Nederlands Centrum Jeugdgezondheid

JGZ-richtlijn ADHD
Signalering, begeleiding en toeleiding naar diagnostiek

Evidence tabellen

Toelichting
Se= Sensitivity
Sp= Specificity
PV+= Positive Predictive Value
PV-= Negative Predictive Value
LR+, LR-= Likelihood ratio's
AUC= Area under the ROC curve

Item	Omschrijving
Referentie:	1e auteur (publicatiejaar)
Doel studie:	doel (aim; objectives) van de studie (bijvoorbeeld: accuratesse test, reproduceerbaarheid test, bepaling van afkappunt of vergelijkbaarheid van twee of meer tests)
Studieopzet:	specificeer de onderzoeksopzet (dwarsdoorsnedeonderzoek, prospectief cohort onderzoek, rct)
Setting:	aantal centra, betrokken landen, 1e/2e/3e lijn, stad/platteland/stad-platteland
Locatie:	specificeer naam / plaats instelling
Training onderzoekers:	specificeer het aantal, de training en expertise van degenen die de tests uitvoeren en van degenen die de testuitslagen beoordelen onderzoekers
Aantal:	aantal patiënten betrokken in studie en aantal geanalyseerd, en aantal patiënten niet geanalyseerd met opgaaf van reden (bijv. niet interpreteerbare resultaten)
Leeftijd:	gemiddelde; standaarddeviatie of bereik (minimum – maximum)
Sekseratio:	percentage vrouw
Etniciteit:	Percentage participanten van etnische achtergrond
In- en exclusie:	specificeer met name ook de karakteristieken en de fase van de ziekte
Ziekteprevalentie:	specificeer schatting van de prevalentie in de algehele bevolking
Co-morbiditeit:	Ontwikkelingsachterstand danwel de ontwikkelingsleeftijd, verstandelijke handicap, taalachterstand, ggz problematiek,

	epilepsie, genetische aandoeningen, eerdere testresultaten.
Overig:	B.v. SES, opleidingsniveau ouders, verwijzing, procedure.
Level:	1, 2a, 2b, of 3.
Indextest:	beschrijf de indextest, afkappunten, wie het instrument afnam en of de onderzoekers geblindeerd waren. Multidisciplinair team of monodiscipinair. Percentage ontbrekende of oninterpreteerbare testresultaten
Referentietest:	beschrijf de referentietest, afkappunten, wie het instrument afnam en of de onderzoekers geblindeerd waren. Multidisciplinair team of monodiscipinair. Percentage ontbrekende of oninterpreteerbare testresultaten
Tijdsinterval en behandeling tussen beide tests:	geef aan of er sprake was van een tijdsinterval of behandeling
Onderzochte stoornissen:	Criteria targetconditie, prevalentie van de onderzochte stoornissen in de steekproef.
Resultaten:	specificeer de accuratesse uitkomsten: Sensitiviteit (Se); Specificiteit (Sp); Positief voorspellende waarde (PPV); Negatief voorspellende waarde (NPV); Likelihood ratio's (LR+, LR-); Area under the ROC curve (AUC) etc. met inbegrip van een betrouwbaarheidsinterval. Vermeld ook de neveneffecten / complicaties van de indextest en referentietest.
Kwaliteitsbeoordeling:	zie literatuurbeoordelingsformulieren; bewijskracht conform EBRO-classificatie; belangenverstrengeling: b.v. financiering (overheidsgeld, farmaceutische industrie, instelling van gezondheidszorg) of andere belangen.

