I**	Improvements in clinical change mechanisms evident at end of active phase and remained stable throughout maintenance phase of ACCESS	SFS scores
Solanto et al., 2018 **Population:** adults with ADHD **Intervention:** group CBT (+ MPH or + placebo) **Comparison:** individual clinical management (+ MPH or + placebo)	**Time management, organization & planning, Participants below age 50**	High Risk ◑ (BP)	*n* = 55 *MD* = 2.89 CI (1.40 - 4.40) **I**	Effect size measure: "Difference between Least Square Mean Change scores"; blinded rater	AISRS-TMOP
	Time management, organization & planning, Participants above age 50	High Risk ◑ (BP)	*n* = 26 *MD* = 0.90 CI (-1.30 - 3.10) **U**	Effect size measure: "Difference between Least Square Mean Change scores"; blinded rater	AISRS-IN
Komorbiditäten. Selbsturteil					
Gutman et al., 2020 **Population:** adults with self-reported diagnosis of ADHD (20 - 55years), female **Intervention:** intervention based on five-part approach (Gutman & Szczepanski, 2005): helped participants to establish routines, organize personal physical environments, enhance time management skills, monitor and regulate internal and external sensory, develop	**Perceived stress**	Very high risk ● (BP, BA, CE)	*n* = 23 *d* = -2.66 CI (n.a.) **I**	No information regarding concealment, disbalance of medication status between intervention and control groups.	PSS

effective stress management skills. 7 consecutive weeks consisted of individual 1-hr sessions that took place in home and community environments (e.g., work, school, grocery store) **Comparison:** no intervention or contact from research team during the 7-wk intervention					
Lam et al., 2019 **Population:** adults with ADHD **Intervention:** manualized 12-week CBT **Comparison:** parallel Support group	**Problems with self-concept**	High Risk ◑ (BP)	*n* = 251 *MD* = -.30 CI (-1.3 - .70) **U**	Data incomplete due to loss at follow-up, but authors state: nevertheless, psychosocial and clinical baseline characteristics of subsample assessed descriptively similar to baseline participants	CAARS-O:L
Komorbiditäten. Unbekanntes Urteil					
Anastopoulos et al., 2021 **Population:** college students with ADHD 18 - 30 years **Intervention:** ACCESS treatment immediately (cognitive-behavior therapy program delivered via group treatment and individual mentoring across two semesters) **Comparison:** Delayed Treatment Control (DTC): one-year delayed basis.	**Depression symptoms**	High Risk ◑ (BP)	*n* = 250 *d* = .24 CI (-.01 - .49) **U**	Although emotional functioning did not improve, clinically interesting that depression and anxiety levels seemed to stabilize for ACCESS participants, while worsening for DTC participants	BDI-II
	Anxiety	High Risk ◑ (BP)	*n* = 250 *d* = .33 CI (.08 - .58) **I**	Although emotional functioning did not improve, clinically interesting that depression and anxiety levels	BAI scores

				seemed to stabilize for ACCESS participants, while worsening for DTC participants	
	Maladaptive thinking	High Risk ◑ (BP)	*n* = 250 *d* = .50 CI (.25 - .75) **I**	Improvements in clinical change mechanisms were evident at end of active phase and remained stable throughout maintenance phase of ACCESS	ACS-CV scores
Pan et al., 2022 **Population**: Adults with ADHD **Intervention**: CBT + Medication **Comparison:** Medication only	**Anxiety**	Very high risk ● (BP, BA)	*n* = 98 *d* = .68 CI (2.52 - 7.52) **I**	Value for T2 (after 12-week CBT-treatment). Follow-up values reported in study.	SAS
	State anxiety	Very high risk ● (BP, BA)	*n* = 98 *d* = .50 CI (1.88 - 9.13) **I**	Value for T2 (after 12-week CBT-treatment). Follow-up values reported in study.	STAI
	Trait anxiety	Very high risk ● (BP, BA)	*n* = 98 *d* = .52 CI (1.7 - 7.68) **I**	Value for T2 (after 12-week CBT-treatment). Follow-up values reported in study.	STAI
	Dysfunctional attitudes	Very high risk ● (BP, BA)	*n* = 98 *d* = .19 CI (-3.07 - 11.52) **U**	Value for T2 (after 12-week CBT-treatment). Follow-up values reported in study.	DAS
	Thoughts	Very high risk ● (BP, BA)	*n* = 98 *d* = .22 CI (-2.09 - 9.99) **U**	Value for T2 (after 12-week CBT-treatment). Follow-up values reported in study.	ATQ

Young et al., 2017 **Population**: Adults with ADHD **Intervention**: CBT + Medication **Comparison:** Medication only	**Emotional control**	Very high risk ● (BP, BA)	*n* = 95 *d* = .32 CI (n.a.) I	RATE-S
	Antisocial scale	Very high risk ● (BP, BA)	*n* = 95 *d* = .50 CI (n.a.) I	RATE-S

Anmerkung. *n* = Anzahl der Versuchspersonen. SG = sequence generation, CC = concealment, BP = blinding participants, BA = blinding assessors, ID = incomplete data, OR = outcome reporting, CE = carry over effects, SX = stopped early, UM = unvalidated measures, OI = other issue.

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1.4 Weitere non-pharmakologische Interventionen

1.4.1 Digitale Interventionen

1.4.1.1. Welchen Stellenwert haben digitale Interventionen in der Behandlung von ADHS?

1.4.1.1. A

Berücksichtigte Endpunktkategorien: Meta-Analysen

Endpunktkategorien	MAs	*m*	Gesamtaussagesicherheit der Evidenz
ADHS Symptome gesamt (KU)	4	4	Sehr schwach/schwach
Aufmerksamkeit (KU)	3	4	
Hyperaktivität/ Impulsivität (KU)	3	4	
Exekutive Funktionen (E)	1	7	
Exekutive Funktionen (L)	3	11	

Anmerkung. MAs = Anzahl der Meta-Analysen, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.

Summary of Findings Tabelle: Meta-Analysen

Referenz	Endpunkt	Aussagesicherheit (GRADE)	Effektstärke	Kommentare	Mess-instrument
ADHS Symptome gesamt. Kombiniertes Urteil					
Westswood et al., 2023 **Population: Children/adolescents with ADHD.** **Intervention: CCT with an adaptive component; alone, not in combination or adjunct to TAU)** **Comparison: Semi-active (non-adaptive CCT), non-active (treatment as usual [TAU], wait list control [WLC]), or placebo pill (only RCTs)**	**ADHD Total symptoms, Children/adolescents**	Very low ⊕◯◯◯ (R, IP)	*n* = 587, *k* = 13 *SMD* = .11 CI (-.02 - .24) **U**	Publication bias not assessed. Forest plot not reported	CRS-R, CPRS-R/T, Conners 3AI, ADHD-RS, DBD-RS, CTRS-R, EDAH (parent), SNAP-IV.
Hamada et al., 2025 **Population: Children or adolescents (under 18) with ADHD symptoms (subclinical ADHD also eligible)** **Intervention: Computer games delivered through digital devices (such as PCs, tablets).** **Comparison: Wait-list, treatment as usual (TAU), and sham interventions (e.g.,**	**ADHD total symptoms**	Very low ⊕◯◯◯ (R, IP)	*n* = 682, *k* = 8 *SMD* = -.06 CI (-.21 - .09) **U**	Subgroup: Only standard games without addition NF or Physical exercise/VR or social element.	ADHD-RS, DBDRS, Conners' Rating Scale (parents and teachers)

games without anti-ADHD components)					
Liu et al., 2024 **Population: Children, adolescents and adults with ADHD** **Intervention: Computerized Cognitive Training (CCT), Game-based training (GBT), internet-based training (IBT, based on CBT/psychoeducation), chatbots, brain-computer interfaces.** **Comparison: Medication, TAU, other active control groups, Waitlist**	**Total ADHD symptoms, CCT vs. control**	Very low ⊕◯◯◯ (R, IC, IP, P)	*n* = 84, *k* = 3 *SMD* = -0.79 CI (-1.71 - 0.13) **U**	No information regarding RoB, no publication bias analysis done.	ADHD-RS, CAARS, SWAN, SNAP-IV, Conners-3
Ren et al., 2023 **Population: Children (5 to 16 years) with ADHD** **Intervention: Cognitive intervention studies using digital game-based games** **Comparison: Active control, passive control, both active and passive control groups (only RCT studies)**	**Behavior and symptoms**	Moderate ⊕⊕⊕◯ (R)	*n* = 654, *k* = 9 *g* = .30 CI (.20 - .40) **I**	No forest plots reported. No information about point estimated variability, overlapping and consistent direction.	ADHD Symptoms (DSM-IV), the Conners Rating Scale, ADHD-RS, BRIEF, WFIRS-P, SNAP-IV, DBDRS, SPSRQ-C, PedsQL, HSQ, Purpose-designed symptom frequency questionnaires, IRS, CGI-I
Aufmerksamkeit. Kombiniertes Urteil					
Westswood et al., 2023 **Population: Children/adolescents with ADHD.** **Intervention: Fully computer-based procedures with an adaptive component (CCT; alone, not in combination or adjunct to TAU)**	**Inattention, Children/adolescents**	Very low ⊕◯◯◯ (R, IP)	*n* = 587, *k* = 13 *SMD* = .15 CI (-.02 - .31) **U**	Publication bias not assessed. Forest plot not reported	CRS-R, CPRS-R/T, Conners 3AI, ADHD-RS, DBD-RS, CTRS-R, EDAH (parent), SNAP-IV.

Comparison: Semi-active (non-adaptive CCT), non-active (treatment as usual [TAU], wait list control [WLC]), or placebo pill (only RCTs)					
Hamada et al., 2025 **Population: Children or adolescents (under 18) with ADHD symptoms (subclinical ADHD participants were also eligible)** **Intervention: Computer games delivered through digital devices (such as PCs, tablets).** **Comparison: Wait-list, treatment as usual (TAU), and sham interventions (e.g., games without anti-ADHD components)**	**Inattention**	Very low ⊕◯◯◯ (R, IP)	*n* = 665, *k* = 7 *SMD* = -.07 CI (-.22 - .08) **U**	Subgroup: Only standard games without addition NF or Physical exercise/VR or social element.	ADHD-RS, DBDRS, Conners' Rating Scale (parents and teachers)
Liu et al., 2024 **Population: Children, adolescents and adults with ADHD** **Intervention: Computerized Cognitive Training (CCT), Game-based training (GBT), internet-based training (IBT, based on CBT/psychoeducation), chatbots, brain-computer interfaces.** **Comparison: Medication, TAU, other active control groups, Waitlist**	**Inattention, CCT vs. control**	Low ⊕⊕◯◯ (R, P)	*n* = 180, *k* = 3 *SMD* = -0.50 CI (-0.92 - -0.08) **I**	No information regarding RoB. No publication bias analysis done.	ADHD-RS, CAARS, SWAN, SNAP-IV, Conners-3
	Inattention, GBT vs. control	Low ⊕⊕◯◯ (R, P)	*n* = 287, *k* = 3 *SMD* = -0.44 CI (-0.73 - -0.16) **I**	No information regarding RoB neither publ. Bias analysis. "Game-based training" is basically defined the same as CCt, but with different difficulty levels!	ADHD-RS, CAARS, SWAN, SNAP-IV, Conners-3
Hyperaktivität/ Impulsivität (Kombiniertes Urteil)					

Westswood et al., 2023 **Population: Children/adolescents with ADHD.** **Intervention: Fully computer-based procedures with an adaptive component (CCT; alone, not in combination or adjunct to TAU)** **Comparison: Semi-active (non-adaptive CCT), non-active (treatment as usual [TAU], wait list control [WLC]), or placebo pill (only RCTs)**	**Hyperactivity**	Very low ⊕◯◯◯ (R, IP)	*n* = 587, *k* = 13 *SMD* = .12 CI (-.05 - .28) **U**	Publication bias not assessed. Forest plot not reported	CRS-R, CPRS-R/T, Conners 3AI, ADHD-RS, DBD-RS, CTRS-R, EDAH (parent), SNAP-IV.
Hamada et al., 2025 **Population: Children or adolescents (under 18) with ADHD symptoms (subclinical ADHD participants were also eligible)** **Intervention: Computer games delivered through digital devices (such as PCs, tablets).** **Comparison: Wait-list, treatment as usual (TAU), and sham interventions (e.g., games without anti-ADHD components)**	**Hyperactivity/Impulsivity**	Very low ⊕◯◯◯ (R, IP)	*n* = 667, *k* = 7 *SMD* = -.06 CI (-.21 - .09) **U**	Subgroup: Only standard games without addition NF or Physical exercise/VR or social element.	ADHD-RS, DBDRS, Conners' Rating Scale (parents and teachers)
Liu et al., 2024 **Population: Children, adolescents and adults with ADHD**	**Hyp./Imp., CCT vs. control**	Very low ⊕◯◯◯ (R,IC,IP,P)	*n* = 180, *k* = 3 *SMD* = -0.45 CI (-1.04 - 0.13) **U**	No information regarding RoB neither publ. Bias analysis.	ADHD-RS, CAARS, SWAN, SNAP-IV, Conners-3

Intervention: Computerized Cognitive Training (CCT), Game-based training (GBT), internet-based training (IBT, based on CBT/psychoeducation), chatbots, brain-computer interfaces. Comparison: Medication, TAU, other active control groups, Waitlist	**Hyp./Imp., GBT vs. control**	Very low ⊕◯◯◯ (R,IP,P)	*n* = 287, *k* = 4 *SMD* = -0.21 CI (-0.45 - 0.02) **U**	No information regarding RoB neither publ. Bias analysis."Game-based training" is basically defined the same as CCt, but with different difficulty levels!	ADHD-RS, CAARS, SWAN, SNAP-IV, Conners-3
Exekutive Funktionen. Elternurteil					
Lee et al., 2025 **Population: Children or adolescents (under 18 years) with ADHD Intervention: Medication + Game-based digital interventions: utilized serious games with mission-guided tasks aimed at improving cognitive function: computer assisted therapy (75%), and mobile/tablet applications (25%) Comparison: Control group not defined (only RCT)**	**Cognitive responses. Working Memory**	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 481, *k* = 4 *MD* = -.83 CI (-2.45 - .78) **U**	No information about randomization, no information about publication bias	P-BRIEF Working memory
	Behavioral responses. Inhibition	Very low ⊕◯◯◯ (R,IP)	*n* = 481, *k* = 4 *MD* = .27 CI (-1.44 - 1.98) **U**	No information about randomization, no information about publication bias	P-BRIEF Inhibit
	Cognitive responses. Initiate	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 131, *k* = 2 *MD* = 1.05 CI (-2.14 - 4.23) **U**	No information about randomization, no information about publication bias	P-BRIEF-Initiate
	Cognitive responses. Plan/Organize	Very low ⊕◯◯◯ (R, IP)	*n* = 131, *k* = 2 *MD* = -.53 CI (-3.33 - 2.26) **U**	No information about randomization, no information about publication bias	P-BRIEF-Plan/Organize
	Cognitive responses. Organization of materials	Very low ⊕◯◯◯ (R, IP)	*n* = 131, *k* = 2 *MD* = -.87 CI (-4.24 - 2.50) **U**	No information about randomization, no information about publication bias	P-BREIF Organize

	Behavioral responses. Self-Monitoring	Low ⊕⊕◯◯ (IP)	*n* = 131, *k* = 2 *MD* = 1.78 CI (-.92 - 4.48) **U**	No information about randomization, no information about publication bias	P-BRIEF Monitor
	Affective results. Shifting	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 160, *k* = 3 *MD* = .42 CI (-2.84 - 3.68) **U**	No information about randomization, no information about publication bias	P-BRIEF Shifting scale
Exekutive Funktionen. Lehrer*innenurteil					
Ren et al., 2023 **Population: Children (5 to 16 years) with ADHD** **Intervention: Cognitive intervention studies using digital game-based games** **Comparison: Active control, passive control, both active and passive control groups (only RCT studies)**	**Working memory**	Moderate ⊕⊕⊕◯ (R)	*n* = 348, *k* = 8 *g* = .47 CI (.07 - .86) **I**	No forest plots reported. No information about point estimated variability, overlapping and consistent direction.	Color span backward, CANTAB, the List Sorting Working Memory Test, Corsi Block Tapping Task-backward, The span-board task
	Inhibition	Moderate ⊕⊕⊕◯ (R)	*n* = 309, *k* = 7 *g* = .27 CI (.06 - .48) **I**	No forest plots reported. No information about point estimated variability, overlapping and consistent direction.	Simon Task, Stop signal task (SST), Flanker Test, Stroop ▪Stop Signal Reaction Time, Go/Nogo task
	Cognitive flexibility	Low ⊕⊕◯◯ (R, IP)	*n* = 112, *k* = 2 *g* = .21 CI (-1.77 - 2.20) **U**	No forest plots reported. No information about point estimated variability, overlapping and consistent direction.	Flanker Task, Trail Making Task
	Planning	Low ⊕⊕◯◯ (R, IP)	*n* = 68, *k* = 2 *g* = .01 CI (-3.14 - 3.16) **U**	No forest plots reported. No information about point estimated variability, overlapping and consistent	CANTAB (Stockings of Cambridge)

				direction.	
	Attention abilities	Moderate ⊕⊕⊕◯ (R)	*n* = 441, *k* = 4 *g* = .29 CI (.18 - .41) **I**	No forest plots reported. No information about point estimated variability, overlapping and consistent direction.	CANTAB , IED, Test of Variables of Attention, Tonic alertness, Phasic alertnesss, Selective attention, Vigilance, Divided attention, Flexibility
Westswood et al., 2023 **Population: Children/adolescents with ADHD.** **Intervention: Fully computer-based procedures with an adaptive component (CCT; alone, not in combination or adjunct to TAU)** **Comparison: Semi-active (non-adaptive CCT), non-active (treatment as usual [TAU], wait list control [WLC]), or placebo pill (only RCTs)**	**Neuropsychological results. Interference inhibition, Children/adolescents**	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 326, *k* = 7 *SMD* = -.05 CI (-.40 - .31) **U**	Publication bias not assessed. Forest plot not reported	NIH-Flanker Attentional Network Task, Stroop Colour & Word Test, D-KEFS Color Word, Interference Condition Trials, Incongruent Trials, Day-Night Stroop task
	Neuropsychological results. Motor inhibition, Children/adolescents	Very low ⊕◯◯◯ (R, IP)	*n* = 692, *k* = 12 *SMD* = .18 CI (-.02 - .39) **U**	Publication bias not assessed. Forest plot not reported	Conners' CPT-II, CANTAB Stop Task, CPT, A-X CPT, NIH-GNG,
	Neuropsychological results. Attention, Children/adolescents	Very low ⊕◯◯◯ (R, IP)	*n* = 701, *k* = 14 *SMD* = .10 CI (-.10 - .30) **U**	Publication bias not assessed. Forest plot not reported	Conners' CPT-II, CPT, GNG Task, CANTAB-Rapid Visual Information Processing, A-X CPT, D2 Test of Attention, SA-DOTS-02K, TAP Battery

					Vigilance Task, Oddball
	Neuropsychological results. Non-verbal reasoning, Children/adolescents	Very low ⊕◯◯◯ (R, IP)	*n* = 268, *k* = 5 *SMD* = .05 CI (-.19 - .29) **U**	Publication bias not assessed. Forest plot not reported	Raven's progressive matrices, WAIS-III Matrix Reasoning subtest, Raven coloured progressive matrices, Ravens Standard Progressive Matrices, Raven's Matrix,
	Neuropsychological results. Processing speed, Children/adolescents	Very low ⊕◯◯◯ (R, IP)	*n* = 302, *k* = 6 *SMD* = -.15 CI (-.38 - .08) **U**	Publication bias not assessed. Forest plot not reported	5 Choice RTI, GNG CPT, IntegNeuro - Choice RT, Vigilance, SA-DOTS-02K
Lee et al., 2025 **Population: Children or adolescents (under 18 years) with ADHD Intervention: Medication + Game-based digital interventions: utilized serious games with mission-guided tasks aimed at improving cognitive function: computer assisted therapy (75%), and mobile/tablet applications (25%) Comparison: Control group not defined (only RCT)**	**Cognitive responses. Visuospatial short-term memory**	Moderate ⊕⊕⊕◯ (IP)	*n* = 90 , *k* = 2 *MD* = 1.67 CI (.66 - 2.67) **C**	No information about randomization, no information about publication bias	Corsi block tapping task (CBTT) forward

Anmerkung. *n* = Anzahl der Versuchspersonen, *k* = Anzahl der inkludierten Primärstudien. R = risk of bias, IC = inconsistency, ID = indirectness, IP = imprecision, P = publication bias.

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1.4.1.1. B

***Berücksichtigte Endpunktkategorien:** Primärstudien*

Endpunkt	PS	m	Gesamt
Elterntraining			
ADHS Symptome gesamt (E)	1	3	Schwach/ sehr schwach
Gesamtwert ADHS- und Verhaltenssymptome (E)	1	3	
Funktionelle Beeinträchtigung (E)	1	3	
Erziehungsverhalten (S)	1	6	
Lehrer*innentraining			
ADHS Symptome gesamt (E)	1	1	Schwach/ sehr schwach
ADHS Symptome gesamt (L)	1	1	
Funktionelle Beeinträchtigung (E)	1	1	
Funktionelle Beeinträchtigung (L)	1	1	

Anmerkung. PS = Anzahl der Primärstudien, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.

***Summary of findings Tabelle:** Primärstudien*

Referenz	Endpunkt	Risk of Bias	Effektstärke	Kommentare	Mess-instrument
Elterntraining					
ADHS Symptome gesamt. Elternurteil					
Döpfner et al., 2025 **Population: Children aged 4–11 years with attention-deficit/hyperactivity disorder (ADHD) with or without oppositional defiant disorder (ODD)** **Intervention: Mobile-based self-directed digital Parent Management Training for parents of children with ADHD (hiToco®, based on CBT, with multiple different modules) + TAU. 16 weeks** **Comparison: TAU alone**	**ADHD symptoms, Week 8**	Very high risk ● (BP, BA)	*n* = 65 *d* = .02 CI (n.a.) **U**	Clinical implication based on p value. ITT done	Symptom Checklist-Attention-Deficit/Hyperactivity Disorder (SCL-ADHD)
	ADHD symptoms, Week 12	Very high risk ● (BP, BA)	*n* = 65 *d* = .59 CI (n.a.) **I**	Clinical implication based on p value. ITT done	Symptom Checklist-Attention-Deficit/Hyperactivity Disorder (SCL-ADHD)
	ADHD symptoms, Week 16	Very high risk ● (BP, BA)	*n* = 65 *d* = .37 CI (n.a.) **I**	Clinical implication based on p value. ITT done	Symptom Checklist-Attention-Deficit/Hyperactivity Disorder (SCL-

					ADHD)
Gesamtwert ADHS- und Verhaltenssymptome. Elternurteil					
Döpfner et al., 2025 **Population: Children aged 4–11 years with attention-deficit/hyperactivity disorder (ADHD) with or without oppositional defiant disorder (ODD)** **Intervention: Mobile-based self-directed digital Parent Management Training for parents of children with ADHD (hiToco®, based on CBT, with multiple different modules) + TAU. 16 weeks** **Comparison: TAU alone**	**ADHD + ODD symptoms, Week 8**	Very high risk ● (BP, BA)	*n* = 65 *d* = .15 CI (n.a.) **U**	Clinical implication based on p value. ITT done	SCL-ADHD - Part A and SCL-ODD - Part A
	ADHD + ODD symptoms, Week 12	Very high risk ● (BP, BA)	*n* = 65 *d* = .74 CI (n.a.) **I**	Clinical implication based on p value. ITT done	SCL-ADHD - Part A and SCL-ODD - Part A
	ADHD + ODD symptoms, Week 16	Very high risk ● (BP, BA)	*n* = 65 *d* = .37 CI (n.a.) **I**	Clinical implication based on p value. ITT done	SCL-ADHD - Part A and SCL-ODD - Part A
Funktionelle Beeinträchtigung. Elternurteil					
Döpfner et al., 2025 **Population: Children aged 4–11 years with attention-deficit/hyperactivity disorder (ADHD) with or without oppositional defiant disorder (ODD)** **Intervention: Mobile-based self-directed digital Parent Management Training for parents of children with ADHD (hiToco®, based on CBT, with multiple different modules) + TAU. 16 weeks** **Comparison: TAU alone**	**Functional impairment, Week 8**	Very high risk ● (BP, BA)	*n* = 65 *d* = .46 CI (n.a.) **I**	Clinical implication based on p value. ITT done	Five items of the SCL-ADHD (part F)
	Functional impairment, Week 12	Very high risk ● (BP, BA)	*n* = 65 *d* = .84 CI (n.a.) **I**	Clinical implication based on p value. ITT done	Five items of the SCL-ADHD (part F)
	Functional impairment, Week 16	Very high risk ● (BP, BA)	*n* = 65 *d* = .28 CI (n.a.) **I**	Clinical implication based on p value. ITT done	Five items of the SCL-ADHD (part F)
Erziehungsverhalten. Selbsturteil					

	Positive parenting, Week 8	Very high risk ● (BP, BA)	*n* = 65 *d* = -.45 CI (n.a.) **U**	Clinical implication based on p value. ITT done	Fragebogen zum positiven und negativen Erziehungsverhalten (FPNE)
Döpfner et al., 2025 **Population: Children aged 4–11 years with attention-deficit/hyperactivity disorder (ADHD) with or without oppositional defiant disorder (ODD)** **Intervention: Mobile-based self-directed digital Parent Management Training for parents of children with ADHD (hiToco®, based on CBT, with multiple different modules) + TAU. 16 weeks** **Comparison: TAU alone**	**Positive parenting, Week 12**	Very high risk ● (BP, BA)	n = 65 d = -.68 CI (n.a.) **I**	Clinical implication based on p value. ITT done	Fragebogen zum positiven und negativen Erziehungsverhalten (FPNE)
	Positive parenting, Week 16	Very high risk ● (BP, BA)	n = 65 d = -.74 (n.a.) **I**	Clinical implication based on p value. ITT done	Fragebogen zum positiven und negativen Erziehungsverhalten (FPNE)
	Negative parenting, Week 8	Very high risk ● (BP, BA)	*n* = 65 *d* = .47 (n.a.) **I**	Clinical implication based on p value. ITT done	Fragebogen zum positiven und negativen Erziehungsverhalten (FPNE)
	Negative parenting, Week 12	Very high risk ● (BP, BA)	*n* = 65 *d* = .63 CI (n.a.) **I**	Clinical implication based on p value. ITT done	Fragebogen zum positiven und negativen Erziehungsverhalten (FPNE)
	Negative parenting, Week 16	Very high risk ● (BP, BA)	*n* = 65 *d* = .49 CI (n.a.) **U**	Clinical implication based on p value. ITT done	Fragebogen zum positiven und negativen Erziehungsverhalten (FPNE)
Lehrer*innentraining					
ADHS Symptome gesamt. Elternurteil					
Corkum et al., 2019 **Population: Dyad Teacher/ child from Grades 1 to 6 in a participating public school previously diagnosed with ADHD** **Intervention: Web-Based Intervention for Teachers (6-week**	**ADHD total symptoms**	Very high risk ● (BP, BA)	*n* = 58 *η2* = .01 CI (n.a.) **U**	Clinical implication based on p-value. Group x time interaction	Parent's Conners3 ADHD Index T scores

program). PowerPoint presentations and supporting documents, targeting psychoeducation & teaching methods specialized for children with ADHD Comparison: Waitlist					
ADHS-Symptome gesamt. Lehrer*innenurteil					
Corkum et al., 2019 **Population: Dyad Teacher/ child from Grades 1 to 6 in a participating public school previously diagnosed with ADHD Intervention: Web-Based Intervention for Teachers (6-week program). PowerPoint presentations and supporting documents, targeting psychoeducation & teaching methods specialized for children with ADHD Comparison: Waitlist**	**ADHD total symptoms**	Very high risk ● (BP, BA)	*n* = 58 *η2* = .07 CI (n.a.) **I**	Clinical implication based on p-value. Group x time interaction	Teachers' Conners3 ADHD Index T scores
Funktionelle Beeinträchtigung. Elternurteil					
Corkum et al., 2019 **Population: Dyad Teacher/ child from Grades 1 to 6 in a participating public school previously diagnosed with ADHD Intervention: Web-Based Intervention for Teachers (6-week program). PowerPoint presentations and supporting documents, targeting psychoeducation & teaching methods specialized for children with ADHD Comparison: Waitlist**	**Functional impairment**	Very high risk ● (BP, BA)	*n* = 58 *η2* = .05 CI (n.a.) **U**	Clinical implication based on p-value. Group x time interaction	Impairment Rating Scale (IRS)

Funktionelle Beeinträchtigung. Lehrer*innenurteil					
Corkum et al., 2019 **Population: Dyad Teacher/ child from Grades 1 to 6 in a participating public school previously diagnosed with ADHD** **Intervention: Web-Based Intervention for Teachers (6-week program). PowerPoint presentations and supporting documents, targeting psychoeducation & teaching methods specialized for children with ADHD** **Comparison: Waitlist**	**Functional impairment**	Very high risk ● (BP, BA)	*n* = 58 *η2* = .06 CI (n.a.) **I**	Clinical implication based on p-value. Group x time interaction	Impairment Rating Scale (IRS)

Anmerkung. *n* = Anzahl der Versuchspersonen. SG = sequence generation, CC = concealment, BP = blinding participants, BA = blinding assessors, ID = incomplete data, OR = outcome reporting, CE = carry over effects, SX = stopped early, UM = unvalidated measures, OI = other issue.

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1.4.1.1. C

***Berücksichtigte Endpunktkategorien:* Meta-Analysen**

Endpunktkategorien	MAs	*m*	Gesamtaussagesicherheit der Evidenz
ADHS Symptome gesamt (KU)	1	1	Schwach/ sehr schwach

Anmerkung. MAs = Anzahl der Meta-Analysen, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.

***Berücksichtigte Endpunktkategorien:* Primärstudien**

Endpunkt	RCTs	*m*	Gesamtaussagesicherheit der Evidenz
ADHS Symptome gesamt (S)	3	4	Schwach/ sehr schwach
ADHS Symptome gesamt (KL)	2	2	
Hyperaktivität (KL)	2	2	
Hyperaktivität (S)	1	1	
Impulsivität (KL)	2	2	
Impulsivität (S)	1	1	
Aufmerksamkeit (KL)	1	1	
Aufmerksamkeit (S)	1	1	
Funktionelle Beeinträchtigung (S)	1	2	
Lebensqualität (S)	4	9	
Klinischer Gesamteindruck (KL)	1	1	

Anmerkung. RCTs = Anzahl der randomisierten kontrollierten Studien, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.

Summary of Findings Tabelle: Meta-Analysen

Referenz	Endpunkt	Aussagesicherheit (GRADE)	Effektstärke	Kommentare	Mess-instrument
ADHS Symptome gesamt (KU)					
Liu, et al., 2024 **Population: (Children, adolescents and) adults with ADHD** **Intervention: TAU + internet-based cognitive behavioral therapy (iCBT, based on CBT/ psycho-education): self-guided and**	**Total ADHD symptoms, IBT vs. control**	Low ⊕⊕◯◯ (R, P)	*n* = 273, *k* = 3 *SMD* = -0.49 CI (-0.73 - -0.25) **I**	No information regarding RoB. No publication bias analysis done.	ADHD-RS, CAARS, SWAN, SNAP-IV, Conners-3

group-guided CBT modules Comparison: Medication, TAU, other active control groups, Waitlist

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Anmerkung. *n* = Anzahl der Versuchspersonen, *k* = Anzahl der inkludierten Primärstudien. R = risk of bias, IC = inconsistency, ID = indirectness, IP = imprecision, P = publication bias.