Evidence tabellen voor de screeningsinstrumenten

Evidencetabellen voor de SDQ

Methods	Patients	Instruments	Results	Quality Assesment
Reference: Becker A, Steinhausen HC, Baldursson G, Dalsgaard S, Lorenzo MJ, Ralston SJ et al. 2006. Psychopathological screening of children with ADHD: Strengths and Difficulties Questionnaire in a pan-European study. Eur Child Adolesc Psychiatry; 15 Suppl 1:I56-I62.	Number of patients: n=1,459 Age: Girls: 6-18 years (M=8.8, SD 2.3) Boys 6-18 years (M=9.0, SD 2.5) Sex: 231 girls 1, 222 boys Ethnicity: - Inclusion : Children with ADHD symptoms but no previous formal diagnosis of ADHD. Exclusion: Mental retardation, autism or schizophrenia. Co-morbidity:- Other:-	Index test: SDQ parent-reported version. Reference test: ADHD-Rating Scale-IV (ADHD-RS-IV), Child Health and Illness Profile-Child Edition (CHIP-CE), Clinical Global Impression-Severity (CGI-S) scale and Children's Global Assessment Scale (CGAS). Time interval and treatment in between both tests: Not reported.	Target condition: ADHD. Prevalence in sample: 100% Results: - The resulting pattern of main loadings was an identical replication of the original SDQ subscales. - The internal consistency was satisfactory to good -many of the SDQ subscale scores and the total difficulties score are affected by different moderating factors. - Younger children (6-10y) had higher total difficulties, hyperactivity-inattention and peer relationship problems than older children (11-18y). Girls showed more emotional problems and more prosocial behavior than boys. Despite being statistically significant, the age and gender effects were quite small and may not be clinically meaningful. Statistically significant differences between countries were found for each SDQ subscale score and the total difficulties score. Investigator type was not a significant moderator. -There were moderate positive correlations between the SDQ hyperactivity-inattention subscale and the total score of the ADHD-RS-IV (r=0.51) and the ADHD-RS-IV hyperactivity-impulsivity subscale	Valid reference test (+/-/?):+ Independent assessment of reference and index test (+/-/?): ? Assessment index test independent of clinical information (+/-/?):? No work-up or verification bias (+/-/?):+ Reference test given before start of treatment (+/not relevant):+ Consecutive patients or independent sample (+/-/?):- Disease spectrum in study is representative (+/-/?): - Index test described sufficient for reproducibility (+/-/?):+ Conflicts of interest: two authors employed by Eli Lilly Overall quality of evidence: B It is unclear whether the assessment of the SDQ was independent of clinical information and whether the sample was independent.

			score (r=0.54). Similarly, there were moderate correlations between the SDQ conduct problems subscale score and the ADHD-RS-IV total score and hyperactivity-impulsivity subscale scores (both r=0.42). Conclusion study: The present results demonstrate that the SDQ parent ratings of children with ADHD provide relevant clinical information. Furthermore, the SDQ has shown adequate psychometric properties indicating that the obtained data sets may be used for further statisticalanalyses within the planned longitudinal design of the ADORE study. The scores are dependent of age, gender and country.	
Study aim: 1.To examine the psychometric properties of the SDQ within the framework of the ADORE study, and to evaluate potential differences with regard to age, gender, country, and investigator type (paediatricians, child psychiatrists,other physicians). 2.To examine the correlations between the SDQ subscales and other instruments/ questionnaires used in the study. Study design: Cross-sectional study. ADORE study=prospective, non-interventional, naturalistic study; primary objective is to describe the relationship between treatment				

regimen prescribed and quality of life in children with ADHD over a 2-year period. This paper concerns baseline data, before any treatment had been initiated for ADHD symptoms. Setting: Not reported in this paper. Location: Austria, Denmark, France, Germany, Iceland, Italy, Netherlands, Norway, Switzerland, UK Training of assessors: Not reported.				
Reference: Goodman R. 2001. Psychometric properties of the strengths and difficulties questionnaire. J Am Acad Child Adolesc Psychiatry; 40(11):1337-1345.	Number of patients: Valid SDQs completed by 9,998 parents (96%), by 7,313 teachers (70%), and by 3,983 11-15 year-olds (91%). Response rates follow-up questionnaires: parents 80% (2,091/2,618); teachers 91% (796/876); 11-15 year-olds 77% (781/1014). Age: 5-15 years Sex: Ethnicity: Inclusion : The total sample of 10,438 children was recruited through child benefit records; child benefits are available	Index test: SDQ: 5 factors: Hyperactivity-inattention, emotional, prosocial behavior, conduct and peer problems. Reference test: Development and Well-Being Assessment (DAWBA), an integrated package of questionnaires, interviews, and rating techniques designed to generate psychiatric diagnoses on 5-16 year-olds. Time interval and treatment in between both tests: The SDQ was re-administered to some parents, teachers, and youths after an interval of 4 to 6 months. This cannot be thought of as a measure of test-retest reliability because the interval is too great, such that changes in the scores with time may reflect genuine changes in the children's psychological state as well as test-	Target condition: ADHD. Prevalence in sample: Parent SDQ 224/9998(2.2%) Teacher SDQ 170/7313 (2.3%) Youth SDQ 83/3983 (2.1%) Results: -Factor analysis: The predicted five-factor structure was confirmed. -Pearson Interrater correlations hyperact-Inattention: Parent x teacher 0.48; parent x youth 0.41; teacher x youth 0.32. -Internal consistency: mean 0.73, for hyperact-inatt: parent 0.77, teacher 0.88, youth 0.67 -Retest stability (after 4-6 months): mean 0.62, for hyperact-inatt: parent 0.72, teacher 0.82, youth 0.60r	Valid reference test (+/-/?):+ Independent assessment of reference and index test (+/-/?):+ Assessment index test independent of clinical information (+/-/?):+ No work-up or verification bias (+/-/?):+ Reference test given before start of treatment (+/not relevant): na Consecutive patients or independent sample (+/-/?):+ Disease spectrum in study is representative (+/-/?):+