Summary of Findings Tabelle: RCTs

Referenz	Endpunkt	Risk of Bias	Effektstärke	Kommentare	Mess-instrument
ADHS-Symptome gesamt. Selbsturteil					
D'Amelio et al., 2025 **Population: Adults (18 - 65) with confirmed ADHD Intervention: "Attexis", a fully self-guided online Programm (PC) based on CBT and mindfulness principles + TAU (3 months) Comparison: TAU alone**	**ADHD total symptoms, 3 months, Pre-post**	Very high risk ● (BP, BA)	*n* = 337 *d* = .85 CI (.62 - 1.08) **I**		ASRS total score
	ADHD total symptoms, 6 months, Pre-follow-up	Very high risk ● (BP, BA)	*n* = 337 *d* = .61 CI (.39 - .83) **I**		ASRS total score
Schuurmans et al., 2024 **Population: Adults with ADHD Intervention: TAU + "ORIKO" (App based on CBT, MBCT, DBT, social skills training and peer-support) Comparison: TAU + Waitlist control**	**ADHD total symptoms**	Very high risk ● (BP, BA)	*n* = 220 *d* = .58 CI (n.a.) **I**	Clinical implication based on p-value.	ASRS
Selaskowski et al., 2023 **Population: Adults with ADHD**	**ADHD total symptoms**	Very high risk ● (BP, BA)	*n* = 34 ES = n.a. CI (n.a.) **U**	Clinical implication based on p-value. Both groups showed	ADHS-SB

Intervention: Chatbot based self-guided psychoeducation (3weeks) **Comparison: App based self-guided psychoeducation (3weeks)**				significant improvement over time.	
ADHS Symptome gesamt. Kliniker*innenurteil					
Selaskowski et al., 2022 **Population: Adults with ADHD** **Intervention: App-supported group-psychoeducation** **Comparison: pen and paper (brochure) supported group-psychoeducation**	**ADHD total symptoms**	High risk ◑ (BP)	*n* = 34 ES = n.a. CI (n.a.) **I**	Clinical implication based on p-value.	IDA-R
Selaskowski et al., 2023 **Population: Adults with ADHD** **Intervention: Chatbot based self-guided psychoeducation (3weeks)** **Comparison: App based self-guided psychoeducation (3weeks)**	**ADHD total symptoms**	High risk ◑ (BP)	*n* = 34 ES = n.a. CI (n.a.) **U**		IDA-R
Hyperaktivität. Kliniker*innenurteil					
Selaskowski et al., 2022 **Population: Adults with ADHD** **Intervention: App-supported group-psychoeducation** **Comparison: pen and paper (brochure)**	**Hyperactivity**	High risk ◑ (BP)	*n* = 34 ES = n.a. CI (n.a.) **U**	Clinical implication based on p-value.	IDA-R

supported group-psychoeducation					
Selaskowski et al., 2023 **Population: Adults with ADHD** **Intervention: Chatbot based self-guided psychoedu-cation (3weeks)** **Comparison: App based self-guided psychoedu-cation (3weeks)**	**Hyperactivity**	High risk ◑ (BP)	*n* = 34 ES = n.a. CI (n.a.) **U**	Clinical implication based on p-value. Both groups showed significant improvement over time.	IDA-R
Hyperaktivität. Selbsturteil					
Selaskowski et al., 2023 **Population: Adults with ADHD** **Intervention: Chatbot based self-guided psychoedu-cation (3weeks)** **Comparison: App based self-guided psychoedu-cation (3weeks)**	**Hyperactivity**	Very high risk ● (BP, BA)	*n* = 34 ES = n.a. CI (n.a.) **U**	Clinical implication based on p-value. Both groups showed significant improvement over time.	ADHS-SB
Impulsivität. Kliniker*innenurteil					
Selaskowski et al., 2022 **Population: Adults with ADHD** **Intervention: App-supported group-psychoedu-cation** **Comparison: pen and paper (brochure) supported group-psychoedu-cation**	**Impulsivity**	High risk ◑ (BP)	*n* = 34 ES = n.a. CI (n.a.) **I**	Clinical implication based on p-value.	IDA-R
Selaskowski et al., 2023	**Impulsivity**	High risk ◑	*n* = 34 ES = n.a. CI (n.a.)	Clinical implication based on p-	IDA-R

Population: Adults with ADHD **Intervention: Chatbot based self-guided psychoeducation (3weeks)** **Comparison: App based self-guided psychoeducation (3weeks)**		(BP)	**U**	value. Both groups showed significant improvement over time.	
Impulsivität. Selbsturteil					
Selaskowski et al., 2023 **Population: Adults with ADHD** **Intervention: Chatbot based self-guided psychoeducation (3weeks)** **Comparison: App based self-guided psychoeducation (3weeks)**	**Impulsivity**	Very high risk ● (BP, BA)	*n* = 34 ES = n.a. CI (n.a.) **U**	Clinical implication based on p-value. Both groups showed significant improvement over time.	ADHS-SB
Aufmerksamkeit. Kliniker*innenurteil					
Selaskowski et al., 2023 **Population: Adults with ADHD** **Intervention: Chatbot based self-guided psychoeducation (3weeks)** **Comparison: App based self-guided psychoeducation (3weeks)**	**Inattention**	High risk ◑ (BP)	*n* = 34 ES = n.a. CI (n.a.) **U**	Clinical implication based on p-value. Both groups showed significant improvement over time.	IDA-R
Aufmerksamkeit. Selbsturteil					
Selaskowski et al., 2023 **Population: Adults with ADHD**	**Inattention**	Very high risk ● (BP, BA)	*n* = 34 ES = n.a. CI (n.a.) **U**	Clinical implication based on p-value. Both groups showed	ADHS-SB

Intervention: Chatbot based self-guided psychoeducation (3weeks) **Comparison: App based self-guided psychoeducation (3weeks)**			significant improvemen t over time.	
Funktionelle Beeinträchtigung. Selbsturteil				
D'Amelio et al., 2025 **Population: Adults (18 - 65) with confirmed ADHD** **Intervention: "Attexis", a fully self-guided online Programm (PC) based on CBT and mindfulness principles + TAU (3 months)** **Comparison: TAU alone**	**Functional impairment, 3 months, Pre-post**	Very high risk ● (BP, BA)	*n* = 337 *d* = .61 CI (.38 - .84) **I**	Work and Social Adjustment Scale (WSAS)
	Functional impairment, 6 months, Pre-follow-up	Very high risk ● (BP, BA)	*n* = 337 *d* = .47 CI (.24 - .70) **I**	Work and Social Adjustment Scale (WSAS)
Lebensqualität. Selbsturteil				
D'Amelio et al., 2025 **Population: Adults (18 - 65) with confirmed ADHD** **Intervention: "Attexis", a fully self-guided online Programm (PC) based on CBT and mindfulness principles + TAU (3 months)** **Comparison: TAU alone**	**Quality of life, 3 months, Pre-post**	Very high risk ● (BP, BA)	*n* = 337 *d* = .44 CI (.22 - .66) **I**	AQoL-8D
	Quality of life, 6 months, Pre-follow-up	Very high risk ● (BP, BA)	*n* = 337 *d* = .47 CI (.26 - .69) **I**	AQoL-8D
Kenter et al., 2023 **Population: Adults (≥ 18) with self-reported ADHD diagnosis**	**Quality of Life, pre-post**	Very high risk ● (BP, BA)	*n* = 120 *d* = .53 CI (.34 - .83) **I**	Adult ADHD Quality of Life Measure (AAQoL)

Intervention: "MyADHD" intervention: short-term, structured self-guided intervention with modified elements from CBT, DBT, and GMT. Accessible on smartphones, tablets, laptops, and personal computers **Comparison: online psychoeducation module**	**Quality of Life, Pre-follow-up**	Very high risk ● (BP, BA)	*n* = 120 *d* = .52 CI (.32 - .84) **I**		Adult ADHD Quality of Life Measure (AAQoL)
Schuurmans et al., 2024 **Population: Adults with ADHD** **Intervention: TAU + "ORIKO" (App based on CBT, MBCT, DBT, social skills training and peer-support)** **Comparison: TAU + Waitlist control**	**QoL**	Very high risk ● (BP, BA)	*n* = 220 *d* = 0.54 CI (n.a.) **I**	Clinical implication based on p-value.	AAQoL
Selaskowski et al., 2023 **Population: Adults with ADHD** **Intervention: Chatbot based self-guided psychoeducation (3weeks)** **Comparison: App based self-guided psychoeducation (3weeks)**	**QoL: physical health**	Very high risk ● (BP, BA)	*n* = 34 ES = n.a. CI (n.a.) **U**	Clinical implication based on p-value. Both groups showed significant improvement over time.	WHOQOL
	QoL: psychological health	Very high risk ● (BP, BA)	*n* = 34 ES = n.a. CI (n.a.) **U**	Clinical implication based on p-value.	WHOQOL
	QoL: social relationships	Very high risk ● (BP, BA)	*n* = 34 ES = n.a. CI (n.a.)	Clinical implication based on p-value.	WHOQOL

			C		
	QoL: environmental factors	Very high risk ● (BP, BA)	*n* = 34 ES = n.a. CI (n.a.) **U**	Clinical implication based on p-value.	WHOQOL
Klinischer Gesamteindruck. Kliniker*innenurteil					
Schuurmans et al., 2024 **Population: Adults with ADHD** **Intervention: TAU + "ORIKO" (App based on CBT, MBCT, DBT, social skills training and peer-support)** **Comparison: TAU + Waitlist control**	**Clinical Global Impression**	Very high risk ● (BP, BA)	*n* = 220 *d* = 0.69 CI (n.a.) **I**	Clinical implication based on p-value.	CGI-S

Anmerkung. *n* = Anzahl der Versuchspersonen. SG = sequence generation, CC = concealment, BP = blinding participants, BA = blinding assessors, ID = incomplete data, OR = outcome reporting, CE = carry over effects, SX = stopped early, UM = unvalidated measures, OI = other issue.

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1.4.2 Neurofeedback

1.4.2.1. Wann kann Neurofeedback als Behandlungsoption bei ADHS eingesetzt werden? 1.4.2.2. Wie soll Neurofeedback bei ADHS durchgeführt werden?

1.4.2.1. A & 1.4.2.2. A

Berücksichtigte Endpunktkategorien: Meta-Analysen (identisch für beide Empfehlungen)

Endpunktkategorien	MAs	*m*	Gesamt
ADHS Symptome gesamt (E)	3	5	Moderat (KiJu); Schwach (Erw)
ADHS Symptome gesamt (L)	1	2	
ADHS Symptome gesamt (S)	1	3	
Aufmerksamkeit (KU)	1	19	
Aufmerksamkeit (E)	6	21	
Aufmerksamkeit (L)	4	8	
Aufmerksamkeit (S)	1	3	
Aufmerksamkeit (T)	5	13	
Hyperaktivität/ Impulsivität (E)	6	23	
Hyperaktivität/ Impulsivität (L)	4	8	
Hyperaktivität/ Impulsivität (S)	1	3	
Impulsivität (T)	2	3	
Arbeitsgedächtnis (T)	2	2	

***Anmerkung*. MAs = Anzahl der Meta-Analysen, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.**

Berücksichtigte Endpunktkategorien: RCTs (nur 1.4.2.2.)

Endpunktkategorien	RCTs	*m*	Gesamtaussagesicherheit der Evidenz
ADHS Symptome gesamt (E)	3	10	Moderat (KiJu); Schwach (Erw)
ADHS Symptome gesamt (L)	2	6	
ADHS Symptome gesamt (KL)	1	1	
Aufmerksamkeit (KU)	2	15	
Aufmerksamkeit (E)	4	16	
Aufmerksamkeit (L)	1	1	
Aufmerksamkeit (KL)	1	2	
Hyperaktivität/ Impulsivität (E)	3	16	
Hyperaktivität/ Impulsivität (L)	1	2	
Hyperaktivität/ Impulsivität (KL)	1	2	
Inhibition (E)	1	1	

***Anmerkung*. RCTs = Anzahl der randomisierten kontrollierten Studien, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.**

Summary of Findings Tabelle: Meta-Analysen

Referenz	Endpunkt	Aussagesicherheit (GRADE)	Effektstärke	Kommentare	Mess-instrument
ADHS Symptome gesamt. Elternurteil					
Chung, et al., 2022 **Population: Children with ADHD, 8-13 years** **Intervention: EEG-Neurofeedback** **Comparison: Treatment as usual, wait list, EMG-biofeedback, computerized attention training, cognitive interventions, physical activities, placebo feedback**	**ADHD symptoms total, proximal raters**	Very low ⊕◯◯◯ (R, IC)	*n* = 691, *k* = 13 *g* = .26 CI (.06 - .46) **I**	Proximal raters: closest to participant, mostly parents.	Conners-3, ARS, CPRS, FBB-HSK, CRS
Yan, et al., 2019 **Population: Children and adolescence with ADHD, >18 years** **Intervention: Neurofeedback** **Comparison: Medication (MPH)**	**ADHD symptoms total**	Very low ⊕◯◯◯ (R, IC)	*n* = 1231, *k* = 14 *SMD* = -.50 CI (-.81 - -.19) **C**		IOWA-Conners, Conners parents, SWAN, TOVA-1, ADHD-RS, VADTRS, SNAP-IV
	ADHD symptoms total, follow-up	Very low ⊕◯◯◯ (R, IC)	*n* = 989, *k* = 11 *SMD* = .83 CI (.42 - 1.25) **I**		IOWA-Conners, Conners parents, SWAN, TOVA-1, ADHD-RS, VADTRS, SNAP-IV
Lin, et al., 2022	**ADHD total symptoms**	Low ⊕⊕◯◯ (R)	*n* = 305, *k* = 5		ADHD RS, Chinese

Population: Children with ADHD, 8-11 years **Intervention: Combined EEG-Neurofeedback (TB) and medication** **Comparison: Medication**			*g* = .29 CI (.02 - .56) **I**		ADHD rating scale, Barkley's Defiant Children, Chinese Conners rating scale
	ADHD total symptoms, follow-up	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 196, *k* = 3 *g* = .48 CI (-.24 - 1.20) **U**		ADHD RS, Barkley's Defiant Children, Chinese Conners rating scale
ADHS Symptome gesamt. Lehrer*innenurteil					
Yan, et al., 2019 **Population: children and adolescence with ADHD, >18 years** **Intervention: Neurofeedback** **Comparison: Medication (MPH)**	**ADHD symptoms total**	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 228, *k* = 4 *SMD* = -.58 CI (-1.06 - -.09) **C**	MA could not inform on sustained effect of NF and MPH directly, considered MPH combined with other active treatments (attention training, cognitive training, physical activity training and self-management)	Barkley, SWAN, ADHD-RS, VADTRS
	ADHD symptoms total, follow-up	Very low ⊕◯◯◯ (R, IP)	*n* = 198, *k* = 3 *SMD* = -.19 CI (-.53 - .15) **U**		Barkley, SWAN, ADHD-RS, VADTRS
ADHS Symptome gesamt. Selbsturteil					
Fan, et al., 2022 **Population: Adolescents and adults with ADHD, 6-60 years**	**ADHD total symptoms**	Very low ⊕◯◯◯ (R, IC, IP, P)	*n* = 169, *k* = 3 *SMD* = -.07 CI (-.48 - .31) **U**		CAARS, CRS-R, ADHD rating self-report

Intervention: EEG-Neurofeedback (TB/ SCP) Comparison: Waitlist, treatment as usual, other intervention (MPH, sham)	**ADHD total symptoms, follow-up**	Very low ⊕◯◯◯ (R, IP, P)	*n* = 135, *k* = 2 *SMD* = .22 CI (-.13 - .57) **U**		CAARS, ADHD rating self-report
	ADHD total symptoms, EEG-NF vs. waitlist/ TAU	Very low ⊕◯◯◯ (R, IP, P)	*n* = 94, *k* = 2 *SMD* = -.29 CI (-.71 - .13) **U**		CRS-R, ADHD rating self-report
Aufmerksamkeit. Kombiniertes Urteil					
Lee, et al., 2022 Population: Children and adolescents with ADHD, 6-18 years Intervention: Neurofeedback Theta/Beta training based Comparison: Within-group and between-group (wait list, TAU, attention skills training, behavioral training, physical activity, medication, other types of NF, EMG-biofeedback)	**Attention, within-group, pre- vs. post-treatment**	Moderate ⊕⊕⊕◯ (R)	*n* = 317, *k* = 12 *g* = .65 CI (.45 - .84) **I**	No significance level specified. Total number of training sessions 15 - 40, each session lasted 15 - 180 min, treatment duration 3 - 20 weeks	Conners, FBB-HKS/ ADHS, ADHD-RS, SWAN, EDAH and bp/d2 Test; CPT, CPT-II AOT, TOVA
	Attention, within-group, pre-/ follow-up (3-20 weeks after)	Low ⊕⊕◯◯ (R, ID)	*n* = 155, *k* = 4 *g* = .87 CI (.58 - 1.16) **I**	No significance level specified.	Conners 3rd edition, SWAN, ADHD-RS-IV CPRSR and CPT AOT, CPT-II
	Attention, post-treatment	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 317, *k* = 12 *g* = .20 CI (-.11 - .51) **U**		Conners, FBBHKS/ ADHS, ADHD-RS, SWAN, EDAH and bp/d2 Test; CPT, CPT-II AOT, TOVA
	Attention, within-group, pre-/ post-treatment	Moderate ⊕⊕⊕◯ (R)	*n* = 310, *k* = 11 *g* = .72 CI (.44 - .99)	Only parent-, teacher- or self-report; no significance level specified	CPRS, Conners 3, SWAN, FBB-HKS/ADHS, CPRS, CTRS, ADHD-RS,

			I		EDAH
Attention, within-group, pre-/ follow-up	Low ⊕⊕◯◯ (R, ID)	*n* = n.a., *k* = 2 *g* = 1.25 CI (.68 - 1.81)	I	Only parent-, teacher- or self-report; no measuring instrument reported; no significance level specified	n.a.
Attention, post-treatment	Low ⊕⊕◯◯ (R, IP)	*n* = 310, *k* = 11 *g* = -.02 CI (-.34 - .31)	U	Only parent-, teacher- or self-report;	CPRS, Conners 3, SWAN, FBB-HKS/ADHS, CPRS, CTRS, ADHD-RS, EDAH
Attention, NF vs. wait list, post-treatment	Very low ⊕◯◯◯ (R, IP)	*n* = 19, *k* = 1 *g* = .17 CI (-.65 - .99)	U		ADHD-RS
Attention, NF vs. no treatment, post-treatment	Low ⊕⊕◯◯ (R, IC)	*n* = 76, *k* = 3 *g* = 1.25 CI (.14 - 2.36)	I		ADHD-RS, EDAH, TOVA, CPT
Attention, NF vs. physical activity, post-treatment	Low ⊕⊕◯◯ (R, IP)	*n* = 40, *k* = 2 *g* = .31 CI (-.49 - 1.10)	U		SWAN, AOT, CPT
Attention, NF vs. medication, post-treatment	Low ⊕⊕◯◯ (R, IP)	*n* = 98, *k* = 4 *g* = -.25 CI (-.89 - .39)	U		SWAN, ADHD-RS, EDAH, AOT, TOVA

Attention, NF vs. other NF protocols, post-treatment	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 126, *k* = 3 *g* = -.06 CI (-.52 - .41) **U**		ADHD-RS, CPRS, Conners 3, d2, CPT
Attention, NF vs. EMG-biofeedback, post-treatment	Low ⊕⊕◯◯ (R, IP)	*n* = 31, *k* = 2 *g* = .44 CI (-.07 - .94) **U**		FBB-HKS/ ADHS, CPRS, CTRS, bp/d2, CPT
Attention, NF vs. combined medication and NF, post-treatment	Very low ⊕◯◯◯ (R, IP)	*n* = 33, *k* = 1 *g* = -.09 CI (-.57 - .40) **U**		EDAH, TOVA
Attention, within-group (RCT), pre-/ post-treatment	High ⊕⊕⊕⊕	*n* = 187, *k* = 7 *g* = .75 CI (.45 - 1.05) **I**	No significance level specified. No information on IC.	FBB-HKS/ ADHS, CPRS, CTRS, Conners 3, SWAN, ADHD-RS, bp/d2, CPT, AOT
Attention, within-group (non-RCT), pre-/ post-treatment	Moderate ⊕⊕⊕◯ (R)	*n* = 130, *k* = 5 *g* = .51 CI (.24 - .78) **I**	No significance level specified	CPRS, ADHD-RS, EDAH, d2, CPT, TOVA
Attention, RCT, pre-/ post-treatment	Moderate ⊕⊕⊕◯ (IP)	*n* = 187, *k* = 7 *g* = .12 CI (-.31 - .55) **U**	No significance level specified	FBB-HKS/ ADHS, CPRS, CTRS, Conners 3, SWAN, ADHD-RS, bp/d2, CPT, AOT
Attention, non-RCT, pre-/ post-treatment	Low ⊕⊕◯◯ (R, IP)	*n* = 130, *k* = 5 *g* = .14	No significance level specified	CPRS, ADHD-RS, EDAH, d2, CPT, TOVA

			CI (-.27 - .55) **U**		
	Attention, within-group (non-RCT), pre-/follow-up	Very low ⊕◯◯◯ (R, IP)	*n* = n.a., *k* = 1 *g* = .57 CI (-.27 - 1.41) **U**	No significance level specified	n.a.
	Attention, within-group (RCT), pre-/follow-up	Low ⊕⊕◯◯ (R, ID)	*n* = n.a., *k* = 3 *g* = .90 CI (.55 - 1.25) **I**	No significance level specified	n.a.
Aufmerksamkeit. Elternurteil					
Chung, et al., 2022 **Population: Children and adolescents with ADHD, 8-17 years** **Intervention: EEG-Neurofeedback** **Comparison: Treatment as usual, wait list, EMG-biofeedback, computerized attention training, cognitive interventions, physical activities, placebo feedback**	**Inattention, proximal rater**	Very low ⊕◯◯◯ (R, IC)	*n* = 1191, *k* = 19 *g* = .29 CI (.05 - .47) **I**	Treatment sessions between 20 and 40; proximal raters: closest to participant, mostly parents.	Conners-3, CPRS, ARS, SWAN, FBB-ADHS, CBCL, CRS, FBB-HSK, IOWA-Conners
Lin, et al., 2022	**Inattention**	Low ⊕⊕◯◯ (R)	*n* = 305, *k* = 5		ADHD RS, Chinese

Population: Children with ADHD, 8-11 years Intervention: Combined EEG-Neurofeedback (TB) and medication Comparison: Medication			*g* = .33 CI (.05 - .61) **I**		ADHD rating scale, Barkley's Defiant Children, Chinese Conners rating scale
	Inattention, follow-up	Very low ⊕◯◯◯ (R, IC)	*n* = 193, *k* = 3 *g* = .57 CI (-.04 - 1.18) **U**		ADHD RS, Barkley's Defiant Children, Chinese Conners rating scale
Rahmani, et al., 2022 **Population: Participants with ADHD (no restriction of age) Intervention: EEG-Neurofeedback Comparison: treatment as usual, wait list, EMG-biofeedback, computerized attention training, cognitive interventions, physical activities, placebo feedback**	**Inattention**	Moderate ⊕⊕⊕◯ (IP)	*n* = 962, *k* = 13 *MD* = .00 CI (-.23 - .23) **U**	Study used weighted mean difference (WMD).	CPRS, ADHD-RS
Riesco-Matías, et al., 2021 **Population: Children and**	**Inattention, NF vs. nonactive control group, post-**	Low ⊕⊕◯◯ (R, IC)	*n* = 674, *k* = 11 *g* = -.33 CI (-.56 - -.10)		FBB-HKS, ADHD rating scale, DSM questionnaire for ADHD,

adolescents with ADHD, < 18 years **Intervention: EEG-Neurofeedback (theta/beta, SCP, SMR)** **Comparison: control group: active and nonactive conditions (e.g. cognitive training, EMG biofeedback, waitlist)**	**pretreatment difference**		**I**		Conners, SWAN
	Inattention, NF vs. stimulant control group, post-pretreatment difference	Moderate ⊕⊕⊕◯ (R)	*n* = 258, *k* = 6 *g* = .57 CI (.27 - .87) **C**		most-proximal evaluator rating
	Inattention, NF vs. stimulant control group, posttreatment difference	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 258, *k* = 6 *g* = .33 CI (-.07 - .73) **U**	Most-proximal evaluator rating	n.a.
Van Doren, et al., 2019 **Population: Children and adolescence with ADHD, <18 years** **Intervention: Neurofeedback (theta/beta and SCP)** **Comparison: active and passive controls: wait list, MPH, physical activity, attention training, self-management, cognitive training**	**Inattention, within-group, pre-post**	Low ⊕⊕◯◯ (R, P)	*n* = 256, *k* = 10 *SMD* = .64 CI (.45 - .82) **I**		FBB-HKS, Conners, ADHS RS-IV, Barkley, SWAN
	Inattention, within-group, pre-follow-up	Very low ⊕◯◯◯ (R, P)	*n* = 256, *k* = 10 *SMD* = .80 CI (.58 - 1.01) **I**	Exact sample size for follow-up not specified in study, only possible maximum number calculated by study itself.	FBB-HKS, Conners, ADHS RS-IV, Barkley, SWAN
	Inattention, within-group, post-follow-up	Very low ⊕◯◯◯ (R, IP, P)	*n* = 256, *k* = 10 *SMD* = .14 CI (-.03 - .31) **U**	Exact sample size for follow-up not specified in study, only possible maximum number calculated by study itself.	FBB-HKS, Conners, ADHS RS-IV, Barkley, SWAN
	Inattention, pre-post	Very low ⊕◯◯◯ (R, IC, IP, P)	*n* = 506, *k* = 10 *SMD* = .09 CI (-.22 - .40) **U**		FBB-HKS, Conners, ADHS RS-IV, Barkley, SWAN

Inattention, pre-follow-up	Very low ⊕◯◯◯ (R, IC, IP, P)	*n* = 506, *k* = 10 *SMD* = .31 CI (-.01 - .63) **U**	Exact sample size for follow-up not specified in study, only possible maximum number calculated by study itself.	FBB-HKS, Conners, ADHS RS-IV, Barkley, SWAN
Inattention, post-follow-up	Very low ⊕◯◯◯ (R, IC, IP, P)	*n* = 506, *k* = 10 *SMD* = .15 CI (-.07 - .37) **U**	Exact sample size for follow-up not specified in study, only possible maximum number calculated by study itself.	FBB-HKS, Conners, ADHS RS-IV, Barkley, SWAN
Inattention, NF vs. non-active controls, pre-post	Very low ⊕◯◯◯ (R, IC, P)	*n* = 351, *k* = 6 *SMD* = .38 CI (.14 - .61) **I**		FBB-HKS, Conners, ADHS RS-IV, Barkley, SWAN
Inattention, NF vs. non-active controls, pre-follow-up	Very low ⊕◯◯◯ (R, PB)	*n* = 351, *k* = 6 *SMD* = .57 CI (.34 - .81) **I**	Exact sample size for follow-up not specified in study, only possible maximum number calculated by study itself.	FBB-HKS, Conners, ADHS RS-IV, Barkley, SWAN
Inattention, NF vs. non-active controls, post-follow-up	Very low ⊕◯◯◯ (R, IP, P)	*n* = 351, *k* = 6 *SMD* = .17 CI (-.04 - .45) **U**	Exact sample size for follow-up not specified in study, only possible maximum number calculated by study itself.	FBB-HKS, Conners, ADHS RS-IV, Barkley, SWAN
Inattention, NF vs. active controls, pre-post	Low ⊕⊕◯◯ (R, P)	*n* = 155, *k* = 4 *SMD* = -.44 CI (-.86 - -.02) **C**	Active treatment defined as medication or psychotherapy started after pre-treatment.	FBB-HKS, Conners, ADHS RS-IV, Barkley, SWAN

	Inattention, NF vs. active controls, pre-follow-up	Very low ⊕◯◯◯ (R, IC, IP, P)	*n* = 155, *k* = 4 *SMD* = -.21 CI (-.71 - .29) **U**	Active treatment defined as medication or psychotherapy started after pre-treatment. Exact sample size for follow-up not specified in study, only possible maximum number calculated by study itself	FBB-HKS, Conners, ADHS RS-IV, Barkley, SWAN
	Inattention, NF vs. active controls, post-follow-up	Very low ⊕◯◯◯ (R, IC, IP, P)	*n* = 155, *k* = X *SMD* = .12 CI (-.50 - .75) **U**	Active treatment defined as medication or psychotherapy started after pre-treatment. Exact sample size for follow-up not specified in study, only possible maximum number calculated by study itself.	FBB-HKS, Conners, ADHS RS-IV, Barkley, SWAN
Yan, et al., 2019 **Population: children and adolescence with ADHD, >18 years** **Intervention: Neurofeedback** **Comparison: Medication (MPH)**	**Inattention**	Very low ⊕◯◯◯ (R, IC)	*n* = 844, *k* = 10 *SMD* = -.41 CI (-.73 - -.09) **C**		IOWA-Conners, Conners parents, SWAN, TOVA-1, ADHD-RS, VADTRS, SNAP-IV
	Inattention, follow-up	Very low ⊕◯◯◯ (R, IC)	*n* = 804, *k* = 9 *SMD* = .45 CI (.04 - .86) **I**		IOWA-Conners, Conners parents, SWAN, TOVA-1, ADHD-RS, VADTRS, SNAP-IV
Aufmerksamkeit. Lehrer*innenurteil					

Chung, et al., 2022 **Population: Children with ADHD, 8-13 years** **Intervention: EEG-Neurofeedback** **Comparison: Treatment as usual, wait list, EMG-biofeedback, computerized attention training, cognitive interventions, physical activities, placebo feedback**	**Inattention**	Low ⊕⊕◯◯ (R, IC)	*n* = 1069, *k* = 14 *SMD* = .24 CI (.07 - .41) **I**		Conners-3, CTRS, ARS, SWAN, FBB-ADHS, CBCL, CRS, FBB-HSK, IOWA-Conners, CGAS, SCAMP
Rahmani, et al., 2022 **Population: Participants with ADHD (no restriction of age)** **Intervention: EEG-Neurofeedback** **Comparison: treatment as usual, wait list, EMG-biofeedback, computerized attention training, cognitive interventions, physical activities, placebo feedback**	**Inattention**	Low ⊕⊕◯◯ (IC, IP)	*n* = 1009, *k* = 10 *MD* = .12 CI (-.14 - .38) **U**	Study used weighted mean difference (WMD).	CPRS, ADHD-RS

	Inattention, NF vs. nonactive control group, post-pretreatment difference	Moderate ⊕⊕⊕◯ (IC)	*n* = 573, *k* = 9 *g* = -.25 CI (-.45 - -.04) **I**	FBB-HKS, ADHD rating scale, DSM questionaire for ADHD, Conners, SWAN
Riesco-Matías, et al., 2021 **Population: Children and adolescents with ADHD, < 18 years** **Intervention: EEG-Neurofeedback (theta/beta, SCP, SMR)** **Comparison: control group: active and nonactive conditions (e.g. cognitive training, EMG biofeedback, waitlist)**	**Inattention, NF vs. nonactive control group, posttreatment difference**	High ⊕⊕⊕⊕	*n* = 479, *k* = 8 *g* = -.16 CI (-.34 - .03) **U**	FBB-HKS, ADHD rating scale, DSM questionaire for ADHD, Conners, SWAN
	Inattention, NF vs. stimulant control group, post-pretreatment difference	Moderate ⊕⊕⊕◯ (IC)	*n* = 169, *k* = 5 *g* = .70 CI (-.01 - 1.41) **U**	FBB-HKS, ADHD rating scale, DSM questionaire for ADHD, Conners, SWAN
	Inattention, NF vs. stimulant control group, posttreatment difference	Low ⊕⊕◯◯ (IC, IP)	*n* = 128, *k* = 5 *g* = .78 CI (.19 - 1.36) **C**	ADHD rating scale, Conners, SWAN, Barley's Defiant Children, Vanderbilt ADHD diagnostic rating scale
Yan, et al., 2019 **Population: children and adolescence with ADHD, >18 years** **Intervention: Neurofeedback** **Comparison: Medication (MPH)**	**Inattention**	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 228, *k* = 4 *SMD* = -.68 CI (-1.25 - -.11) **C**	Barkley, SWAN, ADHD-RS, VADTRS
	Inattention, follow-up	Low ⊕⊕◯◯ (R)	*n* = 188, *k* = 3 *SMD* = -.49	Barkley, SWAN, ADHD-RS, VADTRS

			CI (-.83 - -.14) **C**		
Aufmerksamkeit. Selbsturteil					
Fan, et al., 2022 **Population: Adolescents and adults with ADHD, 6-60 years** **Intervention: EEG-Neurofeedback (TB/ SCP)** **Comparison: Waitlist, treatment as usual, other intervention (MPH, sham)**	**Inattention**	Very low ⊕◯◯◯ (R, IC, IP, P)	*n* = 231, *k* = 4 *SMD* = -.14 CI (-.50 - .22) **U**		Barkley's Defiant Children self-report, CAARS, CRS-R, ADHD rating self-report
	Inattention, follow-up	Very low ⊕◯◯◯ (R, IC, IP, P)	*n* = 187, *k* = 3 *SMD* = -.13 CI (-.59 - .33) **U**		CAARS, ADHD rating self-report, Barkley's Defiant Children self-report
	Inattention, EEG-NF vs. waitlist/ TAU	Very low ⊕◯◯◯ (R, IP, P)	*n* = 95, *k* = 2 *SMD* = -.48 CI (-.90 - -.06) **I**		CRS-R, ADHD rating self-report
Aufmerksamkeit. Kognitive Tests					
Chiu, et al., 2022 **Population: Participants with ADHD (mean age 14.96, range 8.66-37.8)** **Intervention: EEG-Neurofeedback (different NF protocols)** **Comparison: active**	**Selective attention**	Very low ⊕◯◯◯ (R, P)	*n* = 318, *k* = 6 *SMD* = .07 CI (n.a.) **U**	Significantly poorer therapeutic outcomes in studies that involved participants who were unaware of treatment allocation compared to those studies without blinding of treatment allocation (p = 0.006).	CPT, ANT, KiTAP, TAP

treatment or inactive treatment (waitlist or TAU)	**Attentional performance**	Very low ⊕◯◯◯ (R, IC, P)	*n* = 595, *k* = 14 *g* = .29 CI (.09 - .49) **I**		CPT, SST, d2 test, Stroop task, working memory test, subtests of Wechsler intelligence test, ANT
	Sustained attention: omission	Very low ⊕◯◯◯ (R, P)	*n* = 170, *k* = 4 *g* = .32 CI (.08 - .63) **I**		Go/ No Go, CPT, SST, KiTAP
	Sustained attention: reaction time	Very low ⊕◯◯◯ (R, IC, P)	*n* = 339, *k* = 6 *g* = .11 CI (n.a.) **U**		Go/ No Go, CPT, Auditory oddball, SST, KiTAP, TAP
	Attentional performance, follow-up	Very low ⊕◯◯◯ (R, P)	*n* = 197, *k* = 3 ES = n.a. CI (n.a.) **U**	Clinical implication based on p-value	CPT, SST, d2 test, Stroop task, working memory test, subtests of Wechsler intelligence test, ANT
	Sustained attention complete	Very low ⊕◯◯◯ (R, P)	*n* = 339, *k* = 6 *g* = .32 CI (n.a.) **I**	Sustained attention complete includes omission und reaction	Go/ No Go, CPT, Auditory oddball, SST, KiTAP, TAP
Lee, et al., 2022 **Population: Children and adolescents with ADHD, 6-18 years**	**Attention, within-group, pre-/ post-treatment**	Low ⊕⊕◯◯ (R, IP)	*n* = 133, *k* = 6 *g* = .41 CI (-.06 - .89) **U**	Only neuropsychological and behavioral measures	bp/d2, CPT, AOT, TOVA, CPT-II
	Attention, within-group,	Very low ⊕◯◯◯	*n* = 42, *k* = 2	Only neuropsychological	d2, CPT

Intervention: Neurofeedback Theta/Beta training based Comparison: Within-group and between-group (wait list, TAU, attention skills training, behavioral training, physical activity, medication, other types of NF, EMG-biofeedback)	**pre-/ follow-up**	(R, ID, IP)	*g* = -.12 CI (-.84 - .61) **U**	and behavioral measures	
	Attention, between-group, post-treatment	Low ⊕⊕◯◯ (R, IP, P)	*n* = 133, *k* = 6 *g* = .33 CI (-.11 - .74) **U**	Only neuropsychological and behavioral measures	bp, d2, TOVA, CPT, AOT
Lin, et al., 2022 **Population: Children with ADHD, 8-11 years Intervention: Combined EEG-Neurofeedback (TB) and medication Comparison: Medication**	**Attentional performance**	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 180, *k* = 3 *g* = .12 CI (-.35 - .59) **U**		ADHD RS, CPT, d2-Test
Louthrenoo, et al., 2022 **Population: Children and adolescence with ADHD, 5-18 years Intervention: Neurofeedback (TBR und SCP protocol) Comparison: control group, waiting list, treatment as usual**	**Sustained attention**	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 349, *k* = 9 *SMD* = -.11 CI (-.36 - .13) **U**		Continuous Performance Task, D2 Attention, Go/No-Go Task, and Attention Network Test

Yan, et al., 2019 **Population: children and adolescence with ADHD, >18 years** **Intervention: Neurofeedback** **Comparison: Medication (MPH)**	**Inattention**	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 440, *k* = 6 *SMD* = -.96 CI (-1.71 - -.21) **C**		IVA-CPT
	Inattention, follow-up	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 224, *k* = 3 *SMD* = .38 CI (-.79 - 1.56) **U**		IVA-CPT
Hyperaktivität/ Impulsivität. Elternurteil					
Chung, et al., 2022 **Population: Children with ADHD, 8-13 years** **Intervention: EEG-Neurofeedback** **Comparison: Treatment as usual, wait list, EMG-biofeedback, computerized attention training, cognitive interventions, physical activities, placebo feedback**	**Hyperactivity/ impulsivity, proximal raters**	Low ⊕⊕◯◯ (R)	*n* = 952, *k* = 16 *g* = .16 CI (.03 - .29) **I**	Proximal raters: closest to participant, mostly parents.	Conners-3, CPRS, ARS, SWAN, FBB-ADHS, CRS, FBB-HSK
Lin, et al., 2022 **Population: Children with ADHD, 8-11 years**	**Hyperactivity/ impulsivity**	Very low ⊕◯◯◯ (R, IP)	*n* = 305, *k* = 5 *g* = .17 CI (-.05 - .40) **U**		ADHD RS, Chinese ADHD rating scale, Barkley's Defiant Children,

Intervention: Combined EEG-Neurofeedback (TB) and medication Comparison: Medication					Chinese Conners rating scale
	Hyperactivity/ impulsivity, follow-up	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 193, *k* = 3 *g* = .33 CI (-.34 - 1.01) **U**		ADHD RS, Barkley's Defiant Children, Chinese Conners rating
Rahmani, et al., 2022 **Population: Participants with ADHD (no restriction of age) Intervention: EEG-Neurofeedback Comparison: treatment as usual, wait list, EMG-biofeedback, computerized attention training, cognitive interventions, physical activities, placebo feedback**	**Hyperactivity/ impulsivity**	Moderate ⊕⊕⊕◯ (IP)	*n* = 962, *k* = 13 *MD* = -.02 CI (-.26 - .21) **U**	The study used weighted mean difference (WMD).	CPRS, ADHD-RS
Riesco-Matías, et al., 2021 **Population: Children and adolescents with ADHD, < 18 years Intervention: EEG-Neurofeedback (theta/beta, SCP, SMR)**	**Hyperactivity/ impulsivity, NF vs. nonactive control group, post-pretreatment difference**	Moderate ⊕⊕⊕◯ (R)	*n* = 674, *k* = 11 *g* = -.17 CI (-.33 - -.02) **I**	most-proximal evaluator rating, often parent-rating	FBB-HKS, ADHD rating scale, DSM questionaire for ADHD, Conners, SWAN
	Hyperactivity/ impulsivity,	Low ⊕⊕◯◯ (R, IC)	*n* = 674, *k* = 11 *g* = -.24	most-proximal evaluator rating, often parent-rating	FBB-HKS, ADHD rating scale, DSM

Comparison: control group: active and nonactive conditions (e.g. cognitive training, EMG biofeedback, waitlist)	**NF vs. nonactive control group, post-pretreatment difference**		CI (-.39 - -.08) **I**		questionaire for ADHD, Conners, SWAN
	Hyperactivity/ impulsivity, NF vs. nonactive control group, posttreatment difference	Moderate ⊕⊕⊕◯ (R)	*n* = 674, *k* = 11 *g* = -.20 CI (-.36 - -.05) **I**	most-proximal evaluator rating, often parent-rating	FBB-HKS, ADHD rating scale, DSM questionaire for ADHD, Conners, SWAN
	Hyperactivity/ impulsivity, NF vs. stimulant control group, post-pretreatment difference	Low ⊕⊕◯◯ (R, IC)	*n* = 258, *k* = 6 *g* = .26 CI (.02 - .51) **C**	most-proximal evaluator rating	n.a.
	Hyperactivity/ impulsivity, NF vs. stimulant control group, posttreatment difference	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 258, *k* = 6 *g* = .33 CI (-.10 - .76) **U**	most-proximal evaluator rating	n.a.
Van Doren, et al., 2019 **Population: Children and adolescence with ADHD, <18 years** **Intervention: Neurofeedback (theta/beta and SCP)** **Comparison: active and passive controls: wait**	**Hyperactivity/ impulsivity, within-group, pre-post**	Low ⊕⊕◯◯ (R, P)	*n* = 256, *k* = 10 *SMD* = .50 CI (.33 - .68) **I**		FBB-HKS, Conners, ADHS RS-IV, Barkley, SWAN
	Hyperactivity/ impulsivity, within-group, pre-follow-up	Very low ⊕◯◯◯ (R, P)	*n* = 256, *k* = 10 *SMD* = .61 CI (.43 - .79) **I**	Exact sample size for follow-up not specified in study, only possible maximum number calculated by study itself.	FBB-HKS, Conners, ADHS RS-IV, Barkley, SWAN

list, MPH, physical activity, attention training, self-management, cognitive training	**Hyperactivity/ impulsivity, within-group, post-follow-up**	Very low ⊕◯◯◯ (R, IP, P)	*n* = 256, *k* = 10 *SMD* = .11 CI (-.06 - .28) **U**	Exact sample size for follow-up not specified in study, only possible maximum number calculated by study itself.	FBB-HKS, Conners, ADHS RS-IV, Barkley, SWAN
	Hyperactivity/ impulsivity, pre-post	Very low ⊕◯◯◯ (R, IP, P)	*n* = 506, *k* = 10 *SMD* = .16 CI (-.02 - .33) **U**		n.a.
	Hyperactivity/ impulsivity, pre-follow-up	Very low ⊕◯◯◯ (R, P)	*n* = 506, *k* = 10 *SMD* = .32 CI (.15 - .49) **I**	Exact sample size for follow-up not specified in study, only possible maximum number calculated by study itself.	FBB-HKS, Conners, ADHS RS-IV, Barkley, SWAN
	Hyperactivity/ impulsivity, post-follow-up	Very low ⊕◯◯◯ (R, IC, IP, P)	*n* = 506, *k* = 10 *SMD* = .15 CI (-.02 - .32) **U**	Exact sample size for follow-up not specified in study, only possible maximum number calculated by study itself.	FBB-HKS, Conners, ADHS RS-IV, Barkley, SWAN
	Hyperactivity/ impulsivity, between-group (non-active controls), pre-post	Low ⊕⊕◯◯ (R, P)	*n* = 351, *k* = 6 *SMD* = .25 CI (.05 - .45) **I**		FBB-HKS, Conners, ADHS RS-IV, Barkley, SWAN
	Hyperactivity/ impulsivity, between-group (non-active controls), pre-follow-up	Very low ⊕◯◯◯ (R, P)	*n* = 351, *k* = 6 *SMD* = .39 CI (.19 - .59) **I**	Exact sample size for follow-up not specified in study, only possible maximum number calculated by study itself.	FBB-HKS, Conners, ADHS RS-IV, Barkley, SWAN

	Hyperactivity/ impulsivity, between-group (non-active Controls), post-follow-up	Very low ⊕◯◯◯ (R, IC, IP, P)	*n* = 351, *k* = 6 *SMD* = .14 CI (-.06 - .34) **U**	Exact sample size for follow-up not specified in study, only possible maximum number calculated by study itself.	FBB-HKS, Conners, ADHS RS-IV, Barkley, SWAN
	Hyperactivity/ impulsivity, between-group (active controls), pre-post	Very low ⊕◯◯◯ (IC, IP, P)	*n* = 155, *k* = 4 *SMD* = -.07 CI (-.39 - .24) **U**		FBB-HKS, Conners, ADHS RS-IV, Barkley, SWAN
	Hyperactivity/ impulsivity, between-group (active controls), pre-follow-up	Very low ⊕◯◯◯ (R, IP, P)	*n* = 155, *k* = 4 *SMD* = .15 CI (-.17 - .46) **U**	Exact sample size for follow-up not specified in study, only possible maximum number calculated by study itself.	FBB-HKS, Conners, ADHS RS-IV, Barkley, SWAN
	Hyperactivity/ impulsivity, between-group (active controls), post-follow-up	Very low ⊕◯◯◯ (R, IC, IP, P)	*n* = 155, *k* = 4 *SMD* = .22 CI (-.20 - .64) **U**	Exact sample size for follow-up not specified in study, only possible maximum number calculated by study itself.	FBB-HKS, Conners, ADHS RS-IV, Barkley, SWAN
Yan, et al., 2019 **Population: children and adolescence with ADHD, >18 years** **Intervention: Neurofeedback** **Comparison: Medication (MPH)**	**Hyperactivity/ impulsivity**	Very low ⊕◯◯◯ (R, IC)	*n* = 985, *k* = 12 *SMD* = -.51 CI (-.89 - -.13) **C**		IOWA-Conners, Conners parents, SWAN, TOVA-1, ADHD-RS, VADTRS, SNAP-IV
	Hyperactivity/ impulsivity, follow-up	Very low ⊕◯◯◯ (R, IC)	*n* = 859, *k* = 10 *SMD* = .69 CI (.40 - .97) **I**		IOWA-Conners, Conners parents, SWAN, TOVA-1, ADHD-RS,

					VADTRS, SNAP-IV
Hyperaktivität/ Impulsivität. Lehrer*innenurteil					
Chung, et al., 2022 **Population: Children with ADHD, 8-13 years** **Intervention: EEG-Neurofeedback** **Comparison: Treatment as usual, wait list, EMG-biofeedback, computerized attention training, cognitive interventions, physical activities, placebo feedback**	**Hyperactivity/ impulsivity, distal rater**	Low ⊕⊕◯◯ (R, IC)	*n* = 846, *k* = 13 *g* = .17 CI (.00 - .33) **I**	Distal rater: less close to participant (mostly teachers).	Conners-3, CTRS, ARS, SWAN, FBB-ADHS, CBCL, CRS, FBB-HSK, IOWA-Conners, SCAMP
Rahmani, et al., 2022 **Population: Participants with ADHD (no restriction of age)** **Intervention: EEG-Neurofeedback** **Comparison: treatment as usual, wait list, EMG-biofeedback, computerized attention training, cognitive interventions,**	**Hyperactivity/ impulsivity**	Very low ⊕◯◯◯ (IC, IP)	*n* = 1009, *k* = 10 *MD* = .01 CI (-.46 - .48) **U**	Study used weighted mean difference (WMD).	CPRS, ADHD-RS

physical activities, placebo feedback					
Riesco-Matías, et al., 2021 **Population: Children and adolescents with ADHD, < 18 years** **Intervention: EEG-Neurofeedback (theta/beta, SCP, SMR)** **Comparison: control group: active and nonactive conditions (e.g. cognitive training, EMG biofeedback, waitlist)**	**Hyperactivity/ impulsivity, NF vs. nonactive control group, post-pretreatment difference**	Low ⊕⊕◯◯ (IC, IP)	*n* = 573, *k* = 9 *g* = -.16 CI (-.32 - .01) **U**		FBB-HKS, ADHD rating scale, DSM questionaire for ADHD, Conners, SWAN
	Hyperactivity/ impulsivity, NF vs. nonactive control group, posttreatment difference	Low ⊕⊕◯◯ (IC, IP)	*n* = 479, *k* = 8 *g* = -.11 CI (-.32 - .10) **U**		FBB-HKS, ADHD rating scale, DSM questionaire for ADHD, Conners, SWAN
	Hyperactivity/ impulsivity, NF vs. stimulant control group, post-pretreatment difference	Low ⊕⊕◯◯ (IC, IP)	*n* = 150, *k* = 4 *g* = .36 CI (-.22 - .94) **U**	probably blinded evaluator rating	ADHD rating scale, Conners, SWAN, Barley's Defiant Children, Vanderbilt ADHD diagnostic rating scale
	Hyperactivity/ impulsivity, NF vs. stimulant control group, posttreatment difference	Moderate ⊕⊕⊕◯ (IC)	*n* = 157, *k* = 4 *g* = .54 CI (.15 - .94) **C**		ADHD rating scale, Conners, SWAN, Barley's Defiant Children, Vanderbilt ADHD diagnostic rating scale
Yan, et al., 2019	**Hyperactivity/ impulsivity**	Low ⊕⊕◯◯ (R)	*n* = 228, *k* = 4 *SMD* = -.47		Barkley, SWAN,

Population: children and adolescence with ADHD, >18 years **Intervention: Neurofeedback** **Comparison: Medication (MPH)**			CI (-.86 - -.09) **C**	ADHD-RS, VADTRS
	Hyperactivity/ impulsivity, follow-up	Very low ⊕◯◯◯ (R, IP)	*n* = 188, *k* = 3 *SMD* = .11 CI (-.26 - .47) **U**	Barkley, SWAN, ADHD-RS, VADTRS
Hyperaktivität/ Impulsivität. Selbsturteil				
Fan, et al., 2022 **Population: Adolescents and adults with ADHD, 6-60 years** **Intervention: EEG-Neurofeedback (TB/ SCP)** **Comparison: Waitlist, treatment as usual, other intervention (MPH, sham)**	**Hyperactivity/ impulsivity**	Very low ⊕◯◯◯ (R, IC, IP, P)	*n* = 231, *k* = 4 *SMD* = .06 CI (-.20 - .32) **U**	Barkley's Defiant Children self-report, CAARS, CRS-R, ADHD rating self-report
	Hyperactivity/ impulsivity, follow-up	Very low ⊕◯◯◯ (R, IC, IP, P)	*n* = 187, *k* = 3 *SMD* = -.01 CI (-.30 - .28) **U**	CAARS, ADHD rating self-report, Barkley's Defiant Children self-report
	Hyperactivity/ impulsivity, EEG-NF vs. waitlist/ TAU	Very low ⊕◯◯◯ (R, IP, P)	*n* = 95, *k* = 2 *SMD* = -.03 CI (-.45 - .38) **U**	CRS-R, ADHD
Impulsivität. Kognitive Tests				
Louthrenoo, et al., 2022 **Population: Children and adolescence with ADHD, 5-18 years** **Intervention: Neurofeedback (TBR und SCP protocol)**	**Response inhibition**	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 378, *k* = 9 *SMD* = .00 CI (-.38 - .37) **U**	Continuous Performance Task, Counting Stroop task, Stop Signal Task, Go/No-Go Task, Attention Network Test

Comparison: control group, waiting list, treatment as usual					
Yan, et al., 2019 **Population: children and adolescence with ADHD, >18 years** **Intervention: Neurofeedback** **Comparison: Medication (MPH)**	**Inhibition**	Very low ⊕◯◯◯ (R, IC	*n* = 440, *k* = 6 *SMD* = -.47 CI (-.87 - -.07) **C**	Neuropsychological measures	IVA-CPT
	Inhibition, follow-up	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 224, *k* = 3 *SMD* = -.21 CI (-2.61 - 2.19) **U**	Neuropsychological measures	IVA-CPT
Arbeitsgedächtnis. Kognitive Tests					
Chiu, et al., 2022 **Population: Participants with ADHD (mean age 14.96, range 8.66-37.8)** **Intervention: EEG-Neurofeedback (different NF protocols)** **Comparison: active treatment or inactive treatment (waitlist or TAU)**	**Working memory**	Very low ⊕◯◯◯ (R, BP)	*n* = 122, *k* = 2 *g* = -.01 CI (n.a.) **U**		Digit span, VSWM
Louthrenoo, et al., 2022 **Population: Children and adolescence**	**Working memory**	Low ⊕⊕◯◯ (IP)	*n* = 121, *k* = 3 *SMD* = -.05 CI (-.42 - .33) **U**		Digit Span Backward, Spatial Span Backward Test

with ADHD, 5-18 years Intervention: Neurofeedback (TBR und SCP protocol) Comparison: control group, waiting list, treatment as usual	

Anmerkung. *n* = Anzahl der Versuchspersonen, *k* = Anzahl der inkludierten Primärstudien. R = risk of bias, IC = inconsistency, ID = indirectness, IP = imprecision, P = publication bias.

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Summary of Findings Tabelle: RCTs (nur 1.4.2.2.)

Referenz	Endpunkt	Risk of Bias	Effektstärke	Kommentare	Mess-instrument
ADHS Symptome gesamt. Elternurteil					

Lam, et al., 2022 **Population: Boys (10-18 years) with ADHD naïve or stable medication** **Intervention: 15 active fMRI-NF runs (each run seven 30-second "Rest" and six 40-second "Selfregulation" blocks)** **Comparison: >8 sham FMRI-NF.**	**ADHD symptoms**	No Risk ◯	*n* = 88 *ES = n.a.* CI (n.a.) **U**	Clinical implication based on p-value of group x time interaction, within-group ANOVAs showed significantly reduced scores for both groups, relative to baseline, at post treatment and follow-up	ADHD-RS
Purper-Ouakil, et al., 2022 **Population: children with ADHD aged 7-13** **Intervention: Neurofeedback (TBR or SMR)** **Comparison: Methylphenidate**	**Total ADHD symptoms, D60**	Very high risk ● (BP, BA)	*n* = 150 ES = n.a. CI (n.a.) **C**	Clinical implication based on p-value	n.a.
	Total ADHD symptoms, D90	Very high risk ● (BP, BA)	*n* = 147 ES = n.a. CI (n.a.) **C**	Clinical implication based on p-value	n.a.
Rahmani, et al., 2022 **Population: children and adolescents (6-17 years) with ADHD diagnostic** **Intervention: Neurofeedback (Pro Comp, 30-min sessions 2 days a week)** **Comparison: no treatment**	**Total ADHD symptoms, pre- 4 weeks post-treat**	No Risk ◯	*n* = 26 *MD* = 1.35 CI (36.62 - 33.92) **I**	8 sessions made by this point.	Parent ADHD-RS-IV
	Total ADHD symptoms, NF vs. control group, after 4 weeks	No Risk ◯	*n* = 52 ES = n.a. CI (n.a.) **I**	Clinical implication based on p-value; 8 sessions made by this point	Parent ADHD-RS-IV
	Total ADHD symptoms, pre- 8 weeks post-treat	No Risk ◯	*n* = 26 *MD* = 1.81 CI (37.19 - 33.57) **I**	16 sessions made by this point	Parent ADHD-RS-IV

	Total ADHD symptoms, NF vs. control group, after 8 weeks	No Risk ◯	*n* = 52 ES = n.a. CI (n.a.) **U**	Clinical implication based on p-value; 16 sessions made by this point	Parent ADHD-RS-IV
	Total ADHD symptoms, pre- 12 weeks post-treat	No Risk ◯	*n* = 26 *MD* = 1.47 CI (36.78 - 33.84) **I**	24 sessions made by this point	Parent ADHD-RS-IV
	Total ADHD symptoms, NF vs. control group, after 12 weeks	No Risk ◯	*n* = 52 ES = n.a. CI (n.a.) **I**	Clinical implication based on p-value; 24 sessions made by this point	Parent ADHD-RS-IV
	Total ADHD symptoms, NF vs. control group, after 12 weeks	No Risk ◯	*n* = 56 ES = n.a. CI (n.a.) **U**	Clinical implication based on p-value; 24 sessions made by this point	Parent ADHD-RS-IV
ADHS Symptome gesamt. Lehrer*innenurteil					
Purper-Ouakil, et al., 2022 **Population: children with ADHD aged 7-13** **Intervention: Neurofeedback (TBR or SMR)** **Comparison: Methylphenidate**	**Total ADHD symptoms, D90**	High Risk ◑ (BP)	*n* = 89 ES = n.a. CI (n.a.) **C**	Clinical implication based on p-value	ADHD-RS-T
Rahmani, et al., 2022 **Population: children and adolescents (6-17 years) with ADHD diagnostic** **Intervention: Neurofeedback (Pro**	**Total ADHD symptoms, pre- 4 weeks post-treat**	No Risk ◯	*n* = 26 *MD* = 2.52 CI (38.4 - 33.36) **I**	8 sessions made by this point.	Teacher ADHD-RS-IV
	Total ADHD symptoms,	No Risk ◯	*n* = 56	Clinical implication	Teacher ADHD-RS-IV

Comp, 30-min sessions 2 days a week) Comparison: no treatment	**NF vs control, after 4 weeks**		ES = n.a. CI (n.a.) **I**	based on p-value; 8 sessions made by this point	
	Total ADHD symptoms, pre- 8 weeks post-treat	No Risk ◯	*n* = 26 *MD* = 1.3 CI (40.26 - 37.66) **I**	16 sessions made by this point.	Teacher ADHD-RS-IV
	Total ADHD symptoms, NF vs control, after 8 weeks	No Risk ◯	*n* = 56 ES= n.a. CI (n.a.) **I**	Clinical implication based on p-value; 16 sessions made by this point	Teacher ADHD-RS-IV
	Total ADHD symptoms, pre- 12 weeks post-treatment	No Risk ◯	*n* = 26 *MD* = 1.63 CI (35.78 - 32.52) **I**	24 sessions made by this point.	Teacher ADHD-RS-IV
ADHS Symptome gesamt. Kliniker*innenurteil					
Purper-Ouakil, et al., 2022 Population: children with ADHD aged 7-13 Intervention: Neurofeedback (TBR or SMR) Comparison: Methylphenidate	**ADHD total score, (D90)**	Very high risk ● (BP, BA)	*n* = 149 ES = n.a. CI (n.a.) **C**	Clinical implication based on p-value; significant change score difference between NF and MPH group at day 90	ADHD-RS-C
Aufmerksamkeit. Kombiniertes Urteil					
Cash, et al., 2023 Population: children with ADHD aged 7-10 Intervention: Theta-Beta Neurofeedback, focus on trainer continuity and trainer experience	**Inattention, effect of trainer continuity**	High Risk ◑ (BA)	*n* = 142 ES = n.a. CI (n.a.) **U**	Clinical implication based on p-value, Parent and teacher rating	n.a.
	Inattention, effect of trainer experience	High Risk ◑ (BA)	*n* = 26 *MD* = 2.52	Clinical implication based on p-value, Parent	n.a.

Comparison: control condition of equal intensity, duration, and appearance in which "feedback" was based on pre-recorded EEG of different child			CI (38.4 - 33.36) **I**	and teacher rating	
Roley-Roberts, et al., 2023 **Population: children with ADHD (7-10 years), some with anxiety as comorbidity, with ODD, with both anxiety and ODD, or neither comorbidity** **Intervention: Neurofeedback (TBR)** **Comparison: control group (trainings differed only in deliberate training down of TBR based on child's own EEG in active NF vs based on pre-recorded EEG from another child's neurofeedback session in control)**	**Inattention, comorbidity anxiety, treatment end - 13-month follow-up**	High Risk ◑ (ID)	*n* = 29 *d* = .22 CI (-.61 - 1.04) **U**		Connors 3rd Edition: Long Version (C3P and C3T; Conners, 2008) inattention scale
	Inattention, no comorbidity, treatment end - 13-month follow-up	High Risk ◑ (ID)	*n* = 42 *d* = -.10 CI (-.71 - .51) **U**		Connors 3rd Edition: Long Version (C3P and C3T; Conners, 2008) inattention scale
	Inattention, comorbidity ODD, baseline - 13-month follow-up	High Risk ◑ (ID)	*n* = 33 *d* = .74 CI (.05 – 1.43) **I**	All comorbidities at beginning of treatment, unclear which comorbidity drop-outs at Follow-up; RCTs and quasi-experiments	Conners-3, parent and teacher rated
	Inattention, comorbidity anxiety, baseline - 13-month follow-up	High Risk ◑ (ID)	*n* = 29 *d* = -.58 CI (-1.37 - .21) **U**	All comorbidities at beginning of treatment, unclear which comorbidity drop-outs at Follow-up; RCTs and quasi-experiments	Conners-3, parent and teacher rated

Inattention, no comorbidity, baseline - 13-month follow-up	High Risk ◑ (ID)	*n* = 42 *d* = .16 CI (-.42 - .74) **U**	All comorbidities at beginning of treatment, unclear which comorbidity drop-outs at Follow-up; RCTs and quasi-experiments	Conners-3, parent and teacher rated
Inattention, comorbidity anxiety and ODD, baseline - treatment end	High Risk ◑ (ID)	*n* = 38 *d* = .22 CI (-.36 - .81) **U**	All comorbidities at beginning of treatment, unclear which comorbidity drop-outs at Follow-up; RCTs and quasi-experiments	Conners-3, parent and teacher rated
Inattention, comorbidity ODD, baseline - treatment end	High Risk ◑ (ID)	*n* = 33 *d* = .33 CI (-.32 - .98) **U**	All comorbidities at beginning of treatment, unclear which comorbidity drop-outs at Follow-up; RCTs and quasi-experiments	Conners-3, parent and teacher rated
Inattention, comorbidity anxiety, baseline - treatment end	High Risk ◑ (ID)	*n* = 29 *d* = -.79 CI (-1.55 - -.04) **C**	All comorbidities at beginning of treatment, unclear which comorbidity drop-outs at Follow-up; RCTs and quasi-experiments	Conners-3, parent and teacher rated
Inattention, no comorbidity, baseline - treatment end	High Risk ◑ (ID)	*n* = 42 *d* = .26 CI (-.30 - .81) **U**	All comorbidities at beginning of treatment, unclear which comorbidity drop-outs at Follow-up; RCTs	Conners-3, parent and teacher rated

				and quasi-experiments	
	Inattention, comorbidity anxiety and ODD, treatment end - 13-month follow-up	High Risk ◑ (ID)	*n* = 38 *d* = .03 CI (-.61 - .66) **U**	All comorbidities at beginning of treatment, unclear which comorbidity drop-outs at Follow-up; RCTs and quasi-experiments	Conners-3, parent and teacher rated
	Inattention, comorbidity ODD, treatment end - 13-month follow-up	High Risk ◑ (ID)	*n* = 33 *d* = .41 CI (-.32 - 1.14) **U**	All comorbidities at beginning of treatment, unclear which comorbidity drop-outs at Follow-up; RCTs and quasi-experiments	Conners-3, parent and teacher rated
Aufmerksamkeit. Elternurteil					
Luo, et al., 2022 **Population: children with diagnosed ADHD (7-12 years), four children were taking medication** **Intervention: Focus Pocus Training: 3 versions of programs created for this study: NFT (only neurofeedback games), CCT (only cognitive training games), and COM (neurofeedback and cognitive training games)** **Comparison: between interventions**	**Inattention, all trainings, pre-/post**	High Risk ◑ (CO)	*n* = 80 η^2 = .0173 CI (n.a.) **I**	Clinical implication based on p-value; no significant group differences and no Training × Group interaction; no information about blinding of assessors and participants, probably not blind	AD/HD-RS, parent rating
Purper-Ouakil, et al., 2022	**Inattention, D60**	Very high risk	*n* = 155 ES = n.a. CI (n.a.)	Clinical implication	ADHD-RS-P

Population: children with ADHD aged 7-13 Intervention: Neurofeedback (TBR or SMR) Comparison: Methylphenidate		● (BP, BA)	**C**	based on p-value	
	Inattention, D90	Very high risk ● (BP, BA)	*n* = 147 ES = n.a. CI (n.a.) **C**	Clinical implication based on p-value	ADHD-RS-P
Rahmani, et al., 2022 Population: children and adolescents (6-17 years) with ADHD diagnostic Intervention: Neurofeedback (Pro Comp, 30-min sessions 2 days a week) Comparison: no treatment	**Inattention, pre- vs. 4 weeks post**	No Risk ◯	*n* = 26 *MD* = .67 CI (18.97 - 16.33) **I**	8 sessions made by this point	Parent ADHD-RS-IV, Inattention subscale
	Inattention, NF vs. control, after 4 weeks	No Risk ◯	*n* = 52 ES = n.a. CI (n.a.) **U**	Clinical implication based on p-value; 8 sessions made by this point	Parent ADHD-RS-IV, Inattention subscale
	Inattention, pre- vs. 8 weeks post	No Risk ◯	*n* = 26 *MD* = 1.06 CI (18.68 - 16.65) **I**	16 sessions made by this point	Parent ADHD-RS-IV, Inattention subscale
	Inattention, NF vs. control, after 8 weeks	No Risk ◯	*n* = 52 ES = n.a. CI (n.a.) **U**	Clinical implication based on p-value; 16 sessions made by this point	Parent ADHD-RS-IV, Inattention subscale
	Inattention, pre- vs. 12 weeks post	No Risk ◯	*n* = 26 *MD* = 0.85 CI (18.16 - 15.09) **I**	24 sessions made by this point	Parent ADHD-RS-IV, Inattention subscale
	Inattention, NF vs. control, after 12 weeks	No Risk ◯	*n* = 56 ES = n.a. CI (n.a.) **U**	Clinical implication based on p-value; 24	Parent ADHD-RS-IV, Inattention subscale

				sessions made by this point	
	Inattention, pre- vs. 4 weeks post	No Risk ◯	*n* = 26 *MD* = 1.22 CI (9.37 - 16.93) **I**	8 sessions made by this point.	Parent ADHD-RS-IV, Inattention subscale
	Inattention, NF vs. control, after 4 weeks	No Risk ◯	*n* = 56 ES = n.a. CI (n.a.) **U**	Clinical implication based on p-value; 8 sessions made by this point	Parent ADHD-RS-IV, Inattention subscale
	Inattention, pre- vs. 8 weeks post	No Risk ◯	*n* = 26 *MD* = .65 CI (19.88 - 18.58) **I**	16 sessions made by this point.	Parent ADHD-RS-IV. Inattention subscale
	Inattention, NF vs. control, after 8 weeks	No Risk ◯	*n* = 56 ES = n.a. CI (n.a.) **I**	Clinical implication based on p-value; 16 sessions made by this point.	Parent ADHD-RS-IV, Inattention subscale
	Inattention, pre- vs. 12 weeks post	No Risk ◯	*n* = 26 *MD* = .84 CI (17.99 - 16.31) **I**	24 sessions made by this point.	Parent ADHD-RS-IV, Inattention subscale
	Inattention, NF vs. control, after 12 weeks	No Risk ◯	*n* = 56 ES = n.a. CI (n.a.) **I**	Clinical implication based on p-value; 24 sessions made by this point	Parent ADHD-RS-IV, Inattention subscale
Roy, S. et al. (2022)	**Inattention, NF, within-group,**	Very High Risk	*n* = 29 ES = n.a. CI (n.a.)	Clinical implication	Conners 3-Parent Short Scale

Population: children with ADHD, 6-12 years **Intervention: Neurofeedback, Medication and behaviour management (intervention with children and parent training)** **Comparison: between the interventions**	**baseline - follow-up**	◑ (BP, BA)	**I**	based on p-value; RCTs and quasi-experiments, between-group: NF = Behavior Intervention (P = 0.057), NF < Medication (P = 0.014)*	
Aufmerksamkeit. Lehrer*innenurteil					
Purper-Ouakil, et al., 2022 **Population: children with ADHD aged 7-13** **Intervention: Neurofeedback (TBR or SMR)** **Comparison: Methylphenidate**	**Inattention, D90**	High Risk ◑ (BP)	*n* = 90 ES = n.a. CI (n.a.) **C**	Clinical implication based on p-value	ADHD-RS-T
Aufmerksamkeit. Kliniker*innenurteil					
Purper-Ouakil, et al., 2022 **Population: children with ADHD aged 7-13** **Intervention: Neurofeedback (TBR or SMR)** **Comparison: Methylphenidate**	**Inattention, D60**	Very high risk ● (BP, BA)	*n* = 157 ES = n.a. CI (n.a.) **C**	Clinical implication based on p-value	ADHD-RS-C
	Inattention, D90	Very high risk ● (BP, BA)	*n* = 149 ES = n.a. CI (n.a.) **C**	Clinical implication based on p-value	ADHD-RS-C
Hyperaktivität/ Impulsivität. Elternurteil					
Luo, et al., 2022 **Population: children with diagnosed ADHD (7-12 years), four children were taking medication**	**Hyperactivity/ impulsivity, all trainings, pre-/post**	High Risk ◑ (CO)	*n* = 80 η^2 = .271 CI (n.a.) **I**	Clinical implication based on p-value; no significant group differences or Training × Group interaction; no information	ADHD-RS-P

Intervention: Focus Pocus Training: 3 versions of programs created for this study: NFT (only neurofeedback games), CCT (only cognitive training games), and COM (neurofeedback and cognitive training games) **Comparison: between interventions**				about blinding of assessors and participants, probably not blind	
Purper-Ouakil, et al., 2022 **Population: children with ADHD aged 7-13** **Intervention: Neurofeedback (TBR or SMR)** **Comparison: Methylphenidate**	**Hyperactivity/ impulsivity, D60**	Very high risk ● (BP, BA)	*n* = 155 ES = n.a. CI (n.a.) **C**	Clinical implication based on p-value	ADHD-RS-P
	Hyperactivity/ impulsivity, D90	Very high risk ● (BP, BA)	*n* = 148 ES = n.a. CI (n.a.) **C**	Clinical implication based on p-value	ADHD-RS-P
Rahmani, et al., 2022 **Population: children and adolescents (6-17 years) with ADHD diagnostic** **Intervention: Neurofeedback (Pro Comp, 30-min sessions 2 days a week)** **Comparison: no treatment**	**Hyperactivity, pre- vs 4 weeks post**	No Risk ◯	*n* = 26 *MD* = .71 CI (18.33 - 16.91) **I**	8 sessions made by this point.	ADHD-RS-IV-P, Hyperactivity subscale
	Hyperactivity, NF vs. control, after 4 weeks	No Risk ◯	*n* = 56 ES = n.a. CI (n.a.) **I**	Clinical implication based on p-value; 8 sessions made by this point	ADHD-RS-IV-P, Hyperactivity subscale
	Hyperactivity, pre- vs. 8 weeks post	No Risk ◯	*n* = 26 *MD* = .88 CI (18.65 - 16.89) **I**	16 sessions made by this point.	ADHD-RS-IV-P, Hyperactivity subscale

Hyperactivity, NF vs. control, after 8 weeks	No Risk ◯	*n* = 56 ES = n.a. CI (n.a.) **U**	Clinical implication based on p-value; 16 sessions made by this point	ADHD-RS-IV-P, Hyperactivity subscale
Hyperactivity, pre- vs. 12 weeks post	No Risk ◯	*n* = 26 *MD* = .93 CI (18.93 - 17.07) **I**	24 sessions made by this point.	ADHD-RS-IV-P, Hyperactivity subscale
Hyperactivity, NF vs. control, after 12 weeks post	No Risk ◯	*n* = 56 ES = n.a. CI (n.a.) **U**	Clinical implication based on p-value; 24 sessions made by this point	ADHD-RS-IV-P, Hyperactivity subscale
Hyperactivity, pre- vs. 4 weeks post	No Risk ◯	*n* = 26 *MD* = .38 CI (18.11 - 17.35) **I**	8 sessions made by this point.	ADHD-RS-IV-P
Hyperactivity, NF vs. control, after 4 weeks	No Risk ◯	*n* = 56 ES = n.a. CI (n.a.) **U**	Clinical implication based on p-value; 8 sessions made by this point	ADHD-RS-IV-P
Hyperactivity, pre- vs. 8 weeks post	No Risk ◯	*n* = 26 *MD* = .83 CI (20.56 - 18.90) **I**	16 sessions made by this point.	ADHD-RS-IV-P
Hyperactivity, NF vs. control, after 8 weeks	No Risk ◯	*n* = 56 ES = n.a. CI (n.a.)	Clinical implication based on p-value; 16	ADHD-RS-IV-P

			I	sessions made by this point	
	Hyperactivity, pre- vs. 12 weeks post	No Risk ◯	*n* = 26 *MD* = .92 CI (17.92 - 16.80) I	24 sessions made by this point.	ADHD-RS-IV-P
	Hyperactivity, NF vs. control, after 12 weeks	No Risk ◯	*n* = 56 ES = n.a. CI (n.a.) I	Clinical implication based on p-value; 24 sessions made by this point.	ADHD-RS-IV-P
Roy, S. et al. (2022) **Population: children with ADHD, 6-12 years** **Intervention: Neurofeedback, Medication and behaviour management (intervention with children and parent training)** **Comparison: between the interventions**	**Hyperactivity/ impulsivity, NF within-group, baseline - follow-up**	Very high risk ● (BP, BA)	*n* = 29 ES = n.a. CI (n.a.) I	Clinical implication based on p-value; RCTs and quasi-experiments; between-group: NF = behavior intervention (p = 1.000), NF < medication (p < 001)*	Conners 3-Parent Short Scale
Hyperaktivität/ Impulsivität. Lehrer*innenurteil					
Purper-Ouakil, et al., 2022 **Population: children with ADHD aged 7-13** **Intervention: Neurofeedback (TBR or SMR)** **Comparison: Methylphenidate**	**Hyperactivity/ impulsivity, D90**	High Risk ◑ (BP)	*n* = 91 ES = n.a. CI (n.a.) C	Clinical implication based on p-value	ADHD-RS-T
	Hyperactivity, D90	High Risk ◑ (BP)	*n* = 95 ES = n.a. CI (n.a.) C	Clinical implication based on p-value	Strengths and Difficulties Questionnaire (SDQ)
Hyperaktivität/ Impulsivität. Kliniker*innenurteil					
Purper-Ouakil, et al., 2022	**Hyperactivity/ impulsivity,**	Very high risk	*n* = 157	Clinical implication	ADHD-RS-C

Population: children with ADHD aged 7-13 **Intervention: Neurofeedback (TBR or SMR)** **Comparison: Methylphenidate**	**D60**	● (BP, BA)	ES = n.a. CI (n.a.) **C**	based on p-value	
	Hyperactivity/ impulsivity, D90	Very high risk ● (BP, BA)	*n* = 149 ES = n.a. CI (n.a.) **C**	Clinical implication based on p-value	ADHD-RS-C
Inhibition. Elternurteil					
Luo, et al., 2022 **Population: children with diagnosed ADHD (7-12 years), four children were taking medication** **Intervention: Focus Pocus Training: 3 versions of programs created for this study: NFT (only neurofeedback games), CCT (only cognitive training games), and COM (neurofeedback and cognitive training games)** **Comparison: between interventions**	**Inhibition, all trainings, pre-/post**	High Risk ◑ (CE)	*n* = 80 η^2 = .15 CI (n.a.) **I**	Clinical implication based on p-value; no significant group difference and Training × Group interaction; no information about blinding of assessors and participants, probably not blind	BRIEF, parent rating

Anmerkung. *n* = Anzahl der Versuchspersonen. SG = sequence generation, CC = concealment, BP = blinding participants, BA = blinding assessors, ID = incomplete data, OR = outcome reporting, CE = carry over effects, SX = stopped early, UM = unvalidated measures, OI = other issue.

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1.4.3 Diätetische Interventionen

1.4.3.2. Was soll im Hinblick auf künstliche Farbstoffe beachtet werden?

1.4.3.2. A

Berücksichtigte Endpunktkategorien: Meta-Analysen

Endpunktkategorien	MAs	*m*	Gesamtaussagesicherheit der Evidenz
ADHS Symptome gesamt (E)	2	2	Schwach/ sehr schwach
ADHS Symptome gesamt (L)	1	1	
ADHS Symptome gesamt (KL)	1	1	

***Anmerkung*. MAs = Anzahl der Meta-Analysen, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.**

Summary of Findings Tabelle: Meta-Analysen

Referenz	Endpunkt	Aussagesicherheit (GRADE)	Effektstärke	Kommentare	Mess-instrument
ADHS Symptome gesamt. Elternurteil					
Pelsser et. al., 2017 (based on Schab, 2004) **Population: children or youth (<18 years) with adhd or hyperactivity or hyperkinetic syndrome** **Intervention: Elimination Artificial food color (tartrazine or AFC mixtures were given during 1–42 days)** **Comparison: Placebo**	**Total ADHD symptoms**	Very low ⊕◯◯◯ (R, IC, PB)	*n* = 219, *k* = 13 *SMD* = .44 CI (.16 - .72) **I**	Dosage: 1-150mg/day	Conners Parent Teacher Questionnaire
Pelsser et. al., 2017 (based on Nigg, 2012) **Population: children or youth (<18 years) with adhd or**	**Total ADHD symptoms**	Very low ⊕◯◯◯ (IC, ID, IP, P)	*n* = 185, *k* = 11 *SMD* = .21 CI (-.02 - .43) **U**	Outcomes evaluated not clear or well defined: "behavioral effects (relevant to inattention or	Conners' rating scale

hyperactivity or hyperkinetic syndrome **Intervention: Elimination Artificial food color (tartrazine or AFC mixtures were given during 1–42 days)** **Comparison: Placebo**				hyperactivity)" Dosage: 13-250mg/day	
ADHS Symptome gesamt. Lehrer*innenurteil					
Pelsser et. al., 2017 (based on Schab, 2004) **Population: children or youth (<18 years) with adhd or hyperactivity or hyperkinetic syndrome** **Intervention: Elimination Artificial food color (tartrazine or AFC mixtures were given during 1–42 days)** **Comparison: Placebo**	**Total ADHD symptoms**	Very low ⊕◯◯◯ (R, IC, IP, P)	*n* = 152, *k* = 6 *SMD* = .08 CI (-.07 - .24) **U**	Dosage: 1-150mg/day	Conners Parent Teacher Questionnaire
ADHS Symptome gesamt. Kliniker*innenurteil					
Pelsser et. al., 2017 (based on Schab, 2004) **Population: children or youth (<18 years) with adhd or hyperactivity or hyperkinetic syndrome** **Intervention: Elimination Artificial food**	**Total ADHD symptoms**	Very low ⊕◯◯◯ (R, IC, IP, P)	*n* = 140, *k* = 4 *SMD* = .11 CI (-.13 - .34) **U**	Dosage: 1-150mg/day	CPTQ

color (tartrazine or AFC mixtures were given during 1–42 days) **Comparison: Placebo**									

Anmerkung. *n* = Anzahl der Versuchspersonen, *k* = Anzahl der inkludierten Primärstudien. R = risk of bias, IC = inconsistency, ID = indirectness, IP = imprecision, P = publication bias.

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1.4.3.3. Was sollte im Hinblick auf Eliminationsdiäten beachtet werden?

1.4.3.3. A

Berücksichtigte Endpunktkategorien: Meta-Analysen

Endpunktkategorien	MAs	*m*	Gesamtaussagesicherheit der Evidenz
ADHS Symptome gesamt (KU)	1	1	Sehr schwach/ schwach
ADHS Symptome gesamt (E)	1	1	

Anmerkung. MAs = Anzahl der Meta-Analysen, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.

Berücksichtigte Endpunktkategorien: RCTs

Endpunktkategorien	RCTs	*m*	Gesamtaussagesicherheit der Evidenz
Aufmerksamkeit (E)	1	3	Sehr schwach/ schwach
Aufmerksamkeit (L)	1	3	
Hyperaktivität (E)	1	3	
Hyperaktivität (L)	1	3	
Emotionsregulation (E)	1	3	
Emotionsregulation (L)	1	1	

Anmerkung. RCTs = Anzahl der randomisierten kontrollierten Studien, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.

Summary of Findings Tabelle: Meta-Analysen

Referenz	Endpunkt	Aussagesicherheit (GRADE)	Effektstärke	Kommentare	Mess-instrument
ADHS Symptome gesamt. Kombiniertes Urteil					
Pelsser et. al., 2017 (based on Benton, 2007) **Population: children or youth with ADHD or hyperactivity or hyperkinetic syndrome** **Intervention: elimination of some food groups (Feingold diet or allergens) or many foods or additives**	**Total symptom score**	Very low ⨁◯◯◯ (IC, IP)	*n* = 214, *k* = 4 *SMD* = .80 CI (.41 - 1.19) **I**	Primary meta-analysis rechecked: ES include 5 studies but parent rated was only 4.	Conners' rating scale, CAS (Connors Abbreviated Scale)

Comparison: placebo					
ADHS Symptome gesamt. Elternurteil					
Pelsser et. al., 2017 (based on Sonuga-Barke, 2013) **Population: children or youth with ADHD or hyperactivity or hyperkinetic syndrome** **Intervention: elimination of some food groups (Feingold diet or allergens) or many foods or additives** **Comparison: placebo**	**Total symptom score**	Low ⊕⊕◯◯ (IC, IP)	*n* = n.a., *k* = 5 *SMD* = .75 CI (.31 - 1.19) **I**	Conners' rating scale	

Anmerkung. *n* = Anzahl der Versuchspersonen, *k* = Anzahl der inkludierten Primärstudien. R = risk of bias, IC = inconsistency, ID = indirectness, IP = imprecision, P = publication bias.

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Summary of Findings Tabelle: RCTs

Referenz	Endpunkt	Risk of Bias	Effektstärke	Kommentare	Mess-instrument
Aufmerksamkeit. Elternurteil					
Huberts-Bosch et al., 2023 **Population: children (5–12 years) with ADHD**	**Inattention, ED, T0-T1**	Very high risk ● (BP, BA)	*n* = 160 *MD* = .66 CI (n.a.) **I**	Only significant measures reported; clinical implication based on p-value	SWAN questionnaire

Intervention: Elimination diet or Healthy diet Comparison: treatment as usual	**Inattention, HD, T0-T1**	Very high risk ● (BP, BA)	*n* = 160 *MD* = .53 CI (n.a.) **I**	Only significant measures reported; clinical implication based on p-value	SWAN questionnaire
	Inattention, TAU, T0-T1	Very high risk ● (BP, BA)	*n* = 160 *MD* = .41 CI (n.a.) **I**	Only significant measures reported; clinical implication based on p-value	SWAN questionnaire
Aufmerksamkeit. Lehrer*innenurteil					
Huberts-Bosch et al., 2023 **Population: children (5–12 years) with ADHD Intervention: Elimination diet or Healthy diet Comparison: treatment as usual**	**Inattention, HD, T0-T1**	High Risk ◑ (BP)	*n* = 153 *MD* = .29 CI (n.a.) **I**	Only significant measures reported; clinical implication based on p-value	SWAN questionnaire
	Inattention, TAU, T0-T1	High Risk ◑ (BP)	*n* = 153 *MD* = 1.00 CI (n.a.) **I**	Only significant measures reported; clinical implication based on p-value	SWAN questionnaire
	Inattention, Between-group, T1	High Risk ◑ (BP)	*n* = 153 ηp2 = 0.15 CI (n.a.) **I**	Only significant between-group effects reported. ED and HD superior to TAU, no differences between dietary groups; clinical implication based on p-value	SWAN questionnaire
Hyperaktivität. Elternurteil					
Huberts-Boschet et al., 2023	**Hperactivity/ impulsivity, ED, T0-T1**	Very high risk ● (BP, BA)	*n* = 160 *MD* = .73 CI (n.a.) **I**	Only significant measures reported; clinical implication	SWAN questionnaire

Population: children (5–12 years) with ADHD **Intervention: Elimination diet or Healthy diet** **Comparison: treatment as usual**				based on p-value	
	Hperactivity/ impulsivity, HD, T0-T1	Very high risk ● (BP, BA)	*n* = 160 *MD* = .61 CI (n.a.) **I**	Only significant measures reported; clinical implication based on p-value	SWAN questionnaire
	Hperactivity/ impulsivity, TAU, T0-T1	Very high risk ● (BP, BA)	*n* = 160 *MD* = .54 CI (n.a.) **I**	Only significant measures reported; clinical implication based on p-value	SWAN questionnaire
Hyperaktivität. Lehrer*innenurteil					
Huberts-Boschet et al., 2023 **Population: children (5–12 years) with ADHD** **Intervention: Elimination diet or Healthy diet** **Comparison: treatment as usual**	**Hperactivity/ impulsivity, HD, T0-T1**	High Risk ◑ (BP)	*n* = 153 *MD* = .34 CI (n.a.) **I**	Only significant measures reported; clinical implication based on p-value	SWAN questionnaire
	Hperactivity/ impulsivity, TAU, T0-T1	High Risk ◑ (BP)	*n* = 153 *MD* = .81 CI (n.a.) **I**	Only significant measures reported; clinical implication based on p-value	SWAN questionnaire
	Hyperactivity/ impulsivity, Between-group, T1	High Risk ◑ (BP)	*n* = 153 ηp2 = 0.13 CI (n.a.) **I**	Only significant between-group effects reported. ED and HD superior to TAU, no differences between dietary groups; clinical implication based on p-value	SWAN questionnaire
Emotionsregulation. Elternurteil					
Huberts-Boschet et al., 2023	**Emotion regulation,**	Very high risk	*n* = 160 *MD* = .82	Only significant measures	SDQ

Population: children (5–12 years) with ADHD **Intervention: Elimination diet or Healthy diet** **Comparison: treatment as usual**	**ED, T0-T1**	● (BP, BA)	CI (n.a.) **I**	reported; clinical implication based on p-value	
	Emotion regulation, HD, T0-T1	Very high risk ● (BP, BA)	*n* = 160 *MD* = .66 CI (n.a.) **I**	Only significant measures reported; clinical implication based on p-value	SDQ
	Emotion regulation, TAU, T0-T1	Very high risk ● (BP, BA)	*n* = 160 *MD* = .68 CI (n.a.) **I**	Only significant measures reported; clinical implication based on p-value	SDQ
Emotionsregulation. Lehrer*innenurteil					
Huberts-Boschet et al., 2023 **Population: children (5–12 years) with ADHD** **Intervention: Elimination diet or Healthy diet** **Comparison: treatment as usual**	**Emotion regulation, Between-group, T1**	High Risk ◑ (BP)	*n* = 153 ηp2 = 0.15 CI (n.a.) **I**	Only significant between-group effects reported. ED and HD superior to TAU, no differences between dietary groups; clinical implication based on p-value	SDQ

Anmerkung. *n* = Anzahl der Versuchspersonen. SG = sequence generation, CC = concealment, BP = blinding participants, BA = blinding assessors, ID = incomplete data, OR = outcome reporting, CE = carry over effects, SX = stopped early, UM = unvalidated measures, OI = other issue.

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1.4.3.4. Können Omega 3 Fettsäuren zur Behandlung von ADHS empfohlen werden?

1.4.3.4. A

Berücksichtigte Endpunktkategorien: Meta-Analysen

Endpunktkategorien	MAs	*m*	Gesamtaussagesicherheit der Evidenz
ADHS Symptome gesamt (KU)	1	3	Moderat
ADHS Symptome gesamt (E)	3	9	
ADHS Symptome gesamt (L)	2	3	
ADHS Symptome gesamt (KL)	1	2	
Aufmerksamkeit (KU)	1	3	
Aufmerksamkeit (E)	2	6	
Aufmerksamkeit (L)	1	2	
Aufmerksamkeit (KL)	1	2	
Hyperaktivität/ Impulsivität (KU)	1	2	
Hyperaktivität/ Impulsivität (E)	2	6	
Hyperaktivität/ Impulsivität (L)	1	2	
Hyperaktivität/ Impulsivität (KL)	1	2	
ADHS Symptomverbesserung (E)	1	3	
Kognitive Leistung (T)	1	5	
Verhaltensprobleme (E)	2	8	
Verhaltensprobleme (L)	2	5	
Lebensqualität (E)	1	1	
Sicherheit	2	18	

***Anmerkung*. MAs = Anzahl der Meta-Analysen, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.**

Summary of Findings Tabelle: Meta-Analysen

Referenz	Endpunkt	Aussagesicherheit (GRADE)	Effektstärke	Kommentare	Mess-instrument
ADHS Symptome gesamt. Kombiniertes Urteil					
Gillies, et al., 2023 **Population: children and adolescents with ADHD** **Intervention: Poly-unsaturated**	**ADHD symptoms total, Short term**	Very low ⊕◯◯◯ (R, IP, P)	*n* = 96, *k* = 2 *SMD* = .75 CI (.31 - 1.19) **C**	Intervention: 100% weight omega3	Teacher-rated Conners total score, ADHD Rating Scale Parent- and investigator-rated at 1, 3, 6, 12 months

fatty acids w-3 (EPA, DHA, ALA) and/ or w-6 (AA, LA, GLA) between 2 weeks and 6 months with or without any other co-intervention Comparison: stimulants (methylphenidate or dexamfetamine)	**ADHD symptoms total, Medium term**	Very low ⊕◯◯◯ (R, IP, P)	*n* = 60, *k* = 1 *SMD* = .62 CI (.10 - 1.13) **C**	Intervention: 100% weight omega3	ADHD Rating Scale Parent- and investigator-rated at 1, 3, 6, 12 months
	ADHD symptoms total, Long term	Very low ⊕◯◯◯ (R, IP, P)	*n* = 60, *k* = 1 *SMD* = .30 CI (-.21 - .81) **U**	Intervention: 100% weight omega3	ADHD Rating Scale Parent- and investigator-rated at 1, 3, 6, 12 months
ADHS Symptome gesamt. Elternurteil					
Chang, et al., 2018 Population: children and adolescents with ADHD (4–17 years) Intervention: PUFAs supplementation with DHA and EPA alone or in combination (dosage EPA 80-650mg and DHA 2,7 - 640mg) Comparison: placebo	**ADHS-symptoms total**	High ⊕⊕⊕⊕	*n* = 534, *k* = 7 *g* = .38 CI (.20 - .56) **I**	Only RCTs included	CPRS-L, Conner's ADHS, CRS, CPRS, SNAP-IV, SDQ, DISYPS-II, CBCL, SWAN, CHQ-PF50
	ADHS-symptoms total, EPA>=500	High ⊕⊕⊕⊕	*n* = 255, *k* = 3 *g* = .36 CI (.10 - .62) **I**	Only RCTs included	CRS, DISYPS-II, CBCL, TRF, SWAN
	ADHS-symptoms total, EPA<500	High ⊕⊕⊕⊕	*n* = 309, *k* = 4 *g* = .39 CI (.15 - .64) **I**	Only RCTs included	CPRS-L; Conner's ADHD, CTRS, CPRS, SDQ, CHQ-PF5, Abbreviated CRS
Gillies, et al., 2023 Population: children and adolescents with ADHD Intervention: Poly-unsaturated fatty acids w-3 (EPA, DHA, ALA) and/ or w-6 (AA, LA, GLA) between	**ADHD symptoms total, Short term**	Very low ⊕◯◯◯ (IC, IP, P)	*n* = 442, *k* = 8 *SMD* = .17 CI (-.25 - .59) **U**	Intervention: 100% weight only omega 3	Parent ADHD Rating Scale, Conners Rating Scale
	ADHD symptoms total, Medium term	Very low ⊕◯◯◯ (IC, IP, P)	*n* = 1166, *k* = 16 *SMD* = -.08 CI (-.24 - .07) **U**	Intervention: 12% weight omega3 + omega6. 88% only omega3.	Parent ADHD Rating Scale, SWAN, SNAP-IV, Parent Conners Rating Scale, DISYPS-II

2 weeks and 6 months with or without any other co-intervention Comparison: placebo without any other co-intervention or with the same co-intervention	**ADHD symptoms total, Long term**	Very low ⨁◯◯◯ (R, IP, P)	*n* = 60, *k* = 1 *SMD* = -.30 CI (-.81 - .21) **U**	Intervention: 100% weight only omega3.	Parent ADHD Rating Scale
	ADHD symptoms total, Only omega 3 studies	Very low ⨁◯◯◯ (IC, IP, P)	*n* = 1039, *k* = 14 *SMD* = -.06 CI (-.23 - .11) **U**		Parent ADHD Rating Scale, Conners Rating Scale
	ADHD symptoms total, Only omega 6 and 3 studies	Low ⨁⨁◯◯ (IP, P)	*n* = 127, *k* = 2 *SMD* = -.28 CI (-.63 - .07) **U**		Parent ADHD Rating Scale, Conners Rating Scale
Händel, et al., 2021 **Population: children and adolescents with ADHD (6–18 years) Intervention: supplements with polyunsaturated fatty acids w-3 and/or w-6 between 8 weeks and 12 months with or without medical treatment Comparison: placebo with or without medical treatment**	**ADHD core symptoms**	Low ⨁⨁◯◯ (IC)	*n* = 1755, *k* = 24 *SMD* = -.17 CI (-.32 - -.02) **I**	Result significant, but not exceeding the “Minimal clinically important difference” (MCID)	Parent ADHD rating scale
ADHS Symptome gesamt. Lehrer*innenurteil					
Gillies, et al., 2023 **Population: children and**	**ADHD symptoms total, Short term**	Very low ⨁◯◯◯ (R, IC, IP)	*n* = 185, *k* = 4 *SMD* = .35 CI (-.30 - 1.00)	Intervention: 100% weight omega 3	Teacher-rated Conners total score, Teacher ADHD Rating Scale IV, Parent-

adolescents with ADHD **Intervention: Poly-unsaturated fatty acids w-3 (EPA, DHA, ALA) and/ or w-6 (AA, LA, GLA) between 2 weeks and 6 months with or without any other co-intervention** **Comparison: placebo without any other co-intervention or with the same co-intervention**	**ADHD symptoms total, Medium term**	Very low ⨁◯◯◯ (IC, IP, P)	*n* = 498, *k* = 6 *SMD* = .06 CI (-.12 - .24) **U**	Intervention: 7% weight omega3 + omega6; 93% weight omega3	SNAP-IV rated by teachers, Teacher Conners Rating Scale, teacher-rated DISYPS-II
Händel, et al., 2021 **Population: children and adolescents with ADHD (6–18 years)** **Intervention: supplements with polyunsaturated fatty acids w-3 and/or w-6 between 8 weeks and 12 months with or without medical treatment** **Comparison: placebo with or without medical treatment**	**ADHD core symptoms**	Very low ⨁◯◯◯ (R, IC, IP)	*n* = 641, *k* = 10 *SMD* = -.06 CI (-.31 - .19) **U**	Search string limited to RCTs	Any questionnaire mentioned
ADHS Symptome gesamt. Kliniker*innenurteil					
Gillies, et al., 2023 **Population: children and adolescents with ADHD**	**ADHD symptoms total, Short term**	Moderate ⨁⨁⨁◯ (R)	*n* = 143, *k* = 2 *SMD* = -.74 CI (-1.08 - -.40) **I**	Intervention: 100% weight omega3	Conners Abbreviated Questionnaire score (ASQ-P), Mean symptom severity - ADHD Rating Scale

Intervention: Poly-unsaturated fatty acids w-3 (EPA, DHA, ALA) and/ or w-6 (AA, LA, GLA) between 2 weeks and 6 months with or without any other co-intervention Comparison: placebo without any other co-intervention or with the same co-intervention	**ADHD symptoms total, Medium term**	Very low ⊕◯◯◯ (IP, P)	*n* = 64, *k* = 1 *SMD* = -.35 CI (-.84 - .15) **U**	Intervention: 100% weight omega3	Clinician-rated ADHD Rating Scale scores: total scores
Aufmerksamkeit. Kombiniertes Urteil					
Gillies, et al., 2023 **Population: children and adolescents with ADHD Intervention: Poly-unsaturated fatty acids w-3 (EPA, DHA, ALA) and/ or w-6 (AA, LA, GLA) between 2 weeks and 6 months with or without any other co-intervention Comparison: stimulants (methylphenidate or dexamfetamine)**	**ADHD symptoms: inattention, Short term**	Very low ⊕◯◯◯ (R, IP, P)	*n* = 60, *k* = 1 *SMD* = .88 CI (.35 - 1.41) **C**	Intervention: 100% weight omega3	Parent- and investigator-rated ADHD (ADHD Rating Scale)
	ADHD symptoms: inattention, Medium term	Very low ⊕◯◯◯ (R, IP, P)	*n* = 60, *k* = 1 *SMD* = .47 CI (-.04 - .98) **U**	Intervention: 100% weight omega3	Parent- and investigator-rated ADHD (ADHD Rating Scale)
	ADHD symptoms: inattention, Long term	Very low ⊕◯◯◯ (R, IP, P)	*n* = 60, *k* = 1 *SMD* = .06 CI (-.45 - .57) **U**	Intervention: 100% weight omega3	Parent- and investigator-rated ADHD (ADHD Rating Scale)
Aufmerksamkeit. Elternurteil					
Chang, et al., 2018 **Population: children and adolescents with**	**Inattention**	High ⊕⊕⊕⊕	*n* = 590, *k* = 7 *g* = .42 CI (.23 - .62) **I**	Only randomized, double-blind, placebo-controlled trials included	CPRS-L, Conner's ADHS, CRS, CPRS, SNAP-IV, SDQ, DISYPS-II, CBCL, SWAN, CHQ-PF50

ADHD (4–17 years) Intervention: PUFAs supplementation with DHA and EPA alone or in combination (dosage EPA 80-650mg and DHA 2,7 - 640mg) Comparison: placebo	**Inattention symptom scores, EPA>=500**	High ⊕⊕⊕⊕	*n* = 316, *k* = 4 *g* = .36 CI (.15 - .81) **I**	Only randomized, double-blind, placebo-controlled trials included	CRS, SNAP-IV, DISYPS-II, CBCL, TRF, SWAN
	Inattention symptom scores, EPA<500	High ⊕⊕⊕⊕	*n* = 240, *k* = 3 *g* = .36 CI (.10 - .63) **I**	Only randomized, double-blind, placebo-controlled trials included	CPRS-L; Conner's ADHD, CTRS, CPRS, SDQ, CHQ-PF50
Gillies, et al., 2023 **Population: children and adolescents with ADHD Intervention: Poly-unsaturated fatty acids w-3 (EPA, DHA, ALA) and/ or w-6 (AA, LA, GLA) between 2 weeks and 6 months with or without any other co-intervention Comparison: placebo without any other co-intervention or with the same co-intervention**	**ADHD symptoms: inattention, Short term**	Very low ⊕◯◯◯ (IC, IP, P)	*n* = 283, *k* = 5 *SMD* = .01 CI (-.31 - .33) **U**	Intervention: 100% weight only omega3	RBPC (attention subscale), parent ADHD Rating Scale (inattention subscale), Parent-rated DSM-IV attentionsubscales
	ADHD symptoms: inattention, Medium term	Very low ⊕◯◯◯ (R, IC, IP, P)	*n* = 960, *k* = 12 *SMD* = -.01 CI (-.20 - .17) **U**	Intervention: 5,4% weight omega3 + omega6; 95% weight only omega3	ADHD Rating Scale, CBCL, SWAN, SNAP-IV rated by parents, Conners Parent Rating Scale – Revised, Parent- and teacher-rated Disrupted Behavior Disorders Rating Scale: hyperactivity, attention, Parent- and teacher-rated DISYPS-II
	ADHD symptoms: inattention, Long term	Very low ⊕◯◯◯ (R, IP, P)	*n* = 60, *k* = 1 *SMD* = -.39 CI (-.90 - .12) **U**	Intervention: 100% weight omega 3	ADHD Rating Scale
Aufmerksamkeit. Lehrer*innenurteil					

Gillies, et al., 2023 **Population: children and adolescents with ADHD** **Intervention: Poly-unsaturated fatty acids w-3 (EPA, DHA, ALA) and/ or w-6 (AA, LA, GLA) between 2 weeks and 6 months with or without any other co-intervention** **Comparison: placebo without any other co-intervention or with the same co-intervention**	**ADHD symptoms inattention, Short term**	Very low ⊕◯◯◯ (R, IP)	*n* = 86, *k* = 2 *SMD* = .20 CI (-.40 - .44) **U**	Intervention: 100% weight omega3	Teacher-rated Conners Questionnaire subscales: inattention and hyperactivity
	ADHD symptoms inattention, Medium term	Very low ⊕◯◯◯ (IC, IP, P)	*n* = 428, *k* = 5 *SMD* = .17 CI (-.14 - .49) **U**	Intervention: 12% weight omega3 + omega6; 88% weight omega3	SNAP-IV rated by teachers, Teacher Conners Rating Scale, Teacher-rated DISYPS-II
Aufmerksamkeit. Kliniker*innenurteil					
Gillies, et al., 2023 **Population: children and adolescents with ADHD** **Intervention: Poly-unsaturated fatty acids w-3 (EPA, DHA, ALA) and/ or w-6 (AA, LA, GLA) between 2 weeks and 6 months with or without any other co-intervention** **Comparison: placebo without any other co-intervention or**	**ADHD symptoms inattention, Short term**	Low ⊕⊕◯◯ (IP)	*n* = 17, *k* = 1 *SMD* = -.05 CI (-1.00 - .90) **U**	Intervention: 100% weight omega3	Parent and teacher Conners rating scales
	ADHD symptoms inattention, Medium term	Low ⊕⊕◯◯ (IP, P)	*n* = 124, *k* = 2 *SMD* = -.29 CI (-.65 - .07) **U**	Intervention: 100% weight omega3; 1/2 don't have clinician rated questionnaire	Clinician-rated ADHD Rating Scale scores, Change in parent-rated abbreviated Conners Rating Scale

with the same co-intervention					
Hyperaktivität/ Impulsivität. Verschiedene Urteile					
Gillies, et al., 2023 **Population: children and adolescents with ADHD** **Intervention: Poly-unsaturated fatty acids w-3 (EPA, DHA, ALA) and/ or w-6 (AA, LA, GLA) between 2 weeks and 6 months with or without any other co-intervention** **Comparison: stimulants (methylphenidate or dexamfetamine)**	**ADHD symptoms: hyperactivity/ impulsivity, Short term**	Very low ⨁◯◯◯ (R, IP, P)	*n* = 96, *k* = 2 *SMD* = .66 CI (.25 - 1.07) **C**	Intervention: 100% weight omega3	Parent- and investigator-rated ADHD (ADHD Rating Scale) and Teacher-rated Conners total score and Hyperactivity Index
	ADHD symptoms: hyperactivity/ impulsivity, Medium term	Very low ⨁◯◯◯ (R, IP, P)	*n* = 60, *k* = 1 *SMD* = .58 CI (.07 - 1.10) **C**	Intervention: 100% weight omega3	Parent- and investigator-rated ADHD (ADHD Rating Scale)
Hyperaktivität/ Impulsivität. Elternurteil					
Chang, et al., 2018 **Population: children and adolescents with ADHD (4–17 years)** **Intervention: PUFAs supplementation with DHA and EPA alone or in combination (dosage EPA 80-650mg and DHA 2,7 - 640mg)** **Comparison: placebo**	**Hyperactivity**	Moderate ⨁⨁⨁◯ (IC)	*n* = 551, *k* = 6 *g* = .48 CI (.01 - .95) **I**	Only randomized, double-blind, placebo-controlled trials included	CPRS-L, Conner's ADHS, CRS, CPRS, SNAP-IV, SDQ, DISYPS-II, CBCL, SWAN, CHQ-PF50
	Hyperactivity symptom scores, EPA>=500	Low ⨁⨁◯◯ (IC)	*n* = 277, *k* = 3 *g* = .81 CI (.12 - 1.49) **I**	Only randomized, double-blind, placebo-controlled trials included	CPRS-L; Conner's ADHD, SNAP-IV, DISYPS-II, CBCL, TRF
	Hyperactivity symptom scores, EPA<500	Low ⨁⨁◯◯ (IC, IP)	*n* = 274, *k* = 3 *g* = .10 CI (-.22 - .43) **U**	Only randomized, double-blind, placebo-controlled trials included	CPRS-L; Conner's ADHD, CTRS, CPRS, SDQ, CHQ-PF50

Gillies, et al., 2023 **Population: children and adolescents with ADHD** **Intervention: Poly-unsaturated fatty acids w-3 (EPA, DHA, ALA) and/ or w-6 (AA, LA, GLA) between 2 weeks and 6 months with or without any other co-intervention** **Comparison: placebo without any other co-intervention or with the same co-intervention**	**ADHD symptoms: hyperactivity/ impulsivity, Short term**	Very low ⊕◯◯◯ (IC, ID, IP, P)	*n* = 2835, *k* = n.a. *SMD* = .15 CI (-.20 - .50) **U**	Intervention: 100% weight omega 3	RBPC: subscales: attention and motor excess, Parent ADHD Rating Scale: hyperactivity subscale, ADHD Parent Rating Scale, Parent-rated DSM-IV hyperactivity-impulsivity subscales
	ADHD symptoms: hyperactivity/ impulsivity, Medium term	Low ⊕⊕◯◯ (IP, P)	*n* = 869, *k* = 10 *SMD* = .09 CI (-.04 - .23) **U**	Intevention: 4% weight omega3 + omega6; 96% only omega3	ADHD Rating Scale; SNAP-IV rated by parents; Conners Parent Rating, DISYPS-II
	ADHD symptoms: hyperactivity/ impulsivity, Long term	Very low ⊕◯◯◯ (R, IP, P)	*n* = 60, *k* = 1 *SMD* = -.21 CI (-.72 - .29) **U**	Intervention: 100% weight omega 3	ADHD Rating Scale
Hyperaktivität/ Impulsivität. Lehrer/innenurteil					
Gillies, et al., 2023 **Population: children and adolescents with ADHD** **Intervention: Poly-unsaturated fatty acids w-3 (EPA, DHA, ALA) and/ or w-6 (AA, LA, GLA) between 2 weeks and 6 months with or without any other co-intervention** **Comparison: placebo without any other co-**	**ADHD symptoms: hyperactivity/impulsivity, Short term**	Very low ⊕◯◯◯ (R, IP, P)	*n* = 60, *k* = 1 *SMD* = 0 CI (-.51 - .52) **U**	Intervention: 100% weight omega3.	ADHD symptoms - hyperactivity/impulsivity, parent rated- short term. ADD-H Comprehensive Teacher Rating scale
	ADHD symptoms: hyperactivity/impulsivity, Medium term	Very low ⊕◯◯◯ (IC, IP, P)	*n* = 462, *k* = 6 *SMD* = .15 CI (-.03 - .34) **U**	Intervention: 7,3% weight omega3-omega6. 93,7% weight omega3.	SNAP-IV rated by teachers, Teacher Conners Rating Scale: hyperactive-impulsive subscales, Parent- and teacher-rated Disrupted Behavior

intervention or with the same co-intervention					Disorders Rating Scale: hyperactivity, teacher-rated DISYPS-II
Hyperaktivität/Impulsivität. Kliniker*innenurteil					
Gillies, et al., 2023 **Population: children and adolescents with ADHD** **Intervention: Poly-unsaturated fatty acids w-3 (EPA, DHA, ALA) and/ or w-6 (AA, LA, GLA) between 2 weeks and 6 months with or without any other co-intervention** **Comparison: placebo without any other co-intervention or with the same co-intervention**	**ADHD symptoms hyperactivity/impulsivity, Short term**	Very low ⨁◯◯◯ (R, IP, P)	*n* = 53, *k* = 2 *SMD* = .36 CI (-.18 - .91) **U**	Intervention: 100% weight omega.	Psychiatrists' Global Rating scale, Parent and teacher Conners rating scales
	ADHD symptoms hyperactivity/impulsivity, Medium term	Very low ⨁◯◯◯ (IP, P)	*n* = 64, *k* = 1 *SMD* = -.28 CI (-.77 - .21) **U**	Intervention: 100% weight omega	Clinician-rated ADHD Rating Scale scores: total scores, and inattention and hyperactive/impulsive subscale scores
ADHS Symptomverbesserung. Elternurteil					
Gillies, et al., 2023 **Population: children and adolescents with ADHD** **Intervention: Poly-unsaturated fatty acids w-3 (EPA, DHA, ALA) and/ or w-6 (AA, LA, GLA) between 2 weeks and 6 months with or without any**	**ADHD symptoms improvement, Short term**	Moderate ⨁⨁⨁◯ (IP)	*n* = 80, *k* = 2 *RR* = 1.22 CI (.85 - 1.76) **U**	Intervention: only omega-3; RCT and quasi-randomized controlled trials	Parent ADHD Rating Scale (1 study), measure unclear (1 study)
	ADHD symptoms improvement, Medium term	Moderate ⨁⨁⨁◯ (P)	*n* = 191, *k* = 3 *RR* = 1.95 CI (1.47 - 2.60) **I**	Intervention: 95% weight omega 3+omega6. 5% only omega 3; RCT and quasi-randomized controlled trials	Parent-rated "11-item checklist" (1 study), defined as no longer meeting parent criteria for hyperactivity (1 study), unclear measure (1 study)

other co-intervention Comparison: placebo without any other co-intervention or with the same co-intervention	**ADHD symptoms improvement, Long term**	Very low ⊕◯◯◯ (R, IC, ID, IP, P)	*n* = 141, *k* = 2 *RR* = 1.67 CI (.70 - 3.95) **U**	Intervention: 48.8% weight omega3 + omega6; 51,2% only omega3	Parent-rated "11-item checklist" (1study), 30% or more decrease in ADHD total score (1study)
Kognitive Leistung. Kognitive Tests					
Chang, et al., 2018 Population: children and adolescents with ADHD (4–17 years) Intervention: PUFAs supplementation with DHA and EPA alone or in combination (dosage EPA 80-650mg and DHA 2,7 - 640mg) Comparison: placebo	**Cognitive performance, Omission**	Moderate ⊕⊕⊕◯ (IC)	*n* = 214, *k* = 3 *g* = 1.09 CI (.43 - 1.75) **I**	Only randomized, double-blind, placebo-controlled trials were included	They report "omission error" as measurement but don´t report tasks used
	Cognitive performance, Comission	Very low ⊕◯◯◯ (IC, IP)	*n* = 85, *k* = 2 *g* = 2.14 CI (1.24 - 3.03) **I**	Only randomized, double-blind, placebo-controlled trials were included	They report "omission error" as measurement but don´t report tasks used
	Cognitive performance, Backward memory	Moderate ⊕⊕⊕◯ (IP)	*n* = 224, *k* = 2 *g* = .37 CI (-.05 - .79) **U**	Only randomized, double-blind, placebo-controlled trials were included	They report "backward memory" as measurement but don´t report tasks used.
	Cognitive performance, Forward memory	Moderate ⊕⊕⊕◯ (IP)	*n* = 224, *k* = 2 *g* = .06 CI (-.21 - .34) **U**	Only randomized, double-blind, placebo-controlled trials were included	They report "forward memory" as measurement but don´t report tasks used.
	Cognitive performance, Information processing	Very low ⊕◯◯◯ (IC, IP)	*n* = 309, *k* = 4 *g* = .46 CI (-.29 - 1.21) **U**	Only randomized, double-blind, placebo-controlled trials were included	They report "information processing" as measurement but don´t report tasks used.
Verhaltensprobleme. Elternurteil					

	Behaviour, internalizing, Medium term	Very low ⊕◯◯◯ (R, IP, P)	*n* = 237, *k* = 3 *SMD* = .16 CI (-.09 - .42) **U**	Intervention: 100% weight omega	SNAP-IV rated by parents: oppositional behaviour, Parent-rated SDQ: internalizing, Parent-rated CBC: internalizing
Gillies, et al., 2023 **Population: children and adolescents with ADHD** **Intervention: Poly-unsaturated fatty acids w-3 (EPA, DHA, ALA) and/ or w-6 (AA, LA, GLA) between 2 weeks and 6 months with or without any other co-intervention** **Comparison: placebo without any other co-intervention or with the same co-intervention**	**Behaviour, externalising, Short term**	Very low ⊕◯◯◯ (R, IP, P)	*n* = 60, *k* = 1 *SMD* = .02 CI (-.49 - .52) **U**	Intervention: 100% weight omega	Measured by: a. Parent-rated RBPC subscales: conduct; socialized aggression b. Teacher-rated Conners Questionnaire subscales: conduct c. ACTeR (Comprehensive Teacher Rating Scale) subscales: oppositional behaviour
	Behaviour, externalising, Medium term	Very low ⊕◯◯◯ (IC, IP, P)	*n* = 340, *k* = 5 *SMD* = .07 CI (-.26 - .41) **U**	Intervention: 100% weight omega	Measured by: Parent-rated CBCL: aggression, SNAP-IV rated by parents: oppositional behaviour, Parent-rated SDQ: externalizing behaviour, Conners Parent Rating Scale - aggression, conduct; oppositional
	Behaviour, conduct, Short term	Very low ⊕◯◯◯ (R, IP, P)	*n* = 60, *k* = 1 *SMD* = -.10 CI (-.60 - .41)	Intervention: 100% weight omega	Teacher-rated Conners Questionnaire subscales: conduct

			U		
	Behaviour, conduct, Medium term	Very low ⊕◯◯◯ (IC, IP, P)	*n* = 332, *k* = 5 *SMD* = .16 CI (-.05 - .38) **U**	Intervention: 9,8% weight omega3+omega6. 91,2% weight omega3	Parent-rated SDQ: conduct, CPRS - conduct, Parent- and teacher-rated Disrupted Behavior Disorders Rating Scale: conduct, Parent-rated CBCL: internalizing, externalizing
	Behaviour, oppositional, Medium term	Very low ⊕◯◯◯ (R, IC, IP, P)	*n* = 527, *k* = 6 *SMD* = .02 CI (-.17 - .21) **U**	Intervention: 7,5% weight omega3+omega6. 92,5% weight omega3	Measured by: SNAP-IV rated by parents: oppositional behaviour, CPRS: oppositionality subscales, Parent- and teacher-rated DBDRS: oppositional.
	Behaviour, socialisation, Medium term	Very low ⊕◯◯◯ (IC, IP, P)	*n* = 145, *k* = 2 *SMD* = .27 CI (-.06 - .60) **U**	Intervention: Intervention: 100% weight omega3. Subscales are internalising and externalising but not socialisation.	Parent-rated Child Behavior Checklist: internalizing, externalizing
Händel, et al., 2021 **Population: children and adolescents with ADHD (6–18 years)** **Intervention: supplements with polyunsaturated fatty acids w-3**	**Behavioral difficulties**	Low ⊕⊕◯◯ (IC, IP)	*n* = 683, *k* = 7 *SMD* = -.02 CI (-.17 - .14) **U**	Search string limited to randomized controlled trials	n.a.

and/or w-6 between 8 weeks and 12 months with or without medical treatment **Comparison: placebo with or without medical treatment**					
Verhaltensprobleme. Lehrer*innenurteil					
Gillies, et al., 2023 **Population: children and adolescents with ADHD** **Intervention: Poly-unsaturated fatty acids w-3 (EPA, DHA, ALA) and/ or w-6 (AA, LA, GLA) between 2 weeks and 6 months with or without any other co-intervention** **Comparison: placebo without any other co-intervention or with the same co-intervention**	**Conduct behaviour, Short term**	Very low ⊕◯◯◯ (R, IP, P)	*n* = 60, *k* = 1 *SMD* = -.03 CI (-.54 - .48) **U**	Intervention: 100% weight omega3	TCQ subscales: conduct
	Conduct behaviour, Medium term	Very low ⊕◯◯◯ (IC, IP, P)	*n* = 118, *k* = 2 *SMD* = -.03 CI (-.39 - .34) **U**	Intervention: 28% weight omega3 + omega6. 72% weight omega3. significant 1 out of 2 studies didn´t use a teacher rated questionnaire to assess behaviour-conduct.	teacher-rated DBDRS: conduct, Parent-rated CBCL: internalizing, externalizing
	Oppositional behaviour, Medium term	Very low ⊕◯◯◯ (R, IC, IP, P)	*n* = 224, *k* = 2 *SMD* = .10 CI (-.18 - .37) **U**	Intervention: 100% weight omega3	Teacher Conners Rating Scale: oppositionality subscales
	Socialisation behaviour, Medium term	Very low ⊕◯◯◯ (IP)	*n* = 85, *k* = 1 *SMD* = -.16 CI (-.58 - .27) **U**	Intervention: 100% weight omega3	Parent-rated Child Behavior Checklist: internalizing, externalizing

Händel, et al., 2021 **Population: children and adolescents with ADHD (6–18 years)** **Intervention: supplements with polyunsaturated fatty acids w-3 and/or w-6 between 8 weeks and 12 months with or without medical treatment** **Comparison: placebo with or without medical treatment**	**Behavioral difficulties**	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 378, *k* = 5 *SMD* = -.04 CI (-.35 - .26) **U**	n.a.
Lebensqualität. Elternurteil				
Händel, et al., 2021 **Population: children and adolescents with ADHD (6–18 years)** **Intervention: supplements with polyunsaturated fatty acids w-3 and/or w-6 between 8 weeks and 12 months with or without medical treatment** **Comparison: placebo with or without medical treatment**	**Quality of life, Follow-up**	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 60, *k* = 1 *SMD* = .01 CI (-.29 - .31) **U**	n.a.
Sicherheit				

Gillies, et al., 2023 **Population: children and adolescents with ADHD** **Intervention: Poly-unsaturated fatty acids w-3 (EPA, DHA, ALA) and/ or w-6 (AA, LA, GLA) between 2 weeks and 6 months with or without any other co-intervention** **Comparison: placebo without any other co-intervention or with the same co-intervention**	**Overall side effects**	Very low ⨁◯◯◯ (IC, IP, P)	*n* = 591, *k* = 8 *RR* = 1.02 CI (.69 - 1.52) **U**	Intervention: only omega3 Placebo 190 Pro 1000 Differenz: 4 mehr pro 1000 (CI 95% 59 weniger – 99 mehr)	n.a.
	Side effects: appetite loss	Very low ⨁◯◯◯ (IP, P)	*n* = 60, *k* = 1 *RR* = .48 CI (.27 - .83) **I**	No group-risk reported like in effect sides-overall outcome. Intervention: only omega3	n.a.
	Side effects: anxiety	Very low ⨁◯◯◯ (R, IP, P)	*n* = 60, *k* = 1 *RR* = .38 CI (.11 - 1.28) **U**	No group-risk reported like in effect sides-overall outcome. Intervention: only omega3	n.a.
	Side effects: dermatitis	Very low ⨁◯◯◯ (IP, P)	*n* = 147, *k* = 1 *RR* = 1.43 CI (.06 - 34.36) **U**	No group-risk reported like in effect sides-overall outcome. Intervention: only omega3	n.a.
	Side effects: diarrhoea	Low ⨁⨁◯◯ (IP, P)	*n* = 2073, *k* = n.a. *RR* = .71 CI (.36 - 1.41) **U**	No group-risk reported like in effect sides-overall outcome. Although three studies included in this outcome, only two report results. Intervention: only omega3	n.a.

	Side effects: gastrointestinal discomfort	Very low ⊕◯◯◯ (R, IP, P)	*n* = 269, *k* = 3 *RR* = .73 CI (.24 - 2.22) **U**	No group-risk reported like in effect sides-overall outcome. Althought three studies are included in this outcomen only two are reporting results. Intervention: only omega3	n.a.
	Side effects: headache	Very low ⊕◯◯◯ (R, IP, P)	*n* = 207, *k* = 2 *RR* = .56 CI (.31 - 1.01) **U**	No group-risk reported like in effect sides-overall outcome. Intervention: omega-3/omega-6 PUFA + MPH	n.a.
	Side effects: hyperactivity	Very low ⊕◯◯◯ (IP, P)	*n* = 147, *k* = 1 *RR* = 1.43 CI (.06 - 34.36) **U**	No group-risk reported like in effect sides-overall outcome. Intervention: only omega3	n.a.
	Side effects: insomnia	Very low ⊕◯◯◯ (R, IC, IP, P)	*n* = 122, *k* = 2 *RR* = .32 CI (.03 - 3.91) **U**	No group-risk reported like in effect sides-overall outcome. Intervention: only omega3	n.a.
	Side effects: irritability	Very low ⊕◯◯◯ (R, IP, P)	*n* = 60, *k* = 1 *RR* = .07 CI (.00 - 1.12) **U**	No group-risk reported like in effect sides-overall outcome. Intervention: only omega3	n.a.

	Side effects: nausea	Low ⊕⊕◯◯ (IC, IP)	*n* = 428, *k* = 5 *RR* = .97 CI (.41 - 2.34) **U**	No group-risk reported like in effect sides-overall outcome. Intervention: only omega3	n.a.
	Side effects: nose bleed	Very low ⊕◯◯◯ (IC, IP)	*n* = 158, *k* = 2 *RR* = .75 CI (.09 - 6.06) **U**	No group-risk reported like in effect sides-overall outcome. Intervention: only omega3	n.a.
	Side effects: palpitations	Very low ⊕◯◯◯ (R, IP, P)	*n* = 60, *k* = 1 *RR* = .71 CI (.25 - 2.00) **U**	No group-risk reported like in effect sides-overall outcome. Intervention: only omega3	n.a.
	Side effects: tics	Very low ⊕◯◯◯ (R, IC, IP, P)	*n* = 207, *k* = 2 *RR* = .50 CI (.06 - 4.46) **U**	No group-risk reported like in effect sides-overall outcome. Intervention: only omega3	n.a.
	Side effects: tremor	Very low ⊕◯◯◯ (R, IP, P)	*n* = 60, *k* = 1 *RR* = .33 CI (.01 - 7.87) **U**	No group-risk reported like in effect sides-overall outcome. Intervention: only omega3	n.a.
Händel, et al., 2021 **Population: children and adolescents with ADHD (6–18 years) Intervention: supplements with polyunsaturated fatty acids w-3 and/or w-6 between 8 weeks and 12 months with or without**	**Side effects: diarrhea**	Very low ⊕◯◯◯ (IC, IP)	*n* = 254, *k* = 3 *RR* = 1.08 CI (.32 - 3.63) **U**	Search string limited to randomized controlled trials	events
	Side effects: gastrointestinal discomfort	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 379, *k* = 3 *RR* = .72 CI (.27 - 1.88) **U**	Search string limited to randomized controlled trials	events
	Side effects: nausea	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 485, *k* = 5 *RR* = .99	Search string limited to randomized	events

medical treatment **Comparison: placebo with or without medical treatment**	CI (.41 - 2.38) **U**	controlled trials

Anmerkung. *n* = Anzahl der Versuchspersonen, *k* = Anzahl der inkludierten Primärstudien. R = risk of bias, IC = inconsistency, ID = indirectness, IP = imprecision, P = publication bias.

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1.4.3.5. Können andere Nahrungsergänzungsmittel zur Behandlung der ADHS empfohlen werden?

1.4.3.5. A

Berücksichtigte Endpunktkategorien: Meta-Analysen
Vitamin D

Endpunktkategorien	MAs	*m*	Gesamtaussagesicherheit der Evidenz
ADHS Symptome gesamt (KU)	1	1	Schwach/ Sehr schwach
Aufmerksamkeit (KU)	1	1	
Hyperaktivität (KU)	1	1	
Verhaltensprobleme (KU)	1	2	
Unerwünschte Ereignisse	1	1	

***Anmerkung*. MAs = Anzahl der Meta-Analysen, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.**

Berücksichtigte Endpunktkategorien: RCTs
Vitamin D

Endpunktkategorien	RCTs	*m*	Gesamtaussagesicherheit der Evidenz
ADHS Symptome gesamt (E)	1	1	Schwach/sehr schwach
ADHS Symptome gesamt (L)	1	1	
Verhaltensprobleme (E)	1	1	
Soziale Probleme (E)	1	1	
Psychosomatische Probleme (E)	1	1	
Angst (E)	1	1	

***Anmerkung*. RCTs = Anzahl der randomisierten kontrollierten Studien, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.**

Summary of Findings Tabelle: Meta-Analysen
Vitamin D

Referenz	Endpunkt	Aussagesicherheit (GRADE)	Effektstärke	Kommentare	Mess-instrument
ADHS Symptome gesamt. Kombiniertes Urteil					
Gan et al., 2019 **Population: children and adolescents with ADHD** **Intervention: Vitamin D supplementation during 6 to 12 weeks (doses: between 1000**	**ADHD symptom combined**	Very low ⊕◯◯◯ (R, IC, P)	*n* = 221, *k* = 3 *SMD* = .39 CI (.12 - .65) **I**	Parent-, teacher-, and clinician-rated	CPRS, ADHD-RS, WPREMB

IU/day and 50,000 IU/week) combined with methylphenidate. Comparison: no treatment or placebo treatment or same baseline treatment alone or placebo + same baseline treatment (all were placebo controlled finally)					
Aufmerksamkeit. Kombiniertes Urteil					
Gan et al., 2019 **Population: children and adolescents with ADHD Intervention: Vitamin D supplementation during 6 to 12 weeks (doses: between 1000 IU/day and 50,000 IU/week) combined with methylphenidate. Comparison: no treatment or placebo treatment or same baseline treatment alone or placebo + same baseline treatment (all were placebo controlled finally)**	**Inattention scores**	Very low ⊕◯◯◯ (R, IC, P)	*n* = 185, *k* = 3 *SMD* = .67 CI (.12 - 1.23) **I**	Parent-, teacher-, and clinician-rated; all studies initially defined aas randomized and blinded but then read details	CPRS, WCST
Hyperaktivität. Kombiniertes Urteil					
Gan et al., 2019 **Population: children and adolescents with ADHD Intervention: Vitamin D**	**Hyperactivity scores**	Very low ⊕◯◯◯ (R, IC, P)	*n* = 256, *k* = 4 *SMD* = .60 CI (.07 - 1.13) **I**	Parent-, teacher-, and clinician-rated; 3 studies are initially defined as randomized and blinded but then read details.	CPRS, ADHD-RS, WPREMB, WCST, CPQ, SDQT, SDQP, CPT

supplementation during 6 to 12 weeks (doses: between 1000 IU/day and 50,000 IU/week) combined with methylphenidate. Comparison: no treatment or placebo treatment or same baseline treatment alone or placebo + same baseline treatment (all were placebo controlled finally)				1 study Double-blinded (unclear randomized)	
Verhaltensprobleme. Kombiniertes Urteil					
Gan et al., 2019 **Population: children and adolescents with ADHD Intervention: Vitamin D supplementation during 6 to 12 weeks (doses: between 1000 IU/day and 50,000 IU/week) combined with methylphenidate. Comparison: no treatment or placebo treatment or same baseline treatment alone or placebo + same baseline treatment (all were placebo controlled finally)**	**Behavior score**	Low ⊕⊕◯◯ (R, P)	*n* = 125, *k* = 2 *SMD* = .54 CI (.18 - .90) **I**	Parent-, teacher-, and clinician-rated; 1 study is initially defined as randomized and blinded but then read details. 1 study Double-blinded (unclear randomized)	CPRS, ADHD-RS, WPREMB, CPQ, SDQT, SDQP, CPT
	Oppositional scores	Very low ⊕◯◯◯ (IC, IP, P)	*n* = 89, *k* = 2 *MD* = 9.76 CI (-.62 - 20.13) **U**	Parent-, teacher-, and clinician-rated; 2 studies are initially defined as randomized and blinded but then read details.	CPRS, ADHD-RS, WPREMB, WCST
Unerwünschte Ereignisse					
Gan et al., 2019 **Population: children and**	**Adverse effects of vitamin D supplementation**	Low ⊕⊕◯◯ (IP)	*n* = 224, *k* = 2 *Odds Ratio* = 1.53 CI (.86 - 2.72)	Adverse effects were: headache, weight loss, appetite loss,	Side effects questionnaire at 8 weeks (any specific)

adolescents with ADHD Intervention: Vitamin D supplementation during 6 to 12 weeks (doses: between 1000 IU/day and 50,000 IU/week) combined with methylphenidate. Comparison: no treatment or placebo treatment or same baseline treatment alone or placebo + same baseline treatment (all were placebo controlled finally)	**U**	impulsiveness, stomachache, sleep problems, nausea, vomiting, feeling of fear, emotional instability diarrhea. Intervention of the study: 2000 IU/day during 8-week vs Placebo (Starch).

Anmerkung. *n* = Anzahl der Versuchspersonen, *k* = Anzahl der inkludierten Primärstudien. R = risk of bias, IC = inconsistency, ID = indirectness, IP = imprecision, P = publication bias.

REFERENZEN

Gan, J., Galer, P., Ma, D., Chen, C., & Xiong, T. (2019). The Effect of Vitamin D Supplementation on Attention-Deficit/Hyperactivity Disorder: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. *J Child Adolesc Psychopharmacol*, *29*(9), 670-687. https://doi.org/10.1089/cap.2019.0059

Summary of Findings Tabelle: RCTs
Vitamin D

Referenz	Endpunkt	Risk of Bias	Effektstärke	Kommentare	Mess-instrument
ADHS Symptome gesamt. Elternurteil					
Rahmani, et al., 2022 **Population: children and adolescents with ADHD aged 6-15 years Intervention: combined vitamin D and neruofeedback Comparison: no intervention (A), neurofeedback (B), vitamin D (C)**	**Inattention, hyperactivity, and total ADHD symptoms**	No Risk ◯	*n* = 104 ES = n.a. CI (n.a.) **I**	Stronger effect on decreasing ADHD symptoms for combined intervention reported; clinical implication based on p-value	ADHD-RS-IV
ADHS Symptome. Lehrer*innenurteil					

Rahmani, et al., 2022 **Population: children and adolescents with ADHD aged 6-15 years** **Intervention: combined vitamin D and neruofeedback** **Comparison: no intervention (A), neurofeedback (B), vitamin D (C)**	**Inattention, hyperactivity, and total ADHD symptoms**	No Risk ◯	*n* = 104 ES = n.a. CI (n.a.) **I**	Stronger effect on decreasing ADHD symptoms for combined intervention reported, clinical implication based on p-value	ADHD-RS-IV
Verhaltensprobleme. Elternurteil					
Hemamy, et al., 2020 **Population: children with ADHD (DSM IV diagnoses), 6-12 years** **Intervention: vitamin D (50,000 IU/week, pearls) and magnesium (6 mg/kg/day, tablets) supplements** **Comparison: control group, placebo**	**Conduct problems score, Baseline – 8 weeks**	No Risk ◯	*n* = 66 ES = n.a. CI (n.a.) **I**	Supplementation with vitamin D and magnesium; clinical implication based on p-value	Connors Parent's Questionnaire, Scale-48
Soziale Probleme. Elternurteil					
Hemamy, et al., 2020 **Population: children with ADHD (DSM IV diagnoses), 6-12 years** **Intervention: vitamin D (50,000 IU/week, pearls) and magnesium (6 mg/kg/day, tablets) supplements** **Comparison: control group, placebo**	**Social problems score, Baseline – 8 weeks**	No Risk ◯	*n* = 66 ES = n.a. CI (n.a.) **I**	Clinical implication based on p-value	Connors Parent's Questionnaire, Scale-48
Psychosomatische Probleme. Elternurteil					
Hemamy, et al., 2020	**Psychosomatic problems score, Baseline – 8 weeks**	No Risk ◯	*n* = 66 ES = n.a. CI (n.a.)	Clinical implication based on p-value	Connors Parent's Questionnaire, Scale-48

Population: children with ADHD (DSM IV diagnoses), 6-12 years Intervention: vitamin D (50,000 IU/week, pearls) and magnesium (6 mg/kg/day, tablets) supplements Comparison: control group, placebo			**I**		
Angst. Elternurteil					
Hemamy, et al., 2020 **Population: children with ADHD (DSM IV diagnoses), 6-12 years Intervention: vitamin D (50,000 IU/week, pearls) and magnesium (6 mg/kg/day, tablets) supplements Comparison: control group, placebo**	**Anxiety score, Baseline – 8 weeks**	No Risk ◯	*n* = 66 ES = n.a. CI (n.a.) **U**	Clinical implication based on p-value	Connors Parent's Questionnaire, Scale-48

Anmerkung. *n* = Anzahl der Versuchspersonen. SG = sequence generation, CC = concealment, BP = blinding participants, BA = blinding assessors, ID = incomplete data, OR = outcome reporting, CE = carry over effects, SX = stopped early, UM = unvalidated measures, OI = other issue.

REFERENZEN

Rahmani, M., Mahvelati, A., Farajinia, A. H., Shahyad, S., Khaksarian, M., Nooripour, R., & Hassanvandi, S. (2022). Comparison of Vitamin D, Neurofeedback, and Neurofeedback Combined with Vitamin D Supplementation in Children with Attention-Deficit/Hyperactivity Disorder. *Arch Iran Med*, *25*(5), 285-393. https://doi.org/10.34172/aim.2022.47

Hemamy M, Pahlavani N, Amanollahi A, Islam SMS, McVicar J, Askari G, Malekahmadi M. The effect of vitamin D and magnesium supplementation on the mental health status of attention-deficit hyperactive children: a randomized controlled trial. BMC Pediatr. 2021 Apr 17;21(1):178. doi: 10.1186/s12887-021-02631-1. Erratum in: BMC Pediatr. 2021 May 12;21(1):230. doi: 10.1186/s12887-021-02683-3.

Berücksichtigte Endpunktkategorien: Meta-Analysen
Zink

Endpunktkategorien	MAs	*m*	Gesamtaussagesicherheit der Evidenz
ADHS Symptome gesamt (KU)	1	1	Schwach/ sehr schwach
Aufmerksamkeit (KU)	1	1	
Hyperaktivität (KU)	1	1	

***Anmerkung*. MAs = Anzahl der Meta-Analysen, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.**

Berücksichtigte Endpunktkategorien: RCTs
Zink

Endpunktkategorien	RCTs	*m*	Gesamtaussagesicherheit der Evidenz
ADHS Symptome gesamt (E)	1	1	No risk
Aufmerksamkeit (E)	1	1	
Hyperaktivität/ Impulsivität (E)	1	2	

***Anmerkung*. RCTs = Anzahl der randomisierten kontrollierten Studien, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.**

Summary of Findings Tabelle: Meta-Analysen
Zink

Referenz	Endpunkt	Aussagesicherheit (GRADE)	Effektstärke	Kommentare	Mess-instrument
ADHS Symptome gesamt. Kombiniertes Urteil					
Talebi, 2022 **Population: School-aged children with a diagnosis of ADHD (7 to 10 years) with and witout taking methylphenidate** **Intervention: Oral zinc supplementation (10mg - 40 mg) up to 6 weeks** **Comparison: Placebo**	**ADHD total scores**	Very low ⊕◯◯◯ (R, IC)	*n* = 489, *k* = 6 *g* = -.62 CI (-1.24 - -.002) **I**	Parent- and teacher-rated	CPQ, CPTRS, CGI, SNAP, PTR-ADHDS, ADHDS ACTQ-H ACTQ-A ACTQ-C
Aufmerksamkeit. Kombiniertes Urteil					
Talebi, 2022 **Population: School-aged children with a**	**Inattention scores**	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 305, *k* = 3 *g* = .21 CI (-.09 - .51) **U**	Parent- and teacher-rated	CPTRS & amp; SNAP, CPQ, ADHDS ACTQ-H

diagnosis of ADHD (7 to 10 years) with and witout taking methylphenidate Intervention: Oral zinc supplementation (10mg - 40 mg) up to 6 weeks Comparison: Placebo					ACTQ-A ACTQ-C
Hyperaktivität. Kombiniertes Urteil					
Talebi, 2022 **Population: School-aged children with a diagnosis of ADHD (7 to 10 years) with and witout taking methylphenidate Intervention: Oral zinc supplementation (10mg - 40 mg) up to 6 weeks Comparison: Placebo**	**Hyperactivity scores**	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 305, *k* = 3 *g* = -.93 CI (-3.31 - 1.45) **U**	Parent- and teacher-rated	CPTRS & SNAP, CPQ, ADHDS ACTQ-H ACTQ-A ACTQ-C

Anmerkung. *n* = Anzahl der Versuchspersonen, *k* = Anzahl der inkludierten Primärstudien. R = risk of bias, IC = inconsistency, ID = indirectness, IP = imprecision, P = publication bias.

REFERENZEN

Talebi, S., Miraghajani, M., Ghavami, A., & Mohammadi, H. (2022). The effect of zinc supplementation in children with attention deficit hyperactivity disorder: A systematic review and dose-response meta-analysis of randomized clinical trials. *Crit Rev Food Sci Nutr*, *62*(32), 9093-9102. https://doi.org/10.1080/10408398.2021.1940833

Summary of Findings Tabelle: RCTs
Zink

Referenz	Endpunkt	Risk of Bias	Effektstärke	Kommentare	Mess-instrument
ADHS Symptome gesamt. Elternurteil					
Noorazar, et al., 2020 **Population: 60 children with ADHD, aged 7–12 years who were treated with methylphenidate Intervention: 0.5–1 mg/kg/day methylphenidate plus zinc augmentation (10**	**ADHD total score**	No Risk ◯	*n* = 60 ES = n.a. CI (n.a.) **U**	Study duration 6 weeks; homogenity of regressions and no significant difference between groups, homogenity of variance, Levene's test: no significant difference between groups,	Connors Parent's Questionnaire

mg) Zn (10 cc zinc sulfate syrup) Comparison: control group, treated with 0.5–1 mg/kg/day methylphenidate plus placebo				Covariance analysis not significant; clinical implication based on p-value	
Aufmerksamkeit. Elternurteil					
Noorazar, et al., 2020 **Population: 60 children with ADHD, aged 7–12 years who were treated with methylphenidate Intervention: 0.5–1 mg/kg/day methylphenidate plus zinc augmentation (10 mg) Zn (10 cc zinc sulfate syrup) Comparison: control group, treated with 0.5–1 mg/kg/day methylphenidate plus placebo**	**Inattention**	No Risk ◯	*n* = 60 ES = n.a. CI (n.a.) **I**	Study duration 6 weeks; homogenity of regressions and no significant difference between groups, homogenity of variance, Levene's test: no significant difference between groups; Covariance analysis significant; clinical implication based on p-value	Connors Parent's Questionnaire
Hyperaktivität/ Impulsivität. Elternurteil					
Noorazar, et al., 2020 **Population: 60 children with ADHD, aged 7–12 years who were treated with methylphenidate Intervention: 0.5–1 mg/kg/day methylphenidate plus zinc augmentation (10 mg) Zn (10 cc zinc sulfate syrup) Comparison: control group, treated with 0.5–1 mg/kg/day methylphenidate plus placebo**	**Hyperactivity**	No Risk ◯	*n* = 60 ES = n.a. CI (n.a.) **U**	Study duration 6 weeks; homogenity of regressions and no significant difference between groups, homogenity of variance, Levene's test: no significant difference between groups, Covariance analysis: not significant; clinical implication based on p-value	Connors Parent's Questionnaire

	Impulsivity	No Risk ◯	*n* = 60 ES = n.a. CI (n.a.) **U**	Study duration 6 weeks; homogenity of regressions and no significant difference between groups, homogenity of variance, Levene's test: no significant difference between groups, Covariance analysis: not significant; clinical implication based on p-value	Connors Parent's Questionnaire	

Anmerkung. *n* = Anzahl der Versuchspersonen. SG = sequence generation, CC = concealment, BP = blinding participants, BA = blinding assessors, ID = incomplete data, OR = outcome reporting, CE = carry over effects, SX = stopped early, UM = unvalidated measures, OI = other issue.

REFERENZEN

Noorazar, S. G., Malek, A., Aghaei, S. M., Yasamineh, N., & Kalejahi, P. (2020). The efficacy of zinc augmentation in children with attention deficit hyperactivity disorder under treatment with methylphenidate: A randomized controlled trial. *Asian J Psychiatr*, *48*, 101868. https://doi.org/10.1016/j.ajp.2019.101868

Berücksichtigte Endpunktkategorien: RCTs
Micronutrients

Endpunktkategorien	RCTs	*m*	Gesamt
ADHS Symptome gesamt (E)	1	1	Schwach/ sehr schwach
ADHS Symptome gesamt (L)	1	1	
ADHS Symptome gesamt (KL)	2	2	
ADHS Symptome gesamt (S)	2	2	
ADHS Symptome gesamt (F)	1	1	
Aufmerksamkeit (KL)	2	2	
Aufmerksamkeit (S)	2	2	
Aufmerksamkeit (F)	1	1	
Hyperaktivität/ Impulsivität (KL)	2	2	
Hyperaktivität/ Implusivität (S)	2	2	
Hyperaktivität/ Impulsivität (F)	1	1	
Verhaltensprobleme (E)	1	2	
Verhaltensprobleme (L)	1	3	
Emotionsregulation (L)	1	1	
Funktionalität (KL)	3	4	
Klinischer Eindruck (KL)	3	7	
Konflikte (KU)	1	1	
Komorbiditäten (E)	1	1	
Komorbiditäten (S)	2	2	

***Anmerkung*. RCTs = Anzahl der randomisierten kontrollierten Studien, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.**

Summary of Findings Tabelle: RCTs
Micronutrients

Referenz	Endpunkt	Risk of Bias	Effektstärke	Kommentare	Mess-instrument
ADHS Symptome gesamt. Elternurteil					
Rucklidge, et al., 2018 **Population: children with ADHD aged 7-12 years** **Intervention: broad-spectrum Micronutrients (vitamins and minerals)** **Comparison: placebo**	**Total ADHD symptoms**	No Risk ◯	*n* = 93 ES = n.a. CI (n.a.) **U**	Clinical implication based on p-value	CPRS-R:L DSM-IV
ADHS Symptome gesamt. Lehrer*innenurteil					

Rucklidge, et al., 2018 **Population: children with ADHD aged 7-12 years** **Intervention: broad-spectrum Micronutrients (vitamins and minerals)** **Comparison: placebo**	**Total ADHD symptoms**	No Risk ◯	*n* = 93 ES = n.a. CI (n.a.) **U**	Clinical implication based on p-value	CPRS-R:L DSM-IV
ADHS Symptome gesamt. Kliniker*innenurteil					
Rucklidge, et al., 2018 **Population: children with ADHD aged 7-12 years** **Intervention: broad-spectrum Micronutrients (vitamins and minerals)** **Comparison: placebo**	**Total ADHD symptoms**	No Risk ◯	*n* = 93 ES = n.a. CI (n.a.) **U**	Clinical implication based on p-value	ADHD-RS-IV
Rucklidge, et al., 2014 **Population: adults with ADHD without medication** **Intervention: vitamins and minerals, without omega fatty acids** **Comparison: placebo**	**ADHD symptoms total**	No Risk ◯	*n* = 80 *d* = .23 CI (n.a.) **U**	Changes from baseline to end of treatment compared between randomized groups using repeated-measures ANCOVA; clinical implication based on p-value	CAARS (Conners Adult ADHD Rating Scale)
ADHS Symptome. Selbsturteil					
Rucklidge, et al., 2017 **Population: adults with ADHD** **Intervention: staying on Micronutrients after treatment phase** **Comparison: switching to medications (control A) or stopping treatment (control B)**	**ADHD total score**	Very high risk ● (BP, BA)	*n* = 72 ES = n.a. CI (n.a.) **U**	Result of ANCOVA comparing change-score from end of treatment to end of follow-up: Intervention significantly better than control B; clinical implication	Conners' Adult ADHD Rating Scale; Diagnostic and Statistical Manual

				based on p-value	
Rucklidge, et al., 2014 **Population: adults with ADHD without medication** **Intervention: vitamins and minerals, without omega fatty acids** **Comparison: placebo**	**ADHD symptoms total**	No Risk ◯	*n* = 80 *d* = .61 CI (n.a.) **I**	Changes from baseline to end of treatment compared between randomized groups using repeated-measures ANCOVA; clinical implication based on p-value	CAARS (Conners Adult ADHD Rating Scale)
ADHS Symptome. Fremdurteil					
Rucklidge, et al., 2014 **Population: adults with ADHD without medication** **Intervention: vitamins and minerals, without omega fatty acids** **Comparison: placebo**	**ADHD symptoms total**	No Risk ◯	*n* = 80 *d* = .59 CI (n.a.) **I**	Changes from baseline to end of treatment compared between randomized groups using repeated-measures ANCOVA; clinical implication based on p-value	CAARS (Conners Adult ADHD Rating Scale)
Aufmerksamkeit. Kliniker*innenurteil					
Rucklidge, et al., 2018 **Population: children with ADHD aged 7-12 years** **Intervention: broad-spectrum Micronutrients (vitamins and minerals)** **Comparison: placebo**	**Inattention**	No Risk ◯	*n* = 93 ES = n.a. CI (n.a.) **U**	Clinical implication based on p-value	ADHD-RS-IV
Rucklidge, et al., 2014 **Population: adults with ADHD without medication**	**Inattention**	No Risk ◯	*n* = 80 *d* = .02 CI (n.a.) **U**	Changes from baseline to end of treatment compared between randomized groups using	CAARS (Conners Adult ADHD Rating Scale)

Intervention: vitamins and minerals, without omega fatty acids **Comparison: placebo**				repeated-measures ANCOVA; clinical implication based on p-value	
Aufmerksamkeit. Selbsturteil					
Rucklidge, et al., 2017 **Population: adults with ADHD** **Intervention: staying on Micronutrients after treatment phase** **Comparison: switching to medications (control A) or stopping treatment (control B)**	**Inattention**	Very high risk ● (BP, BA)	*n* = 72 ES = n.a. CI (n.a.) **I**	Result of ANCOVA comparing change-score from end of treatment to end of follow-up: Intervention significantly better than control B; clinical implication based on p-value	Conners' Adult ADHD Rating Scale; Diagnostic and Statistical Manual
Rucklidge, et al., 2014 **Population: adults with ADHD without medication** **Intervention: vitamins and minerals, without omega fatty acids** **Comparison: placebo**	**Inattention**	No Risk ◯	*n* = 80 *d* = .62 CI (n.a.) **I**	Changes from baseline to end of treatment compared between randomized groups using repeated-measures ANCOVA; clinical implication based on p-value	CAARS (Conners Adult ADHD Rating Scale)
Aufmerksamkeit. Fremdurteil					
Rucklidge, et al., 2014 **Population: adults with ADHD without medication** **Intervention: vitamins and minerals, without omega fatty acids** **Comparison: placebo**	**Inattention**	No Risk ◯	*n* = 80 *d* = .33 CI (n.a.) **U**	Changes from baseline to end of treatment compared between randomized groups using repeated-measures ANCOVA; clinical implication	CAARS (Conners Adult ADHD Rating Scale)

				based on p-value	
Hyperaktivität/ Impulsivität. Kliniker*innenurteil					
Rucklidge, et al., 2018 **Population: children with ADHD aged 7-12 years** **Intervention: broad-spectrum Micronutrients (vitamins and minerals)** **Comparison: placebo**	**Hyperactivity/impulsivity**	No Risk ◯	*n* = 93 ES = n.a. CI (n.a.) **U**	Clinical implication based on p-value	ADHD-RS-IV
Rucklidge, et al., 2014 **Population: adults with ADHD without medication** **Intervention: vitamins and minerals, without omega fatty acids** **Comparison: placebo**	**Hyperactivity-impulsivity**	No Risk ◯	*n* = 80 *d* = .40 CI (n.a.) **U**	Changes from baseline to end of treatment compared between randomized groups using repeated-measures ANCOVA; clinical implication based on p-value	CAARS (Conners Adult ADHD Rating Scale)
Hyperaktivität/ Impulsivität. Selbsturteil					
Rucklidge, et al., 2017 **Population: adults with ADHD** **Intervention: staying on Micronutrients after treatment phase** **Comparison: switching to medications (control A) or stopping treatment (control B)**	**Hyperactivity/impulsivity**	Very high risk ● (BP, BA)	*n* = 72 ES = n.a. CI (n.a.) **U**	Result of ANCOVA comparing change-score from end of treatment to end of follow-up: no significant differences; clinical implication based on p-value	Conners' Adult ADHD Rating Scale; Diagnostic and Statistical Manual
Rucklidge, et al., 2014 **Population: adults with ADHD without medication**	**Hyperactivity-impulsivity**	No Risk ◯	*n* = 80 *d* = .47 CI (n.a.) **I**	Changes from baseline to end of treatment compared between	CAARS (Conners Adult ADHD Rating Scale)

Intervention: vitamins and minerals, without omega fatty acids **Comparison: placebo**				randomized groups using repeated-measures ANCOVA; clinical implication based on p-value	
Hyperaktivität/ Impulsivität. Fremdurteil					
Rucklidge, et al., 2014 **Population: adults with ADHD without medication** **Intervention: vitamins and minerals, without omega fatty acids** **Comparison: Placebo**	**Hyperactivity-impulsivity**	No Risk ◯	*n* = 80 *d* = .67 CI (n.a.) **I**	Changes from baseline to end of treatment compared between randomized groups using repeated-measures ANCOVA; clinical implication based on p-value	CAARS (Conners Adult ADHD Rating Scale)
Verhaltensprobleme. Elternurteil					
Rucklidge, et al., 2018 **Population: children with ADHD aged 7-12 years** **Intervention: broad-spectrum Micronutrients (vitamins and minerals)** **Comparison: placebo**	**Conduct problem score**	No Risk ◯	*n* = 93 *d* = .52 CI (n.a.) **I**	Clinical implication based on p-value	Strength and difficulties questionnaire (SDQ)
	Total problem score	No Risk ◯	*n* = 93 ES = n.a. CI (n.a.) **U**	Clinical implication based on p-value	Strength and difficulties questionnaire (SDQ)
Verhaltensprobleme. Lehrer*innenurteil					
Rucklidge, et al., 2018 **Population: children with ADHD aged 7-12 years** **Intervention: broad-spectrum Micronutrients (vitamins and minerals)** **Comparison: placebo**	**Conduct problem score**	No Risk ◯	*n* = 93 ES = n.a. CI (n.a.) **U**	Clinical implication based on p-value	Strength and difficulties questionnaire (SDQ)
	Behavioural regulation index	No Risk ◯	*n* = 93 ES = n.a. CI (n.a.) **U**	Clinical implication based on p-value	Global assessment of functioning (BRIEF)

	Total problem score	No Risk ◯	*n* = 93 ES = n.a. CI (n.a.) **U**	Clinical implication based on p-value	Strength and difficulties questionnaire (SDQ)
Emotionsregulation. Lehrer*innenurteil					
Rucklidge, et al., 2018 **Population: children with ADHD aged 7-12 years** **Intervention: broad-spectrum Micronutrients (vitamins and minerals)** **Comparison: placebo**	**Emotional control subscale**	No Risk ◯	*n* = 93 *d* = .66 CI (n.a.) **I**	Clinical implication based on p-value	Global assessment of functioning (BRIEF)
Funktionalität. Kliniker*innenurteil					
Rucklidge, et al., 2018 **Population: children with ADHD aged 7-12 years** **Intervention: broad-spectrum Micronutrients (vitamins and minerals)** **Comparison: placebo**	**C-GAS**	No Risk ◯	*n* = 93 *d* = .48 CI (n.a.) **I**	Clinical implication based on p-value	Childrens Global Assessment Scale
Rucklidge, et al., 2017 **Population: adults with ADHD** **Intervention: staying on Micronutrients after treatment phase** **Comparison: switching to medications (control A) or stopping treatment (control B)**	**GAF total**	Very high risk ● (BP, BA)	*n* = 72 ES = n.a. CI (n.a.) **I**	Result of ANCOVA comparing change-score from end of treatment to end of follow-up: intervention significantly better than both control groups; clinical implication based on p-value	Global Assessment of Functioning
Rucklidge, et al., 2014 **Population: adults with ADHD without medication**	**LIFE-RIFT total**	No Risk ◯	*n* = 80 *d* = .25 CI (n.a.)	Changes from baseline to end of treatment compared between	Longitudinal Interval Follow-up Evaluation – Range Impaired Functioning Tool

Intervention: vitamins and minerals, without omega fatty acids **Comparison: Placebo**			**U**	randomized groups using repeated-measures ANCOVA; clinical implication based on p-value	
	GAF	No Risk ◯	*n* = 80 *d* = .46 CI (n.a.) **I**	Changes from baseline to end of treatment compared between randomized groups using repeated-measures ANCOVA; clinical implication based on p-value	Global Assessment of Functioning
Klinischer Gesamteindruck. Kliniker*innenurteil					
Rucklidge, et al., 2018 **Population: children with ADHD aged 7-12 years** **Intervention: broad-spectrum Micronutrients (vitamins and minerals)** **Comparison: placebo**	**CGI**	No Risk ◯	*n* = 93 *d* = .46 CI (n.a.) **I**	Clinical implication based on p-value	Clinical Global Impression Improvement
	CGI-I-ADHD	No Risk ◯	*n* = 93 *d* = .53 CI (n.a.) **I**	Clinical implication based on p-value	Clinical Global Impression Improvement
	CGI-I-Mood	No Risk ◯	*n* = 93 *d* = .51 CI (n.a.) **I**	Clinical implication based on p-value	Clinical Global Impression Improvement
Rucklidge, et al., 2017 **Population: adults with ADHD** **Intervention: staying on Micronutrients after treatment phase**	**CGI-I-ADHD**	Very high risk ● (BP, BA)	*n* = 72 ES = n.a. CI (n.a.) **U**	Result of ANCOVA comparing change-score from end of treatment to end of follow-up:	Clinical Global Impression Improvement

Comparison: switching to medications (control A) or stopping treatment (control B)				intervention significantly better than both control groups; Clinical implication based on p-value	
	CGI-I-global	Very high risk ● (BP, BA)	*n* = 72 ES = n.a. CI (n.a.) **I**	Result of ANCOVA comparing change-score from end of treatment to end of follow-up: intervention significantly better than both control groups; Clinical implication based on p-value	Clinical Global Impression Improvement
Rucklidge, et al., 2014 **Population: adults with ADHD without medication** **Intervention: vitamins and minerals, without omega fatty acids** **Comparison: Placebo**	**CGI-I-ADHD**	No Risk ◯	*n* = 80 *d* = .53 CI (n.a.) **I**	Changes from baseline to end of treatment compared between randomized groups using repeated-measures ANCOVA; clinical implication based on p-value	Clinical Global Impression Improvement - ADHD
	CGI-I-global	No Risk ◯	*n* = 80 *d* = .57 CI (n.a.) **I**	Changes from baseline to end of treatment compared between randomized groups using repeated-measures ANCOVA; clinical implication	Clinical Global Impression Improvement – overall impression

				based on p-value	
Konflikte. Kombiniertes Urteil					
Johnstone, et al., 2022 **Population: unmedicated children (6–12 years) with ADHD and at least one impairing irritability symptom** **Intervention: micronutrients (vitamins/minerals)** **Comparison: placebo**	**Peer conflicts, Between groups**	No Risk ◯	*n* = 135 *MD* = -.13 CI (n.a.) **I**	Only significant measures reported; clinical implication based on p-value; other adults-/ teacher-rating: clinical implication based on p-value	Child and Adolescent Symptom Inventory-5 (CASI-5)
Komorbiditäten. Elternurteil					
Rucklidge, et al., 2018 **Population: children with ADHD aged 7-12 years** **Intervention: broad-spectrum Micronutrients (vitamins and minerals)** **Comparison: placebo**	**Mania, CMRS-p**	No Risk ◯	*n* = 93 ES = n.a. CI (n.a.) **U**	Clinical implication based on p-value	Child Mania Rating Scale (CMRS), parent Version
Komorbiditäten. Selbsturteil					
Rucklidge, et al., 2017 **Population: adults with ADHD** **Intervention: staying on Micronutrients after treatment phase** **Comparison: switching to medications (control A) or stopping treatment (control B)**	**Depression, MADRS total**	Very high risk ● (BP, BA)	*n* = 72 ES = n.a. CI (n.a.) **I**	Result of ANCOVA comparing change-score from end of treatment to end of follow-up: intervention significantly better than both control groups; clinical implication based on p-value	Montgommery-Asberg Depression Rating Sclae

Rucklidge, et al., 2014 **Population: adults with ADHD without medication** **Intervention: vitamins and minerals, without omega fatty acids** **Comparison: placebo**	**Depression, MADRS total**	No Risk ◯	*n* = 80 *d* = .41 CI (n.a.) **U**	Changes from baseline to end of treatment compared between randomized groups using repeated-measures ANCOVA; clinical implication based on p-value	Montgommery-Asberg Depression Rating Sclae

Anmerkung. *n* = Anzahl der Versuchspersonen. SG = sequence generation, CC = concealment, BP = blinding participants, BA = blinding assessors, ID = incomplete data, OR = outcome reporting, CE = carry over effects, SX = stopped early, UM = unvalidated measures, OI = other issue.

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1.4.4 Sport- und Bewegungstherapie

1.4.4.1. Was ist bzgl. sport- und bewegungstherapeutischen Interventionen im Rahmen einer ADHS-Behandlung zu beachten?

1.4.4.1. A

Berücksichtigte Endpunktkategorien: Meta-Analysen

Endpunktkategorien	MAs	*m*	Gesamtaussagesicherheit der Evidenz
ADHS Symptome gesamt (KU)	3	3	Schwach/sehr schwach
Aufmerksamkeit (KU)	6	6	
Hyperaktivität/ Impulsivität (KU)	4	5	
Funktionsniveau (KU)	1	1	
Exekutive Funktionen (KL)	3	8	
Soziale Probleme (KU)	1	1	
Externalisierendes Verhalten (KU)	1	1	

Anmerkung. MAs = Anzahl der Meta-Analysen, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.

Summary of Findings Tabelle: Meta-Analysen

Referenz	Endpunkt	Aussagesicherheit (GRADE)	Effektstärke	Kommentare	Mess-instrument
ADHS Symptome gesamt. Kombiniertes Urteil					
Hamada et al., 2025 **Population:** children and adolescents under 18 with ADHD symptoms **Intervention:** computer games delivered through digital devices **Comparison:** waitlist, treatment as usual (TAU), sham interventions (e.g., games without anti-ADHD components)	**Total ADHD symptoms, +Physical Exercise/VR vs. C**	Very low ⊕◯◯◯ (R,IP)	*n* = 121 *SMD* = -.40 CI (-.76 - -.04) **I**	Rating according to GRADE rating from MA	Parent and teacher rated questionnaires
Seiffer et al., 2022 **Population:** children/adolescents with ADHD 6 - 18(21) years **Intervention:** moderate to vigorous physical activity (MVPA)	**Total ADHD symptoms, MVPA vs. C**	Low ⊕⊕◯◯ (R,IP)	*n* = 448 *g* = -.33 CI (-.63 - -.02) **I**	Grading of evidence done by authors	CSI-4. Conners 3, K-ARS, DBD, ADDES, BASC, SWAN, CBCL, CPRS-R

Comparison: Standard treatment or passive control group					
Sun et al., 2024 **Population:** children/adolescents with ADHD **Intervention:** Structured Physical exercise (SPE) **Comparison:** different control groups	**Total ADHD symptoms, SPE vs. C**	Very low ⊕◯◯◯ (R,IC,IP)	*n* = 161 *SMD* = -.97 CI (-2.26 - -.11) **I**		Neurocognitive tasks, parent and teacher rated questionnaires (CBCL, Conners Rating Scale)
Aufmerksamkeit. Kombiniertes Urteil					
Cerillo-Urbina et al., 2015 **Population:** children/adolescents with ADHD 6 - 18(21) years **Intervention:** Physical Exercises programmes **Comparison:** no PE intervention (passive control)	**Attention, PE vs. noPE**	Low ⊕⊕◯◯ (R)	*n* = 142 *SMD* = .84 CI (.48 - 1.20) **I**		n.a.
Cornelius et al., 2017 **Population:** children/adolescents with ADHD (3-18 years old) **Intervention:** Physical Activity (PA) **Comparison:** different control groups	**Attention, PA vs. C**	High ⊕⊕⊕⊕	*n* = n.a. *g* = .46 CI (-.62 - 1.54) **U**	no information regarding R, IC, ID, IP	Neurocognitive tasks, parent and teacher rated questionnaires
Hamada et al., 2025 **Population:** children and adolescents under 18 with ADHD symptoms **Intervention:** computer games delivered through digital devices **Comparison:** waitlist, treatment as usual (TAU), sham interventions (e.g.,	**Inattention, +Physical Exercise/VR vs. C**	Very low ⊕◯◯◯ (R,IP)	*n* = 121 *SMD* = -.40 CI (-.76 - -.04) **I**	Rating according to GRADE rating from MA	Parent and teacher rated questionnaires

games without anti-ADHD components)					
Seiffer et al., 2022 **Population:** children/adolescents with ADHD 6 - 18(21) years **Intervention:** moderate to vigorous physical activity (MVPA) **Comparison:** Standard treatment or passive control group	**Inattention, MVPA vs. C**	Low ⊕⊕◯◯ (IP)	*n* = 360 *g* = -.60 CI (-1.26 - .06) **U**		CSI-4. Conners 3, K-ARS, DBD, ADDES, BASC, SWAN, CBCL, CPRS-R
Sun et al., 2022 **Population:** children/adolescents with ADHD 5-15 years **Intervention:** Physical exercise Interventions **Comparison:** passive control groups	**Attention problems, PEI vs. C**	Low ⊕⊕◯◯ (R,IC)	*n* = 352 *SMD* = -.60 CI (-1.10 - -.11) **I**		Neurocognitive tasks, parent and teacher rated questionnaires (CBCL, Conners Rating Scale)
Sun et al., 2024 **Population:** children/adolescents with ADHD **Intervention:** Structured Physical exercise (SPE) **Comparison:** different control groups	**Inattention, SPE vs. C**	Very low ⊕◯◯◯ (R,IC)	*n* = 96 *SMD* = -1.37 CI (-1.10 - -.11) **I**		Neurocognitive tasks, parent and teacher rated questionnaires (CBCL, Conners Rating Scale)
Hyperaktivität/ Impulsivität. Kombiniertes Urteil					
Cerillo-Urbina et al., 2015 **Population:** children/adolescents with ADHD 6 - 18(21) years **Intervention:** Physical Exercises programmes **Comparison:** no PE intervention (passive control)	**Hyperactivity, PE vs. noPE**	Very low ⊕◯◯◯ (R,IP)	*n* = 62 *SMD* = .56 CI (.04 - 1.08) **I**		n.a.
	Impulsivity, PE vs. noPE	Very low ⊕◯◯◯ (R,IP)	*n* = 62 *SMD* = .56 CI (.04 - 1.08) **I**		n.a.
Hamada et al., 2025	**Hyperactivity/ Impulsivity,**	Very low ⊕◯◯◯ (R,IP)	*n* = 121 *SMD* = -.40 CI (-.76 - -.04)	Rating according to GRADE rating from MA	Parent and teacher rated questionnaires

Population: children and adolescents under 18 with ADHD symptoms **Intervention:** computer games delivered through digital devices **Comparison:** waitlist, treatment as usual (TAU), sham interventions (e.g., games without anti-ADHD components)	**+Physical Exercise/VR vs. C**		**I**		
Seiffer et al., 2022 **Population:** children/adolescents with ADHD 6 - 18(21) years **Intervention:** moderate to vigorous physical activity (MVPA) **Comparison:** Standard treatment or passive control group	**Hyperactivity, MVPA vs. C**	Moderate ⊕⊕⊕◯ (R)	*n* = 360 *g* = -.25 CI (-.54 - .05) **U**		CSI-4. Conners 3, K-ARS, DBD, ADDES, BASC, SWAN, CBCL, CPRS-R
Sun et al., 2022 **Population:** children/adolescents with ADHD 5-15 years **Intervention:** Physical exercise Interventions **Comparison:** passive control groups	**Hyperactivity, PEI vs. C**	Moderate ⊕⊕⊕◯ (R)	*n* = 161 *SMD* = .06 CI (-.26 - .37) **U**		Neurocognitive tasks, parent and teacher rated questionnaires (CBCL, Conners Rating Scale)
Funktionsniveau. Kombiniertes Urteil					
Seiffer et al., 2022 **Population:** children/adolescents with ADHD 6 - 18(21) years **Intervention:** moderate to vigorous physical activity (MVPA) **Comparison:** Standard treatment or passive control group	**Functioning level, MVPA vs. C**	Low ⊕⊕◯◯ (R,IP)	*n* = 124 *g* = -.32 CI (-.74 - -.11) **I**	Rating according to GRADE rating from MA	SDQ, CBCL
Exekutive Funktionen. Kliniker*innenurteil					
Liang et al., 2021	**Overall EF, PEI vs. C**	Low ⊕⊕◯◯ (R,IC)	*n* = 493 *SMD* = .61	3 included studies not randomized	Different neurocognitive tests

Population: children/adolescents with ADHD 6 - 18 years **Intervention:** Physical Exercise Interventions **Comparison:** Different Control Groups			CI (.39 - .84) 		
	Cognitive flexibility, PEI vs. C	Low ⊕⊕◯◯ (R,IC)	*n* = n.a. *g* = .78 CI (.33 - 1.23) 	1 included study not randomized	Different neurocognitive tests
	Inhibitory control, PEI vs. C	Low ⊕⊕◯◯ (R,IC)	*n* = n.a. *g* = .76 CI (.38 - 1.15) 	3 included studies not randomized	Different neurocognitive tests
	Working memory, PEI vs. C	Moderate ⊕⊕⊕◯ (R)	*n* = n.a. *g* = .38 CI (.03 - .73) 		Different neurocognitive tests
Song et al., 2023 **Population:** children/adolescents with ADHD **Intervention:** Physical Exercise Interventions **Comparison:** passive control groups	**Cognitive flexibility, PEI vs. C**	Low ⊕⊕◯◯ (R,IC)	*n* = n.a. *SMD* = -.45 CI (-.81 - -.09) 	3 included studies not randomized	Different neurocognitive tests
	Inhibitory control, PEI vs. C	Low ⊕⊕◯◯ (R,IC)	*n* = n.a. *SMD* = -.50 CI (-.71 - -.29) 	6 included studies not randomized	Different neurocognitive tests
	Working memory, PEI vs. C	Low ⊕⊕◯◯ (R,IC)	*n* = n.a. *SMD* = -.50 CI (-.30 - -.16) 	2 included studies not randomized	Different neurocognitive tests
Qiu et al., 2023 **Population:** children/adolescents with ADHD (5-18 years old) **Intervention:** Physical Exercise Interventions **Comparison:** passive and active control groups	**Overall EF, PEI vs. C**	Very low ⊕◯◯◯ (R,IC,P)	*n* = 558 *g* = 1.11 CI (.73 - 1.48) 	3 included studies not randomized	Different neurocognitive tests

Soziale Probleme. Kombiniertes Urteil					
Cornelius et al., 2017 **Population:** children/adolescents with ADHD (3-18 years old) **Intervention:** Physical Activity (PA) **Comparison:** different control groups	**Social problems, PA vs. C**	High ⊕⊕⊕⊕	*n* = n.a. *g* = -.64 CI (-3.72 - 2.42) **U**	no information regarding R, IC, ID, IP	Neurocognitive tasks, parent and teacher rated questionnaires

Externalisierendes Verhalten. Kombiniertes Urteil					
Cornelius et al., 2017 **Population:** children/adolescents with ADHD (3-18 years old) **Intervention:** Physical Activity (PA) **Comparison:** different control groups	**Disruptive behavior, PA vs. C**	High ⊕⊕⊕⊕	*n* = n.a. *g* = -.88 CI (-4.07 - 2.31) **U**	no information regarding R, IC, ID, IP	Neurocognitive tasks, parent and teacher rated questionnaires

Anmerkung. *n* = Anzahl der Versuchspersonen, *k* = Anzahl der inkludierten Primärstudien. R = risk of bias, IC = inconsistency, ID = indirectness, IP = imprecision, P = publication bias.

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1.5 Pharmakotherapie

1.5.2. Welche Präparate sind zur Behandlung empfohlen? 1.5.4. Nach welchen patient*innenindividuellen Kriterien sollten die passenden Medikamente ausgewählt werden?

1.5.2. A & 1.5.4. A

Berücksichtigte Endpunktkategorien: Meta-Analysen

Endpunktkategorien	MAs	*m*	Gesamtaussagesicherheit der Evidenz
ADHS Symptome gesamt (KL)	3	14	Moderat - Hoch
ADHS Symptome gesamt (E)	1	4	
ADHS Symptome gesamt (L)	3	8	
ADHS Symptome gesamt (S)	1	2	
ADHS Symptome gesamt (KU)	4	11	
Klinischer Gesamteindruck (KL)	3	11	
Probleme des Verhaltens (KU)	2	4	
Lebensqualität (KU)	2	3	
Akademisches Funktionsniveau (KU)	1	2	
Schwerwiegende unerwünschte Ereignisse (KU)	2	3	
Unerwünschte Ereignisse (KU)	2	2	

Anmerkung. MAs = Anzahl der Meta-Analysen, m = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.

Summary of Findings Tabelle: Meta-Analysen

Referenz	Endpunkt	Aussagesicherheit (GRADE)	Effektstärke	Kommentare	Mess-instrument
ADHS Symptome gesamt. Kliniker*innenurteil					
Cortese et al., 2018 **Population**: Children with ADHD **Intervention**: MPH or Amphetamines or ATX or Guanfacine **Comparison:** Placebo or different medication	**ADHD total symptoms, Amphetamines vs. placebo**	Moderate ⊕⊕⊕◯ (R)	*n* = n.a., *k* = 6 *SMD* = -1.02 CI (-1.19 - -.85) **I**	GRADE rating based on study authors	ADHD-RS, ADHD-SRS, SNAP-IV, CPRS-R, CTRS-R, CASS, Conners 3, IOWA CPRS/ CTRS, SKAMP, VADTRS, VADPRS, SWAN, ADDES-1, ACTeRS
	ADHD total symptoms, ATX vs. placebo	Low ⊕⊕◯◯ (R,IC)	*n* = n.a., *k* = 21 *SMD* = -.56 CI (-.66 - - .45) **I**	GRADE rating based on study authors	ADHD-RS, ADHD-SRS, SNAP-IV, CPRS-R, CTRS-R, CASS, Conners 3, IOWA CPRS/ CTRS, SKAMP, VADTRS, VADPRS, SWAN, ADDES-1, ACTeRS
	ADHD total symptoms, GUA vs. placebo	Moderate ⊕⊕⊕◯ (R)	*n* = n.a., *k* = 7 *SMD* = -.67 CI (-.85 - - .50) **I**	GRADE rating based on study authors	ADHD-RS, ADHD-SRS, SNAP-IV, CPRS-R, CTRS-R, CASS, Conners 3, IOWA CPRS/ CTRS, SKAMP, VADTRS, VADPRS, SWAN, ADDES-1, ACTeRS

	ADHD total symptoms, MPH vs. placebo	Moderate ⊕⊕⊕◯ (R)	*n* = n.a., *k* = 9 *SMD* = -.78 CI (-.93 - - .62) I	GRADE rating based on study authors	ADHD-RS, ADHD-SRS, SNAP-IV, CPRS-R, CTRS-R, CASS, Conners 3, IOWA CPRS/ CTRS, SKAMP, VADTRS, VADPRS, SWAN, ADDES-1, ACTeRS
Cortese et al., 2018 **Population**: Adults with ADHD **Intervention**: MPH or Amphetamines or ATX or Guanfacine **Comparison:** Placebo or different medication	**ADHD total symptoms, Amphetamine vs. placebo**	Moderate ⊕⊕⊕◯ (R)	*n* = n.a., *k* = 5 *SMD* = -.79 CI (-.99 - - .58) I	GRADE rating based on study authors	AIRS, CAARS-O:L, CAARS-O:S, ADHD-RS, WRAADS, BAARS-IV
	ADHD total symptoms, ATX vs. placebo	Low ⊕⊕◯◯ (R,IC)	*n* = n.a., *k* = 11 *SMD* = -.45 CI (-.58 - - .32) I	GRADE rating based on study authors	AIRS, CAARS-O:L, CAARS-O:S, ADHD-RS, WRAADS, BAARS-IV
	ADHD total symptoms, MPH vs. placebo	Moderate ⊕⊕⊕◯ (IC)	*n* = n.a., *k* = 11 *SMD* = -.78 CI (-.64 - - .35) I	GRADE rating based on study authors	AIRS, CAARS-O:L, CAARS-O:S, ADHD-RS, WRAADS, BAARS-IV
Correll et al., 2021 **Population**: Children and adolescents with ADHD **Intervention**: MPH, Amphetamines, GUA, ATX, alpha2-agonists + stimulants **Comparison:** Placebo	**ADHD total symptoms, Amphetamines vs. placebo**	High ⊕⊕⊕⊕	*n* = 9926, *k* = 46 *SMD* = -1.02 CI (-1.19 - -.85) I	GRADE not applicable. AMSTAR-rating adapted from study	n.a.
	ADHD total symptoms, MPH vs. placebo	High ⊕⊕⊕⊕	*n* = 9926, *k* = 46 SMD = -.78 CI (-.93 - - .62) I	GRADE not applicable. AMSTAR-rating adopted from study	n.a.
	ADHD total symptoms, ATX vs. placebo	High ⊕⊕⊕⊕	*n* = 9926, *k* = 46 SMD = -.56 CI (-.66 - - .45) I	GRADE not applicable. AMSTAR-rating adopted from study	n.a.
	ADHD total symptoms, GUA vs. placebo	High ⊕⊕⊕⊕	*n* = 9926, *k* = 46 *SMD* = -.67 CI (-.85 - - .50) I	GRADE not applicable. AMSTAR-rating adopted from study	n.a.

Ostinelli et al., 2025 **Population**: Adults with ADHD **Intervention**: Stimulants ATX or GUA **Comparison:** Placebo	**ADHD total symptoms, Stimulants vs. placebo**	High ⊕⊕⊕⊕	*n* = n.a., *k* = 16 *SMD* = -.61 CI (-.71 - - .51) **I**	No information regarding RoB, indirectness, imprecision and publication bias	n.a.
	ADHD total symptoms, ATX vs. placebo	High ⊕⊕⊕⊕	*n* = n.a., *k* = 16 *SMD* = -.51 CI (.37 - .64) **I**	No information regarding RoB, indirectness, imprecision and publication bias	n.a.
	ADHD total symptoms, GUA vs. placebo	Moderate ⊕⊕⊕◯ (IP)	*n* = n.a., *k* = 6 *SMD* = .39 CI (-.07 - .86) **U**	No information regarding RoB, indirectness, imprecision and publication bias	n.a.
ADHS Symptome gesamt. Elternurteil					
Correll et al., 2021 **Population**: Children and adolescents with ADHD **Intervention**: MPH, Amphetamines, GUA, ATX, alpha2-agonists + stimulants **Comparison:** Placebo	**ADHD total symptoms, Amphetamines vs. placebo**	High ⊕⊕⊕⊕	*n* = 3796, *k* = 23 *SMD* = -1.07 CI (-1.36 - -.79) **I**	GRADE not applicable. AMSTAR-rating adopted from study	n.a.
	ADHD total symptoms, MPH vs. placebo	High ⊕⊕⊕⊕	*n* = 3796, *k* = 23 *SMD* = -.84 CI (-.95 - -.72) **I**	GRADE not applicable. AMSTAR-rating adopted from study	n.a.
	ADHD total symptoms, ATX vs. placebo	High ⊕⊕⊕⊕	*n* = 3796, *k* = 23 *SMD* = -.60 CI (-.71 - -.50) **I**	GRADE not applicable. AMSTAR-rating adopted from study	n.a.
	ADHD total symptoms, GUA vs. placebo	High ⊕⊕⊕⊕	*n* = 3796, *k* = 23 *SMD* = -.23 CI (-.90 - .45) **U**	GRADE not applicable. AMSTAR-rating adopted from study	n.a.
ADHS Symptome gesamt. Lehrer*innenurteil					
Cortese et al., 2018 **Population:** Children with ADHD	**ADHD total symptoms, ATX vs. placebo**	Very low ⊕◯◯◯ (R, ID, IP)	*n* = n.a., *k* = 3 *SMD* = -.32 CI (-.82 - .18)	GRADE rating from study authors used	ADHD-RS, ADHD-SRS, SNAP-IV, CPRS-R, CTRS-R, CASS, Conners 3, IOWA CPRS/ CTRS, SKAMP, VADTRS,

Intervention: MPH or Amphetamines or ATX or Guanfacin **Comparison:** Placebo or different medication			**U**		VADPRS, SWAN, ADDES-1, ACTeRS
	ADHD total symptoms, GUA vs. placebo	Very low ⊕◯◯◯ (R, ID, IP)	*n* = 3796, *k* = 23 *SMD* = -.63 CI (-1.62 - .35) **U**	GRADE rating from study authors used	ADHD-RS, ADHD-SRS, SNAP-IV, CPRS-R, CTRS-R, CASS, Conners 3, IOWA CPRS/ CTRS, SKAMP, VADTRS, VADPRS, SWAN, ADDES-1, ACTeRS
	ADHD total symptoms, MPH vs. placebo	Low ⊕⊕◯◯ (R, IC)	*n* = n.a., *k* = 5 *SMD* = -.82 CI (-1.16 - -.48) **I**	GRADE rating from study authors used	ADHD-RS, ADHD-SRS, SNAP-IV, CPRS-R, CTRS-R, CASS, Conners 3, IOWA CPRS/ CTRS, SKAMP, VADTRS, VADPRS, SWAN, ADDES-1, ACTeRS
Correll et al., 2021 **Population:** Children and adolescents with ADHD **Intervention:** MPH, Amphetamines, GUA, ATX, alpha2-agonists + stimulants **Comparison:** Placebo	**ADHD total symptoms, Amphetamines vs. placebo**	Moderate ⊕⊕⊕◯ (R)	*n* = 745, *k* = 5 *SMD* = -.55 CI (-1.16 - -.48) **I**	GRADE not applicable. AMSTAR-rating adopted from study	n.a.
	ADHD total symptoms, MPH vs. placebo	High ⊕⊕⊕⊕	*n* = 1843, *k* = 16 *SMD* = -.82 CI (-1.16 - -.48) **I**	GRADE not applicable. AMSTAR-rating adopted from study	n.a.
	ADHD total symptoms, ATX vs. placebo	High ⊕⊕⊕⊕	*n* = 1843, *k* = 16 *SMD* = -.63 CI (-.82 - .18) **U**	GRADE not applicable. AMSTAR-rating adopted from study	n.a.
	ADHD total symptoms, GUA vs. placebo	High ⊕⊕⊕⊕	*n* = 1843, *k* = 16 *SMD* = -.63 CI (-1.62 - .35) **U**	GRADE not applicable. AMSTAR-rating adopted from study	n.a.
Storebo et al., 2023 **Population:** Children and adolescents with ADHD **Intervention:** MPH **Comparison:** Placebo or no intervention	**ADHD symptoms**	Very low ⊕◯◯◯ (R, IC)	*n* = 1728, *k* = 21 *SMD* = -.74 CI (-.88 - -.61) **I**	GRADE rating from study authors used	CTRS, SWAN, SNAP, FBBHKS

ADHS Symptome gesamt. Selbsturteil					
Ostinelli et al., 2025 **Population:** Adults with ADHD **Intervention:** Stimulants, ATX or GUA **Comparison:** Placebo	**Total ADHD symptoms, Stimulants vs. placebo**	Very low ⊕◯◯◯ (R, IC, IP)	*n* = n.a., *k* = 16 *SMD* = -.39 CI (-.52 - -.26) **I**	Certainty of evidence taken from the author's rating (CINeMA)	n.a.
	ADHD total symptoms, ATX vs. placebo	Moderate ⊕⊕⊕◯ (R)	*n* = n.a., *k* = 38 *SMD* = .38 CI (.21 - .56) **I**	Certainty of evidence taken from the author's rating (CINeMA)	n.a.
	ADHD total symptoms, GUA vs. placebo	Low ⊕⊕◯◯ (R, IP)	*n* = n.a., *k* = 6 *SMD* = .67 CI (-.01 – 1.36) **U**	Certainty of evidence taken from the author's rating (CINeMA)	n.a.
ADHS Symptome gesamt. Kombiniertes Urteil					
Stuhec, et al., 2019 **Population:** Adults diagnosed with ADHD **Intervention:** lisdexamfetamine (LDX), mixed amphetamine salts (MASs), modafinil (MDF) and methylphenidate (MPH) **Comparison:** placebo	**ADHD symptoms, MASs vs. placebo**	Moderate ⊕⊕⊕◯ (R, IP)	*n* = 516, *k* = 2 *SMD* = .64 CI (-.83 - -.45) **I**		ADHD DSM-IV-TR
	ADHD symptoms, LDX vs. placebo	Moderate ⊕⊕⊕◯ (R, IP)	*n* = 629, *k* = 3 *SMD* = .89 CI (-1.09 - -.70) **I**		ADHD DSM-IV-TR
	ADHD symptoms, MPH vs. placebo	Very Low ⊕◯◯◯ (R, IP)	*n* = 516, *k* = 2 *SMD* = .64 CI (-.58 - -.41) **I**		ADHD DSM-IV, WRAADDS, AISRS, CAARS, UPD ADHD DSM-III
Correll et al., 2021 **Population**: Children and adolescents with ADHD **Intervention**: MPH, Amphetamines, GUA, ATX, alpha2-agonists+stimulants **Comparison:** Placebo	**ADHD symptoms, Amphetamines vs. placebo**	Moderate ⊕⊕⊕◯ (R)	*n* = 7579, *k* = 36 *SMD* = -.18 CI (-.28 - -.09) **I**	GRADE not appli-cable. AMSTAR-rating adopted from study	n.a.
	ADHD symptoms, MPH vs. placebo	Moderate ⊕⊕⊕◯ (R)	*n = 7579, k = 36* *SMD* = -.14 CI (-.21 - -.08)	GRADE not appli-cable. AMSTAR-rating adopted from study	n.a.

			I		
	ADHD symptoms, ATX vs. placebo	Moderate ⊕⊕⊕◯ (R)	*n = 7579, k = 36* *SMD* = -.17 CI (-.23 - -.11) I	GRADE not applicable. AMSTAR-rating adopted from study	n.a.
	ADHD symptoms, GUA vs. Placebo	Moderate ⊕⊕⊕◯ (R)	*n = 7579, k = 36* *SMD* = -.16 CI (-.26 - -.05 I	GRADE not applicable. AMSTAR-rating adopted from study	n.a.
	ADHD symptoms, Alpha2-Agonists + Stimulants vs. placebo	High ⊕⊕⊕⊕	*n = 719, k = 3* *SMD* = -.36 CI (-.51 - -.21) I	GRADE not applicable. AMSTAR-rating adopted from study	n.a.
Radonjić et al., 2021 **Population:** Adults with ADHD **Intervention:** Atomoxetine and Guanfacine **Comparison:** Placebo	**ADHD symptoms, Atomoxetine vs. placebo**	High ⊕⊕⊕⊕ (IC)	*n* = 7579, *k* = 36 *SMD* = -.18 CI (-.28 - -.09) I	RCTs and non RCTS	Clinician- and self-report: CAARS-INV:SV, AISRS, ADHD-RS, ASRS, CAARSS:L, BADDS adults
	ADHD symptoms, Guanfacine vs. placebo	High ⊕⊕⊕⊕	*n* = 7579, *k = 36* *SMD* = -.14 CI (-.21 - -.08) I	RCTs and non RCTS	Self-report: ADHD Behavior Checklist for Adults, Clinician-report: ADHD-RS Total
Yu et al., 2023 **Population:** Children and adolescents with ADHD **Intervention:** GUA **Comparison:** Placebo	**Total ADHD symptoms**	High ⊕⊕⊕⊕ (R, P)	*n* = 1128, *k* = 6 *SMD* = -8.49 CI (-10.63 - -6.35) I		ADHD-RS-IV
Klinischer Gesamteindruck. Kliniker*innenurteil					
Stuhec et al., 2019 **Population:** Adults with ADHD	**CGI, MASs vs. placebo**	Moderate ⊕⊕⊕◯ (IP)	*n* = 516, *k* = 2 *SMD* = -8.49 CI (-10.63 - -6.35)		CGI-I

Intervention: lisdexamfetamine (LDX), mixed amphetamine salts (MASs), modafinil (MDF) and methylphenidate (MPH) **Comparison:** Placebo			**I**		
	CGI, LDX vs. placebo	Moderate ⊕⊕⊕◯ (IP)	*n* = 629, *k* = 3 *SMD* = -8.49 CI (-10.63 - -6.35) **I**		CGI-I
	CGI, MPH vs. placebo	Low ⊕⊕◯◯ (R, IP)	*n* = 2986, *k* = 12 *SMD* = -8.49 CI (-10.63 - -6.35) **I**		CGI-I
Correll et al., 2021 **Population**: Children and adolescents with ADHD **Intervention**: MPH, Amphetamines, GUA, ATX, alpha2-agonists+stimulants **Comparison:** Placebo	**Global Illness Improvement, Amphetamines vs. placebo**	High ⊕⊕⊕⊕	*n* = n.a., *k* = 40 *OR* = 5.57 CI (5.52 - 10.77) **I**	GRADE not appli-cable. AMSTAR-rating adopted from study	n.a.
	Global Illness Improvement, MPH vs. placebo	High ⊕⊕⊕⊕	*n* = n.a., *k* = 40 *OR* = 3.36 CI (3.99 - 7.79) **I**	GRADE not appli-cable. AMSTAR-rating adopted from study	n.a.
	Global Illness Improvement, GUA vs. placebo	High ⊕⊕⊕⊕	*n* = n.a., *k* = 40 *OR* = 5.57 CI (2.36 - 5.57) **I**	GRADE not appli-cable. AMSTAR-rating adopted from study	n.a.
	Global Illness Improvement, ATX vs. placebo	High ⊕⊕⊕⊕	*n* = n.a., *k* = 40 *OR* = 5.57 CI (1.38 - 3.76) **I**	GRADE not appli-cable. AMSTAR-rating adopted from study	n.a.
Yu et al., 2023 **Population:** Children and adolescents with ADHD **Intervention:** GUA **Comparison:** Placebo	**CGI, GUA vs. placebo, < 10 weeks**	Moderate ⊕⊕⊕◯ (R)	*n* = 1771, *k* = 7 *RR* = 1.97 CI (1.71 - 2.26) **I**		CGI-I
	CGI, GUA vs. placebo, > 10 weeks	High ⊕⊕⊕⊕	*n* = 852, *k* = 4 *RR* = 1.57 CI (1.37 - 1.79)		CGI-I

			I		
	CGI GUA vs. placebo, overall	Moderate ⊕⊕⊕◯ (R)	*n* = 2623, *k* = 11 *RR* = 1.78 CI (1.59 - 2.01) **I**		CGI-I
	CGI-S from Meta-analysis	High ⊕⊕⊕⊕	*n* = 850, *k* = 4 *RR* = 1.2 CI (0.99 - 1.45) **I**		CGI-S
Verhaltensprobleme. Kombiniertes Urteil					
Correll et al., 2021 **Population**: Children and adolescents with ADHD **Intervention**: MPH, Amphetamines, GUA, ATX, alpha2-agonists+stimulants **Comparison:** Placebo	**Aggressive behavior, MPH vs. placebo**	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 181, *k* = 2 *SMD* = -.26 CI (-1.10 - 0.68) **U**	GRADE not appli-cable. AMSTAR-rating adopted from study	n.a.
	Aggressive behavior, Amphetamines vs. placebo	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 84, *k* = 2 *SMD* = -1.15 CI (-1.38 - -.93) **I**	GRADE not appli-cable. AMSTAR-rating adopted from study	n.a.
	Aggressive behavior, ATX vs. placebo	Moderate ⊕⊕⊕◯ (R)	*n* = 2067, *k* = 15 *RR* = 1.34 CI (0.91 - 1.97) **U**	GRADE not appli-cable. AMSTAR-rating adopted from study	n.a.
Storebo et al., 2023 **Population:** Children and adolescents with ADHD **Intervention:** MPH **Comparison:** Placebo or no intervention	**General behavior**	Very Low ⊕◯◯◯ (R, IC)	*n* = 792, *k* = 7 *SMD* = -.62 CI (-.91 - - .33) **I**	GRADE rating from study authors used	n.a.
Lebensqualität. Kombiniertes Urteil					
Correll et al., 2021 **Population**: Children and adolescents with ADHD	**Quality of Life, MPH vs. placebo**	Moderate ⊕⊕⊕◯ (R)	*n* = 514, *k* = 3 *SMD* = -.61 CI (-.80 - - .42) **I**	GRADE not appli-cable. AMSTAR-rating adopted from study	n.a.

Intervention: MPH, Amphetamines, GUA, ATX, alpha2-agonists+stimulants **Comparison:** Placebo	**Quality of Life, ATX vs. placebo**	Moderate ⊕⊕⊕◯ (R)	*n* = 2631, *k* = 16 *SMD* = -.39 CI (-.50 - -.28) **I**	GRADE not appli-cable. AMSTAR-rating adopted from study	n.a.
Storebo et al., 2023 **Population:** Children and adolescents with ADHD **Intervention:** MPH **Comparison:** Placebo or no intervention	**Quality of Life**	Very low ⊕◯◯◯ (R, IC, ID, IP)	*n* = 608, *k* = 4 *SMD* = .40 CI (-.03 - .83) **U**	GRADE rating from study authors used	Child Health Questionnaire
Schulisches Funktionsniveau. Kombiniertes Urteil					
Correll et al., 2021 **Population**: Children and adolescents with ADHD **Intervention**: MPH, Amphetamines, GUA, ATX, alpha2-agonists+stimulants **Comparison:** Placebo	**Functioning ATX vs. placebo**	Moderate ⊕⊕⊕◯ (R)	*n* = 608, *k* = 4 *SMD* = .40 CI (-.03 - .83) **I**	GRADE not appli-cable. AMSTAR-rating adopted from study	n.a.
	Academic functioning, Amphetamines vs. placebo	Moderate ⊕⊕⊕◯ (R)	*n* = 826, *k* = 8 *SMD* = -.56 CI (-.73 - -.39) **U**	GRADE not appli-cable. AMSTAR-rating adopted from study	n.a.
Schwerwiegende unerwünschte Ereignisse. Kombiniertes Urteil					
Correll et al., 2021 **Population**: Children and adolescents with ADHD **Intervention**: MPH, Amphetamines, GUA, ATX, alpha2-agonists+stimulants **Comparison:** Placebo	**Suicide attempts, ATX vs. placebo**	Low ⊕⊕◯◯ (R, IC)	*n* = 3833, *k* = 23 *RR* = .84 CI (.03 - .20) **U**	GRADE not appli-cable. AMSTAR-rating adopted from study	n.a.
	Suicide ideation, ATX vs. placebo	Moderate ⊕⊕⊕◯ (R)	*n* = 2517, *k* = 15 *RR* = 1.67 CI (.83 - 3.36) **U**	GRADE not appli-cable. AMSTAR-rating adopted from study	n.a.
Storebo et al., 2023 **Population:** Children and adolescents with ADHD **Intervention:** MPH	**Participants with one or more Serious Adverse Events**	Very low ⊕◯◯◯ (R,IP)	*n* = 3673, *k* = 26 *RR* = .80 CI (.39 - -1.67) **U**	GRADE rating from study authors used	n.a.

Comparison: Placebo or no intervention					
Unerwünschte Ereignisse. Kombiniertes Urteil					
Yu et al., 2023 **Population:** Children and adolescents with ADHD **Intervention:** GUA **Comparison:** Placebo	**Treatment emergent adverse event**	Low ⊕⊕◯◯ (R, P)	*n* = 2273, *k* = 10 *MD* = 1.23 CI (1.14 - 1.32) **C**		TEAEs
Storebo et al., 2023 **Population:** Children and adolescents with ADHD **Intervention:** MPH **Comparison:** Placebo or no intervention	**Participants with one or more adverse events considered non-serious**	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 5342, *k* = 35 *RR* = 1.23 CI (1.11 - 1.37) **C**	GRADE rating from study authors used	n.a.

Anmerkung. *n* = Anzahl der Versuchspersonen, *k* = Anzahl der inkludierten Primärstudien. R = risk of bias, IC = inconsistency, ID = indirectness, IP = imprecision, P = publication bias.

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1.5.4. D

Berücksichtigte Endpunktkategorien: RCTs

Endpunktkategorien	RCTs	*m*	Gesamtaussagesicherheit der Evidenz
ADHS Symptome (E)	1	2	Hoch (Kinder & Jugendliche)
Verhaltensprobleme (L)	1	3	
Verhaltensprobleme (E)	3	6	
Verhaltensprobleme (U)	1	1	
Internalisierende Symptome (L)	1	2	
Internalisierende Symptome (L)	1	1	
Globales Funktionsniveau (E)	1	1	
Klinischer Gesamteindruck. (KL)	1	2	
Sicherheit (KL)	2	8	

Anmerkung. MAs = Anzahl der Meta-Analysen, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.

Summary of Findings Tabelle: RCTs

Referenz	Endpunkt	Risk of Bias	Effektstärke	Kommentare	Mess-instrument
ADHS Symptome. Elternurteil					
Jahngard et al., 2017 **Population:** children with ADHD (6-8 years old) and symptoms of ODD + previously failed improvements with standard dosages of MPH (10-15mg/d) and family counseling **Intervention:** adjuvant risperidone (henceforth MPH+RISP) **Comparison:** placebo (henceforth MPH+PBO)	**Hyperactivity Adjuvant risperidone vs. adjuvant placebo**	No Risk ◯	*n* = 84 F η^2 = .263 CI (n.a) **I**	Clinician implication based on p-value	Conners' Parent Rating Scale Revised – Long Version (CPRS-R: L)
	Cognitive problems/ Inattention Symptoms Adjuvant risperidone vs. adjuvant Placebo	No Risk ◯	*n* = 84 η^2 = .180 CI (n.a) **I**	Clinician implication based on p-value	Conners' Parent Rating Scale Revised – Long Version (CPRS-R: L)
Verhaltensprobleme. Lehrer*innenurteil					
Blader et al., 2021 **Population:** 6–12-year-olds with ADHD and either ODD or CD	**Aggressive Behavior Adjuvant risperidone vs. adjuvant placebo**	No Risk ◯	*n* = 105 *g* = -1.25 CI (n.a) **I**	19% female; all familiy's had additional Behavioral Therapy sessions	Child Behavior Checklist

Intervention: Stimulant plus adjunctive Risperidon **Comparison**: Stimulant plus adjunctive placebo				Clinical implication based on p-value	
	Rule Breaking Behavior Adjuvant risperidone vs. adjuvant placebo	No Risk ◯	*n* = 105 *LS Mea Difference* = 7.58 CI (-11.08 - -4.09) **I**	19% female; dose stimulant; all familiy's had additional Behavioral Therapy sessions	Child Behavior Checklist
	Restlessness and Inattentive Symptoms Adjuvant Risperidon vs. adjuvant placebo	No Risk ◯	*n* = 105 *g* = -.75 CI (n.a) **U**	19% female; all familiy's had additional Behavioral Therapy sessions. Clinical implication based on p-value	Conners Global Index Parent Version
Verhaltensprobleme. Elternurteil					
Blader et al., 2021 **Population:** 6–12-year-olds with ADHD and either ODD or CD **Intervention:** Stimulant plus adjunctive Risperidon **Comparison**: Stimulant plus adjunctive placebo	**Aggressive Behavior Adjuvant risperidone vs. adjuvant placebo**	No Risk ◯	*n* = 105 *g* = -1.32 CI (n.a) **I**	19% female; dose stimulant optimization, adjustment based on AE's, switch possible if exceeded tolerability; all familiy's had additional Behavioral Therapy sessions. Clinical implication based on p-value	R-MOAS (Retrospective Modified Overt Aggression Scale)
Jahngard et al., 2017 **Population:** children with ADHD (6-8 years old) and symptoms of ODD + previously failed	**Oppositional problems Adjuvant risperidone vs. Placebo**	No Risk ◯	*n* = 50 *LS Means* = -6.9 CI (-9.8 - -4.0) **I**	Clinical implication based on p-value	Conners' Parent Rating Scale Revised - Long Version (CPRS-R: L)

improvements with standard dosages of MPH (10-15mg/d) and family counseling **Intervention:** adjuvant risperidone (henceforth MPH+RISP) **Comparison:** placebo (henceforth MPH+PBO)	**Anxious-shy Adjuvant risperidone vs. placebo**	No Risk ◯	*n* = 84 η^2 = .080 CI (n.a) **I**	Clinical implication based on p-value	Conners' Parent Rating Scale Revised - Long Version (CPRS-R: L)
	Social problems Adjuvant risperidone vs. placebo	No Risk ◯	*n* = 84 η^2 = .461 CI (n.a) **I**	Clinical implication based on p-value	Conners' Parent Rating Scale Revised - Long Version (CPRS-R: L)
Findling, R. L., et al., 2017 **Population:** children (6-12 years) with serious physical aggression, diagnosis of CD or ODD, DSM-IV diagnosis of ADHD, evidence of seriously disruptive behavior **Intervention:** Augmented (PT+STIM+RIS) **Comparison**: Basic (PT+STIM+placebo)	**Conduct problems and oppositional behavior Between-group differences at week 21**	Very high Risk ● (OR,OI)	*n* = 153 *d* = .29 CI (n.a) **U**	unclear amount of adjunctive treatment; clinical implication based on p-value (p = 0.058)	Nisonger Child Behavior Rating Form (NCBRF); D-total score
	Positive social behavior Between-group differences at week 21	Very high Risk ● (OR,OI)	*n* = 153 *d* = .44 CI (n.a) **I**	unclear amount of adjunctive treatment; clinical implication based on p-value (p = 0.005)	Nisonger Child Behavior Rating Form (NCBRF); D-total score
Verhaltensprobleme. Unbekanntes Urteil					
Findling, R. L., et al., 2017 **Population:** children (6-12 years) with serious physical aggression, diagnosis of CD or ODD, DSM-IV diagnosis of ADHD, evidence of seriously disruptive behavior **Intervention:** Augmented (PT+STIM+RIS) **Comparison**: Basic (PT+STIM+placebo)	**Reactive aggression Between-group differences at week 21**	Very high Risk ● (OR,OI)	*n* = 146 *d* = .36 CI (n.a) **I**	unclear amount of adjunctive treatment; clinical implication based on p-value (p = 0.0314)	Antisocial Behavior Scale (ABS); reactive subscale
Internalisierende Symptome. Lehrer*innenurteil					

Blader et al., 2021 **Population:** 6–12-year-olds with ADHD and either ODD or CD **Intervention:** Stimulant plus adjunctive Risperidon **Comparison**: Stimulant plus adjunctive placebo	**Emotional Lability Adjuvant Risperidone vs. adjuvant placebo**	No Risk ◯	*n* = 105 *g* = -1.18 CI (n.a) **I**	19% female; all familiy's had additional Behavioral Therapy sessions. Clinical implication based on p-value	Conners Global Index Parent Version
	Internalizing Behavior Adjuvant Risperidone vs. adjuvant placebo	No Risk ◯	*n* = 105 *g* = -.95 CI (n.a) **I**	19% female; all familiy's had additional Behavioral Therapy sessions. Clinical implication based on p-value	Child Behavior Checklist
Internalisierende Symptome. Kliniker*innenurteil					
Blader et al., 2021 **Population:** 6–12-year-olds with ADHD and either ODD or CD **Intervention:** Stimulant plus adjunctive Risperidon **Comparison**: Stimulant plus adjunctive placebo	**Depression Symptoms Adjuvant risperidone vs. adjuvant placebo**	No Risk ◯	*n* = 105 *g* = -.58 CI (n.a) **I**	19% female; all familiy's had additional Behavioral Therapy sessions. Clinical implication based on p-value	Schedule of Affective Disorders and Schizophrenia for School-Age Children (K-SADS)
Globales Funktionsniveau. Elternurteil					
Blader et al., 2021 **Population:** 6–12-year-olds with ADHD and either ODD or CD **Intervention:** Stimulant plus adjunctive Risperidon **Comparison**: Stimulant plus adjunctive placebo	**Functional Impairment Adjuvant risperidone**	No Risk ◯	*n* = 105 *g* = -.40 CI (n.a) **I**	19% female; all familiy's had additional Behavioral Therapy sessions. Clinical implication based on p-value	Columbia Impairment Scale
Klinischer Gesamteindruck. Kliniker*innenurteil					
Jahngard et al., 2017 **Population:** children with ADHD (6-8 years old) and symptoms of ODD + previously failed	**Symptom severity Adjuvant risperidone vs. placebo**	No Risk ◯	*n* = 84 η^2 = .076 CI (n.a) **C**	Clinician implication based on p-value	Clinical Global Impression (CGI)

improvements with standard dosages of MPH (10-15mg/d) and family counseling **Intervention:** adjuvant risperidone (henceforth MPH+RISP) **Comparison:** placebo (henceforth MPH+PBO)	**Symptom improvement Adjuvant risperidone vs. placebo**	No Risk ◯	*n* = 105 η^2 = .007 CI (n.a) **C**	Clinician implication based on p-value	Clinical Global Impression (CGI)
Sicherheit. Kliniker*innenurteil					
Jahngard et al., 2017 **Population:** children with ADHD (6-8 years old) and symptoms of ODD + previously failed improvements with standard dosages of MPH (10-15mg/d) and family counseling **Intervention:** adjuvant risperidone (henceforth MPH+RISP) **Comparison:** placebo (henceforth MPH+PBO)	**Height Adjuvant risperidone vs. placebo**	No Risk ◯	*n* = 84 η^2 = .00 CI (n.a) **U**	Clinician implication based on p-value	n.a
	Side effects Adjuvant risperidone vs. placebo	No Risk ◯	*n* = 84 η^2 = .031 CI (n.a) **U**	Clinician implication based on p-value	Clinical Global Impression (CGI)
	Weight gain Adjuvant risperidone vs. placebo	No Risk ◯	*n* = 84 η^2 = .257 CI (n.a) **C**	Clinician implication based on p-value	n.a
	Increased systolic blood pressure Adjuvant risperidone vs. placebo	No Risk ◯	*n* = 84 η^2 = .017 CI (n.a) **U**	Clinician implication based on p-value	n.a
	Increased diastolic blood pressure Adjuvant risperidone vs. placebo	No Risk ◯	*n* = 84 η^2 = .017 CI (n.a) **U**	Clinician implication based on p-value	n.a
	Increased pulse rate Adjuvant risperidone vs. placebo	No Risk ◯	*n* = 84 η^2 = .017 CI (n.a) **U**	Clinician implication based on p-value	n.a

Blader et al., 2021 **Population:** 6–12-year-olds with ADHD and either ODD or CD **Intervention:** Stimulant plus adjunctive Risperidon **Comparison**: Stimulant plus adjunctive placebo	**Body mass index (BMI) Adjuvant risperidone vs. placebo**	No Risk ◯	*n* = 84 *g* = .815 CI (n.a) **C**	based on U.S. growth charts; 19% female; all familiy's had additional Behavioral Therapy sessions. Clinical implication based on p-value	n.a
	Weight in kg Adjuvant risperidone vs. placebo	No Risk ◯	*n* = 105 *g* = .404 CI (n.a) **C**	based on U.S. growth charts; 19% female; all familiy's had additional Behavioral Therapy sessions. Clinical implication based on p-value	n.a

Anmerkung. *n* = Anzahl der Versuchspersonen. SG = sequence generation, CC = concealment, BP = blinding participants, BA = blinding assessors, ID = incomplete data, OR = outcome reporting, CE = carry over effects, SX = stopped early, UM = unvalidated measures, OI = other issue.

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1.5.4. F

Berücksichtigte Endpunktkategorien: RCTs

Endpunktkategorien	RCTs	*m*	Gesamtaussagesicherheit der Evidenz
ADHS Symptome (E)	1	6	Hoch
ADHD Symptome (KL)	1	1	
Klinischer Gesamteindruck (KL)	1	2	
Exekutivfunktionen (E)	1	2	
Verhaltensprobleme (E)	1	1	
Verhaltensprobleme (S)	1	2	
Internalisierende Symptome (S)	1	2	

Anmerkung. RCTs = Anzahl der randomisierten kontrollierten Studien, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.

Summary of Findings Tabelle: RCTs

Referenz	Endpunkt	Risk of Bias	Effektstärke	Kommentare	Mess-instrument
ADHS Symptome. Elternurteil					
Wilens, T. E., et al., 2017 **Population:** children from 6-17 with ADHD (DSM-IV-TR) with suboptimal response to extended-release oral preparation of methylphenidate or amphetamine **Intervention:** psychostimulants + dose-optimized GXR (≤ 4 mg/d) in the morning (GXR AM) or evening (GXR PM) **Comparison:** psychostimulants + placebo	**Child's morning ADHD symptoms, GXR AM + psychostimulant vs. Placebo + psychostimulant, Endpoint**	No Risk ◯	*n* = 303 *LS Mean* = -1.7 CI (-3.2 - -.30) **I**		CGI-P morning assessment
	Child's morning ADHD symptoms, GXR PM + psychostimulant vs. Placebo + psychostimulant, Endpoint	No Risk ◯	*n* = 303 *LS Mean* = -2.6 CI (-4.0 - - 1.1) **I**		CGI-P morning assessment
	Child's evening ADHD symptoms, GXR AM + psychostimulant vs. Placebo + psychostimulant, Endpoint	No Risk ◯	*n* = 303 *LS Mean* = -2.4 CI (-4.0 - -.90) **I**		CGI-P evening assessment

	Child's evening ADHD symptoms, GXR PM + psychostimulant vs. Placebo + psychostimulant, Endpoint	No Risk ◯	*n* = 305 *LS Mean* = -3.0 CI (-4.5 - - 1.5) **I**		CGI-P evening assessment
	ADHD symptoms and functioning morning, GXR AM + psychostimulants vs. placebo, Endpoint	No Risk ◯	*n* = 303 *LS Mean* = -5.1 CI (n.a) **I**	clinical implication based on p-value	BSFQ parent-rated items
	ADHD symptoms and functioning morning, GXR PM + psychostimulants vs. placebo, Endpoint	No Risk ◯	*n* = 305 *LS Mean* = -4.7 CI (n.a) **I**	clinical implication based on p-value	BSFQ parent-rated items
ADHS Symptome. Kliniker*innenurteil					
Van Stralen, J. P. M., 2020 **Population:** Children aged 6-12 with ADHD **Intervention:** psychostimulant + guanfacine extended release **Comparison:** psychostimulant + placebo	**ADHD symptoms, GXR+Stim vs. PLB+Stim, At endpoint**	No Risk ◯	*n* = 50 *LS Mean* = -6.9 CI (-9.8 - -4.0) **I**		ADHS-RS-IV
Klinischer Gesamteindruck. Kliniker*innenurteil					
Van Stralen, J. P. M., 2020 **Population:** Children aged 6-12 with ADHD **Intervention:** psychostimulant +	**Severity of illness, GXR+Stim vs. PLB+Stim, At endpoint**	No Risk ◯	*n* = 50 *LS Mean* = -.90 CI (-1.4 - -.40) **I**		CGI-S

guanfacine extended release **Comparison:** psychostimulant + placebo	**Improvement relative to baseline, GYR+Stim vs. PLB+Stim, At endpoint**	No Risk ◯	*n* = 50 *LS Mean* = -.70 CI (-1.2 - -.30) **I**	CGI-I
Exekutivfunktionen. Elternurteil				
Van Stralen, J. P. M., 2020 **Population:** Children aged 6-12 with ADHD **Intervention:** psychostimulant + guanfacine extended release **Comparison:** psychostimulant + placebo	**Global Executive Composite (GEC), GXR+Stim vs. PLB+Stim**	No Risk ◯	*n* = 50 *LS Mean* = -3.0 CI (-5.9 - -.20) **I**	BRIEF-P GEC
	Metacognition index (MI), GXR+Stim vs. PLB+Stim	No Risk ◯	*n* = 50 *LS Mean* = -2.3 CI (-5.0 - -.30) **U**	BRIEF-P
Probleme des Verhaltens. Eltern Urteil				
Van Stralen, J. P. M., 2020 **Population:** Children aged 6-12 with ADHD **Intervention:** psychostimulant + guanfacine extended release **Comparison:** psychostimulant + placebo	**Behavioral regulation index (BRI), GXR+Stim vs. PLB+Stim**	No Risk ◯	*n* = 50 *LS Mean* = -3.7 CI (-7.1 - -.40) **I**	BRI of BRIEF-P
Probleme des Verhaltens. Selbsturteil des Kindes				
Wilens, T. E., et al., 2017 **Population:** children from 6-17 with ADHD (DSM-IV-TR) with suboptimal response to extended-release oral preparation of methylphenidate or amphetamine **Intervention:** psychostimulants + dose-optimized GXR (≤ 4 mg/d) in the morning (GXR AM) or evening (GXR PM)	**Behavior morning, GXR AM + psychostimulant vs. Placebo + psychostimulant, Endpoint**	No Risk ◯	*n* = 303 *LS Mean* = -.20 CI (-.80 - .30) **U**	BSFQ child-rated items, Behavior subscale
	Behavior morning, GXR PM + psychostimulant vs. Placebo +	No Risk ◯	*n* = 305 *LS Mean* = -.50 CI (-1.1 - .10) **U**	BSFQ child-rated items, Behavior subscale

Comparison: psychostimulants + placebo	**psychostimulant, Endpoint**			
Internalisierende Symptome. Selbsturteil des Kindes				
Wilens, T. E., et al., 2017 **Population:** children from 6-17 with ADHD (DSM-IV-TR) with suboptimal response to extended-release oral preparation of methylphenidate or amphetamine **Intervention:** psychostimulants + dose-optimized GXR (≤ 4 mg/d) in the morning (GXR AM) or evening (GXR PM) **Comparison:** psychostimulants + placebo	**Feelings morning, GXR AM + psychostimulant vs. Placebo + psychostimulant, Endpoint**	No Risk ◯	*n* = 303 *LS Mean* = -.50 CI (-1.0 - .10) **U**	BSFQ child-rated items, Feelings subscale
	Feelings morning, GXR PM + psychostimulant vs. Placebo + psychostimulant, Endpoint	No Risk ◯	*n* = 305 *LS Mean* = -.30 CI (-.90 - .20) **U**	BSFQ child-rated items, Feelings subscale

Anmerkung. *n* = Anzahl der Versuchspersonen. SG = sequence generation, CC = concealment, BP = blinding participants, BA = blinding assessors, ID = incomplete data, OR = outcome reporting, CE = carry over effects, SX = stopped early, UM = unvalidated measures, OI = other issue.

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1.5.6. Was ist im Verlauf der medikamentösen Behandlung zu beachten?

1.5.6. F

Berücksichtigte Endpunktkategorien: Meta-Analysen

Endpunktkategorien	MAs	*m*	Gesamtaussagesicherheit der Evidenz
Risiko für kardiovaskuläre Erkrankungen	2	7	Schwach/ sehr schwach
Risiko für Herzstillstand oder Tachyarrhythmien	1	1	
Risiko für zerebrovaskuläre Erkrankungen	1	1	
Risiko für Myokardinfarkt	1	1	
Erhöhte Herzfrequenz	1	3	
Systolischer Blutdruck	1	3	

Anmerkung. MAs = Anzahl der Meta-Analysen, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.

Summary of Findings Tabelle: Meta-Analysen

Referenz	Endpunkt	Aussagesicherheit (GRADE)	Effektstärke	Kommentare	Mess-instrument
		Risiko für kardiovaskuläre Erkrankungen			
Zhang et al., 2022 **Population**: children, adolescents, adults with ADHD **Intervention**: any kind of ADHD medication **Comparison:** multiple different control designs	**Risk of Cardiovascular Disease (children and adolescents)**	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 1719885, *k* = 12 *RR* = 1.18 CI (.91 – 1.53) **U**		n.a.
	Risk of Cardiovascular Disease (young and middle-aged adults)	Very low ⊕◯◯◯ (R, IC, IP)	*n* = 858998, *k* = 7 *RR* = 1.04 CI (.43 – 2.48) **U**		n.a.
	Risk of Cardiovascular Disease (older adults)	Very low ⊕◯◯◯ (R, IP)	*n* = 267105, *k* = 6 *RR* = 1.59 CI (,62 – 4.05) **U**		n.a.
	Risk of Cardiovascular Disease (all age groups), Stimulants vs. control	Very low ⊕◯◯◯ (R, IC)	*n* = n.a., *k* = 15 *RR* = 1.25 CI (.84 – 1.83) **U**	No information regarding publication bias. Exact n for this outcome not reported; total included population	n.a.

				across all outcomes = 3.9 million.	
	Risk of Cardiovascular Disease (all age groups), Non-stimulants vs. control	Very low ⊕◯◯◯ (R, IC)	*n* = n.a., *k* = 3 *RR* = 1.22 CI (.25 – 5.97) **U**	No information regarding publication bias. Exact n for this outcome not reported; total included population across all outcomes = 3.9 million.	n.a.
Liang et al., 2018 **Population**: Children, adolescents, adults with ADHD **Intervention**: MPH **Comparison:** Placebo or ATX	**Cardiac Adverse Events, Children/adolescents, MPH vs. placebo**	Very low ⊕◯◯◯ (R, IP)	*n* = 43884, *k* = 5 *OR* = .88 CI (.51 – 1.51) **U**	No information regarding heterogeneity and publication bias. 4 of 5 studies (n=43724) are cross-over studies.	n.a.
	Cardiac Adverse Events, Adults, MPH vs. placebo	Moderate ⊕⊕⊕◯ (IP)	*n* = 775, *k* = 3 *OR* = 2.33 CI (.68 – 7.91) **U**	No information regarding heterogeneity and publication bias.	n.a.
Risiko für Herzstillstand oder Tachyarrhythmien					
Zhang et al., 2022 **Population**: children, adolescents, adults with ADHD **Intervention**: any kind of ADHD medication **Comparison:** multiple different control designs	**Risk of cardiac arrest / tachyarrhythmias, All age groups**	Very low ⊕◯◯◯ (R, IC)	*n* = n.a., *k* = 9 *RR* = 1.60 CI (.94 – 2.72) **U**	No information regarding publication bias. Exact n for this outcome not reported; total included population across all outcomes = 3.9 million.	n.a.
Risiko für zerebrovaskuläre Erkrankungen					

Zhang et al., 2022 **Population**: children, adolescents, adults with ADHD **Intervention**: any kind of ADHD medication **Comparison:** multiple different control designs	**Risk of Cerebrovascular diseases, All age groups**	Low ⊕⊕◯◯ (R)	*n* = n.a., *k* = 10 *RR* = .91 CI (.72 – 1.15) **U**	No information regarding publication bias. Exact n for this outcome not reported; total included population across all outcomes = 3.9 million.	n.a.
Risiko für Myokardinfarkt					
Zhang et al., 2022 **Population**: children, adolescents, adults with ADHD **Intervention**: any kind of ADHD medication **Comparison:** multiple different control designs	**Risk of Myocardial infarction, All age groups)**	Very low ⊕◯◯◯ (R, IC)	*n* = n.a., *k* = 8 *RR* = 1.06 CI (.68 – 1.65) **U**	No information regarding publication bias. Exact n for this outcome not reported; total included population across all outcomes = 3.9 million.	n.a.
Erhöhte Herzfrequenz					
Liang et al., 2018 **Population**: Children, adolescents, adults with ADHD **Intervention**: MPH **Comparison:** Placebo or ATX	**Increased Heart Rate, Children/ adolescents, MPH vs. placebo**	Moderate ⊕⊕⊕◯ (IC)	*n* = 693, *k* = 7 *SMD* = 1.56 CI (.71 – 2.41) **C**		n.a.
	Increased Heart Rate, Adults, MPH vs. placebo	Moderate ⊕⊕⊕◯ (IC)	*n* = 590, *k* = 4 *SMD* = 2.04 CI (.92 – 3.15) **C**		n.a.
	Increased Heart Rate, Children/ adolescents, MPH vs. ATX	Very low ⊕◯◯◯ (R, IC)	*n* = 590, *k* = 4 *SMD* = 2.04 CI (.92 – 3.15) **I**	1 of 4 studies (*n* = 631) is a cohort-study	n.a.
Systolischer Blutdruck					
Liang et al., 2018	**Systolic Blood Pressure,**	Low ⊕⊕◯◯ (IC, P)	*n* = 575, *k* = 5 *SMD* = 1.61		n.a.

Population: Children, adolescents, adults with ADHD **Intervention**: MPH **Comparison:** Placebo or ATX	**Children/ adolescents, MPH vs. placebo**		CI (.81 – 2.41) **C**		
	Systolic Blood Pressure, Adults, MPH vs. placebo	Low ⊕⊕◯◯ (IC, P)	*n* = 800, *k* = 5 *SMD* = 1.40 CI (.62 – 2.18) **C**		n.a.
	Systolic Blood Pressure, Children/ adolescents, MPH vs. ATX	Low ⊕⊕◯◯ (R)	*n* = 876, *k* = 3 *SMD* = .36 CI (.23 – .51) **I**	1 of 3 studies (n=631) is a cohort-study	n.a.

Anmerkung. *n* = Anzahl der Versuchspersonen, *k* = Anzahl der inkludierten Primärstudien. R = risk of bias, IC = inconsistency, ID = indirectness, IP = imprecision, P = publication bias.

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1.5.7. Was ist im Hinblick auf Medikamenten-Adhärenz zu beachten?

1.5.7. C

Berücksichtigte Endpunktkategorien: RCTs

Endpunktkategorien	RCTs	*m*	Gesamtaussagesicherheit der Evidenz
Medikamenten-Adhärenz (E)	1	3	Schwach/ sehr schwach
Medikamenten-Adhärenz (KL)	2	2	
Medikamenten-Adhärenz (A)	1	2	

Anmerkung. RCTs = Anzahl der randomisierten kontrollierten Studien, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil, A = App-Urteil.

Summary of Findings Tabelle: RCTs

Referenz	Endpunkt	Risk of Bias	Effektstärke	Kommentare	Mess-instrument
Medikamenten-Adhärenz. Elternurteil					
Weisman et al., 2018 **Population:** children with ADHD (6-16 years); drug naive or already treated with stimulant medication **Intervention:** participants and parents prompted to use mobile application (Icon mobile App) **Comparison:** treatment as usual	**Pill counts, Study group vs. control, At week 4**	Very high risk ● (BP, BA)	*n* = 17 ES = n.a. CI (n.a.) **U**	Clinical implication based on p-value of post-hoc comparison with Mann-Whitney U test.	Pill count
	Pill counts, Study group vs. control, At week 8	Very high risk ● (BP, BA)	*n* = 24 ES = n.a. CI (n.a.) **I**	Clinical implication based on p-value of post-hoc comparison with Mann-Whitney U test.	Pill count
	Group main effect for pill counts	Very high risk ● (BP, BA)	*n* = 34 eta^2 = .12 CI (n.a.) **I**	Clinical implication based on p-value.	Pill count
Medikamenten-Adhärenz. Kliniker*innenurteil					
Fried et al., 2020 **Population:** children with ADHD (6-12 years); prescribed with stimulant medication for ADHD	**Timely prescription refills, Intervention group (reference CG; model 1**	Very high risk ● (SG, CC, BP, BA)	*n* = 333 *OR* = 3.79 CI (1.84 - 7.79) **I**	Little info on sequence generation and concealment; model with interaction term; clinical implication	Timely prescription refills (prescriptions documented in electronic medical records)

Intervention: parents received text messages for medication adherence, treatment initiation, and digital patient support (from Sunday to Friday) **Comparison:** treatment as usual	**interaction term)**			based on p-value.	
	Timely prescription refills, Intervention group (reference non-psychiatric clinic; model 1 interaction term)	Very high risk ● (SG, CC, BP, BA)	*n* = 333 *OR* = 0.90 CI (0.39 - 2.10) **U**	Little info on sequence generation and concealment; model with interaction term; clinical implication based on p-value.	Timely prescription refills (prescriptions documented in electronic medical records)
	Timely prescription refills, Intervention group (reference CG; model 2 without interaction term)	Very high risk ● (SG, CC, BP, BA)	*n* = 333 *OR* = 3.46 CI (1.82 - 6.58) **I**	Little info on sequence generation and concealment; model without interaction term and prescribing clinic; clinical implication based on p-value.	Timely prescription refills (prescriptions documented in electronic medical records)
Carvalho et al., 2023 **Population:** 18-45 year old adults with ADHD according to DSM-5, own a smartphone, clinical ASRS score of ≥24, at least high school diploma, accept use of pharmacological treatment **Intervention:** App Group: TAU + App App + Discount Group: TAU + App + commercial discount on purchase of medication prescribed for ADHD treatment **Comparison:** TAU: pharmacological treatment as usual	**Adherence to pharmacological treatment, Across all groups**	High risk ◑ (BP)	*n* = 68 *MD* = .0176 CI (n.a.) **U**	Clinical implication based on p-value; time of assessment unclear; assessor blinding unclear.	Medication possession rate (MPR)

Medikamenten-Adhärenz. App-Urteil					
Carvalho et al., 2023 **Population:** 18-45 year old adults with ADHD according to DSM-5, own a smartphone, clinical ASRS score of ≥24, at least high school diploma, accept use of pharmacological treatment **Intervention:** App Group: TAU + App App + Discount Group: TAU + App + commercial discount on purchase of medication prescribed for ADHD treatment **Comparison:** TAU: pharmacological treatment as usual	**Engagement, App + Discount vs. App**	High risk ◑ (BP)	*n* = 45 *MD* = .123 CI (n.a.) **I**	Clinical implication based on p-value; time of assessment unclear.	Number of times (%) users registered their medication intake into App
	Engagement time x group interaction, App + Discount vs. App	High risk ◑ (BP)	*n* = 45 *MD* = .013 CI (n.a.) **I**	Clinical implication based on p-value.	Number of times (%) users registered their medication intake into App

Anmerkung. *n* = Anzahl der Versuchspersonen. SG = sequence generation, CC = concealment, BP = blinding participants, BA = blinding assessors, ID = incomplete data, OR = outcome reporting, CE = carry over effects, SX = stopped early, UM = unvalidated measures, OI = other issue.

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1.5.7. D

Berücksichtigte Endpunktkategorien: RCTs

Endpunktkategorien	RCTs	*m*	Gesamtaussagesicherheit der Evidenz
Medikamenten-Adhärenz (KU)	1	1	Schwach/ sehr schwach
Medikamenten-Adhärenz (S)	1	1	
Medikamenten-Adhärenz (E)	1	10	
Medikamenten-Adhärenz (KL)	1	2	

Anmerkung. RCTs = Anzahl der randomisierten kontrollierten Studien, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.

Summary of Findings Tabelle: RCTs

Referenz	Endpunkt	Risk of Bias	Effektstärke	Kommentare	Mess-instrument
Medikamenten-Adhärenz. Kombiniertes Urteil					
Zheng et al., 2020 **Population:** children (6-11 years) with ADHD **Intervention:** psychoeducation by pediatricians: systematic training for parents and teachers about ADHD and behavioral interventions as well as classroom management techniques for just the teachers **Comparison:** treatment as usual	**Medication adherence, 6 months**	Very high risk ● (BP, BA, UM)	*n* = 116 ES = n.a. CI (n.a.) **I**	Allocation concealment not reported. Clinical implication based on p-value.	Parents and medical records
Medikamenten-Adhärenz. Selbsturteil					
Zheng et al., 2020 **Population:** children (6-11 years) with ADHD **Intervention:** psychoeducation by	**Medication adherence, 6 months**	Very high risk ● (BP, BA, UM)	*n* = 116 ES = n.a. CI (n.a.) **I**	Allocation concealment not reported. Clinical implication based on p-value.	MARS (Medication Adherence Report Scale), not child specific

pediatricians: systematic training for parents and teachers about ADHD and behavioral interventions as well as classroom management techniques for just the teachers **Comparison:** treatment as usual					
Medikamenten-Adhärenz. Elternurteil					
Bai et al., 2015 **Population:** children 6–16 years with ADHD **Intervention:** psychoeducation on the parents, Intervention focused on Theory of Planned Behavior (TPB) **Comparison:** treatment as usual	**Still taking medication (%), 1 month follow-up**	High risk ◑ (BP)	*n* = 89 ES = n.a. CI (n.a.) **I**	Unclear blinding assessors, clinicial implication based on p-value of t-tests.	n.a.
	Medication possession ratio (MPR), 1 month follow-up	High risk ◑ (BP)	*n* = 89 ES = n.a. CI (n.a.) **I**	Unclear blinding assessors, clinicial implication based on p-value of t-tests.	MPR (defined as percent of days patient complied with prescription in specific period); adherence defined as MPR >= 0.70
	Adherence rate (%) 1 month follow-up	High risk ◑ (BP)	*n* = 89 ES = n.a. CI (n.a.) **U**	Unclear blinding assessors, clinicial implication based on p-value of t-tests.	n.a.
	Average number of days of discontinuation, 1 month follow-up	High risk ◑ (BP)	*n* = 89 ES = n.a. CI (n.a.) **I**	Unclear blinding assessors, clinicial implication based on p-value of t-tests.	n.a.
	Took medication	High risk ◑ (BP)	*n* = 89 ES = n.a. CI (n.a.)	Unclear blinding assessors, clinicial implication	n.a.

	during last weekend (%), 1 month follow-up		I	based on p-value of t-tests.	
	Average number of days of discontinuation during last week, 1 month follow-up	High risk ◑ (BP)	*n* = 89 ES = n.a. CI (n.a.) I	Unclear blinding assessors, clinicial implication based on p-value of t-tests.	n.a.
	Still taking medication (%), 3 months follow-up	High risk ◑ (BP)	*n* = 89 ES = n.a. CI (n.a.) I	Unclear blinding assessors, clinicial implication based on p-value of t-tests.	n.a.
	Average number of days of discontinuation, 3 months follow-up	High risk ◑ (BP)	*n* = 89 ES = n.a. CI (n.a.) I	Unclear blinding assessors, clinicial implication based on p-value of t-tests.	n.a.
	Took medication during last weekend (%), 3 months follow-up	High risk ◑ (BP)	*n* = 89 ES = n.a. CI (n.a.) I	Unclear blinding assessors, clinicial implication based on p-value of t-tests.	n.a.
	Average number of days of discontinuation during last week, 3 months follow-up	High risk ◑ (BP)	*n* = 89 ES = n.a. CI (n.a.) I	Unclear blinding assessors, clinicial implication based on p-value of t-tests.	n.a.
Medikamenten-Adhärenz. Kliniker*innenurteil					

Montoya et al., 2014 **Population:** children with newly diagnosed ADHD (6-12 years) **Intervention:** parental psychoeducation program administered to small groups of parents (standardized, manual-based program) in five weekly 90-minute sessions + medication **Comparison:** medication alone	**Time to discontinuation, At 12 month**	Very high risk ⬤ (BP, BA, SX)	*n* = 208 Hazard Ratio = 0.72 CI (0.36 - 1.43) **U**	Underpowered, very low non-adherence to medication in both groups.	n.a.
	Time to discontinuation, Controlled by comorbidity, At 12 month	Very high risk ⬤ (BP, BA, SX)	*n* = 208 Hazard Ratio = 0.96 CI (0.43 - 2.12) **I**	Underpowered, very low non-adherence to medication in both groups. Learning disorders is significant.	n.a.

Anmerkung. *n* = Anzahl der Versuchspersonen. SG = sequence generation, CC = concealment, BP = blinding participants, BA = blinding assessors, ID = incomplete data, OR = outcome reporting, CE = carry over effects, SX = stopped early, UM = unvalidated measures, OI = other issue.

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1.6 Diagnostik und Behandlung von ADHS und koexistierenden substanzbezogenen Störungen

1.6.2. Was ist bei der Behandlung von ADHS und koexistierenden substanzbezogenen Störungen zu beachten?

1.6.2 B

Berücksichtigte Endpunktkategorien: Meta-Analysen

Endpunktkategorien	MAs	*m*	Gesamtaussagesicherheit der Evidenz
ADHS Symptome gesamt (KL)	1	1	Moderat
ADHS Symptome gesamt (KU)	1	1	
Substanzkomsum Symptome (KU)	1	4	

Anmerkung. MAs = Anzahl der Meta-Analysen, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.

Berücksichtigte Endpunktkategorien: RCTs

Endpunktkategorien	RCTs	*m*	Gesamtaussagesicherheit der Evidenz
ADHS Symptome gesamt (S)	1	2	Moderat
Behandlungsadhärenz (KL)	2	2	
Substanzkonsum Symptome gesamt (KU)	2	5	

Anmerkung. RCTs = Anzahl der randomisierten kontrollierten Studien, *m* = Anzahl der Endpunkte innerhalb dieser Endpunktkategorie. E = Elternurteil, KL = Kliniker*innenurteil, KU = Kombiniertes Urteil, L = Lehrer*innenurteil, S = Selbsturteil, T = kognitive Tests, U = Unbekanntes Urteil.

Summary of Findings Tabelle: Meta-Analysen

Referenz	Endpunkt	Aussagesicherheit (GRADE)	Effektstärke	Kommentare	Mess-instrument
ADHS Symptome gesamt. Kliniker*innenurteil					
Fluyau et al., 2021 **Population: Adults with ADHD and SUD (15 and 65 years)** **Intervention: Pharmacological agent (methyl-phenidate, amphetamine salts, atomoxetine) was used to treat SUD in ADHD patients + combined behavioral therapies (13 out of 17 included studies)** **Comparison: Placebo + combined behavioral**	**Decrease in the severity of ADHD symptoms**	Moderate ⊕⊕⊕◯ (R)	*n* = n.a. *SMD* = .53 CI (.39 - .67) **I**		Clinical Global Impression-Improvement (CGI) scale and the Adult ADHD Investigator Symptom Rating Scale (AISRS)

therapies (13 out of 17 included studies)					
ADHS Symptome gesamt. Kombiniertes Urteil					
Fluyau et al., 2021 **Population: Adults with ADHD and SUD (15 and 65 years)** **Intervention: Pharmacological agent (methyl-phenidate, amphetamine salts, atomoxetine) was used to treat SUD in ADHD patients + combined behavioral therapies (13 out of 17 included studies)** **Comparison: Placebo + combined behavioral therapies (13 out of 17 included studies)**	**Reduction in the Frequency of ADHD symptoms**	Moderate ⊕⊕⊕◯ (R)	*n* = n.a. *SMD* = .42 CI (.26 - .58) **I**		Swanson, Nolan, and Pelham Teacher and Parent Rating Scale
Substanzkonsum Symptome. Kombiniertes Urteil					
Fluyau et al., 2021 **Population: Adults with ADHD and SUD (15 and 65 years)** **Intervention: Pharmacological agent (methyl-phenidate, amphetamine salts, atomoxetine) was used to treat SUD in ADHD patients + combined behavioral therapies (13 out of 17 included studies)** **Comparison: Placebo + combined behavioral therapies (13 out of 17 included studies)**	**Reduction in subtance use**	Moderate ⊕⊕⊕◯ (R)	*n* = 1246 *SMD* = .41 CI (.25 - .56) **I**		continuous measures, representing mainly self-reported quantity of use and urine drug screening
	Management of withdrawal symptoms	Moderate ⊕⊕⊕◯ (R)	*n* = 458 *SMD* = .56 CI (.39 - .76) **I**	Focused only on tobacco	n.a.
	Progression toward abstinence	Moderate ⊕⊕⊕◯ (R)	*n* = n.a. *SMD* = .33 CI (.15 - .51) **I**		n.a.
	Reduction of craving	Moderate ⊕⊕⊕◯ (R)	*n* = 530 *SMD* = .27 CI (-.54 - .05)		n.a.

			I		

Anmerkung. *n* = Anzahl der Versuchspersonen, *k* = Anzahl der inkludierten Primärstudien. R = risk of bias, IC = inconsistency, ID = indirectness, IP = imprecision, P = publication bias.

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Summary of Findings Tabelle: RCTs

Referenz	Endpunkt	Risk of Bias	Effektstärke	Kommentare	Mess-instrument
ADHS Symptome gesamt. Selbsturteil					
Levin et al., 2024 **Population: Adults (18 to 65 years) with ADHD and SUD (cannabis)** **Intervention: mixed amphetamine salts (MAS-ER) 80mg 12-week trial + Medical Management** **Comparison: placebo + Medical Management**	**Reduction on ADHD symptoms**	No Risk ◯	*n* = 28 *OR* = n.a. CI = n.a. **U**	Clinical implication based on p value of Fisher exact test	AISRS
	Reduction on ADHD symptoms x time, Interaction	No Risk ◯	*n* = 28 *OR* = n.a. CI = n.a. **U**	Clinical implication based on p value	AISRS
Behandlungsadhärenz. Kliniker*innenurteil					
Kast et al., 2021 **Population: Adolescents & Adults with ADHD starting SUD treatment.** **Intervention: ADHD pharmacotherapy (within 90 days of admission)** **Comparison: no ADHD pharmacotherapy**	**Treatment attrition, Within 90 days**	Very high risk ● (SG,CC,BP,BA, OI)	*n* = 116 *OR* = 4.92 CI = n.a. **I**	Observational study: Certainty level automatically low, additionally: dissimilar group sizes. Clinical implication based on p-value.	n.a.
Levin et al., 2024 **Population: Adults (18 to 65 years) with ADHD and SUD (cannabis)** **Intervention: mixed amphetamine salts (MAS-ER) 80mg 12-week**	**Medication adherence**	No Risk ◯	*n* = n.a. *ES* = n.a. **U**	Clinical implication based on p value of Fisher exact test	Dose discontinuations

trial + Medical Management **Comparison: placebo + Medical Management**					
Substanzkonsum Symptome. Kombiniertes Urteil					
Levin et al., 2024 **Population: Adults (18 to 65 years) with ADHD and SUD (cannabis)** **Intervention: mixed amphetamine salts (MAS-ER) 80mg 12-week trial + Medical Management** **Comparison: placebo + Medical Management**	**Cannabis abstinence**	No Risk ◯	*n* = 28 *OR* = 4.7 CI = (.31 – 72.1) **U**	Clinical implication based on p value of Fisher exact test	Timeline Followback method, during the last 2 weeks of participant's involvement in 8-week maintenance phase of trial.
	Cannabis use x time, Interaction	No Risk ◯	*n* = 28 *OR* = n.a CI = n.a **I**	Clinical implication based on p value of Fisher exact test	Days of use
	Urine THC	No Risk ◯	*n* = 28 *ES* = n.a. CI = n.a **U**	Clinical implication based on p value of t-test	positive tests on creatine normalized THC
	Urine THC x time, Interaction	No Risk ◯	*n* = 28 *ES* = n.a. CI = n.a. **U**	Clinical implication based on p value	mean weekly creatine normalized THC
Quinn et al., 2017 **Population: Adults with ADHD and prior SUD diagnosis** **Intervention: months with ADHD medication** **Comparison: months with no ADHD medication**	**Substance related events, Male participants**	Very high risk ● (SG,CC,BP,BA)	*n* = 53765 *OR* = .85 CI = (.79 - .90) **I**	Observational study: Certainty level automatically low. Within Subject comparison, adjusted value.	at least one emergency department claim with any non-tobacco-related substance use disorder diagnosis (primary or otherwise)
	Substance related events, Female participants	Very high risk ● (SG,CC,BP,BA)	*n* = 37985 *RR* = .74 CI = (.69 - .80) **I**	Observational study: Certainty level automatically low. Within Subject	at least one emergency department claim with any non-tobacco-

				comparison, adjusted value.	related substance use disorder diagnosis (primary or otherwise)
Baweja et al., 2025 **Population: Participants with ADHD and SUD diagnosis 15 to 25 years old** **Intervention: ADHD medication** **Comparison: No ADHD medication**	**Accidental overdoses**	Very high risk ● (SG,CC,BP,BA)	*n* = 9347 *RR* = .81 CI = (.78 - .84) **U**		n.a.

Anmerkung. *n* = Anzahl der Versuchspersonen. SG = sequence generation, CC = concealment, BP = blinding participants, BA = blinding assessors, ID = incomplete data, OR = outcome reporting, CE = carry over effects, SX = stopped early, UM = unvalidated measures, OI = other issue.

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