	without means testing and are claimed on behalf of approximately 98% of British children. Details of ascertainment and representativeness have been presented elsewhere (Meltzer et al., 2000). <u>Exclusion:</u> <u>Co-morbidity:</u> <u>Other:</u>	retest unreliability.	-Agreement with psychiatric diagnosis: sample was split into low-risk and high-risk subjects according to each SDQ-score. The extreme 10% (highest scores) of the population were compared with the remaining 90%. For the SDQ hyperactivity subscale and diagnosis ADHD: Parent (OR 32.3 (23.8-43.9)) Se 0.74 Sp 0.92 PV 0.17 PV- 0.99 LR+ 9.25 LR- 0.28 Teacher (OR 29.1 (20.8-40.7) Se 0.68 Sp 0.93 PV 0.19 PV- 0.99 Youth (OR 5.0 (3.1-7.8)) Se 0.40 Sp 0.91 PV 0.09 PV- 0.98 <u>Conclusion study:</u> Psychometric properties of SDQ are satisfactory: factors structure is confirmed, reliability and validity are satisfactory. It is potentially useful for screening, as part of a clinical assessment and as measure of treatment outcome.	Index test described sufficient for reproducibility (+/-/?):+ . <u>Conflicts of interest:</u> Author is developer of questionnaire <u>Overall quality of evidence:</u> A2

Study aim: To examine the psychometric properties of the SDQ in a large and representative community sample of children and youths. Study design: Cross-sectional study. Setting: A survey of the mental health of British 5-15 year-olds. Location: UK. Training of assessors: Experienced clinical raters.				
Reference: Van Widenfelt BM, Goedhart AW, Treffers PD, Goodman R. 2003. Dutch version of the Strengths and Difficulties Questionnaire (SDQ). Eur Child Adolesc Psychiatry. 12(6):281-9.	*Data was collected in 2 waves: first wave 15 schools; second wave 6 schools.* Number of patients: First wave: n=970 Second wave: n=268 Age: First wave: 11-16 years (mean 13.1, sd 1.6) Second wave: 8-16 years (mean 14.1, sd. 1.2) Sex: First wave: 51% boys Second wave: 50% boys Ethnicity: -	Index test: SDQ (Strengths and Difficulties Questionnaire). 25-item questionnaire with 3 response categories (not true, somewhat true, certainly true). The questionnaire has a total difficulty score, and 5 subscales consisting of 5 items each: hyperactivity, conduct problems, peer problems, emotional symptoms and pro-social. Reference test: - CBCL; Child Behaviour Checklist - YSR; Youth Self Report - CDI; Children's Depression Inventory - RCMAS; Revised Children's Manifest Anxiety Scale They were all translated in Dutch. Time interval and treatment in between both tests: -	Target condition: Psychometric properties vs. no problems. Prevalence in sample: - Results: Cronbach's alpha of the Parent (P), Teacher (T) and Self Report (S) scales of the SDQ. Total difficulties: P:0.81 T:0.88 S:0.70 Hyperactivity-inattention: P:0.84 T:0.89 S:0.66 Mean inter-informant product-moment correlations of the SDQ: Parent-teacher: 0.38, Teacher-self report: 0.27, Parent-self report: 0.35.	Valid reference test :+ Independent assessment of reference and index test :+ Assessment index test independent of clinical information :? No work-up or verification bias:+ Reference test administered before start of treatment (+/not relevant):+ Consecutive patients or independent sample :+ Disease spectrum in study is representative :+

	Inclusion :- Exclusion:- Co-morbidity: - Other: In the second wave also teachers of 208 participants filled out the SDQ and CBCL; and parents of 300 participants filled out the SDQ and CBCL.	Correlation coefficient between the scales: Correlations<0.30 were considered small; correlations ≥ 0.30 and<0.50 were considered medium, and ≥ 0.50 were considered strong.	Conclusion article: The results of the present study demonstrate that the Dutch translation of the SDQ has acceptable to good psychometric properties. Internal consistency of the teacher SDQ was good. Parent and self-report SDQ were generally acceptable and comparable with the internal consistencies of the CBCL/ YSR, with the exception of the self-report scale conduct problems. Most of the correlations between corresponding scales of the SDQ and the CBCL/YSR were strong and almost as high as the reliability (internal consistency) of the scales, while most of the correlations between conceptually different scales were not significant.	Index test described sufficient for reproducibility :+ Conflicts of interest: No Overall quality of evidence: B - It is not clear how many children have a disorder. It is only the first part of the screening. They compare different screening tools; however, there is no diagnosis.
Study aim: Translated the SDQ into Dutch and examined the reliability and validity with different age groups and informants. Study design: Cross-sectional design. Setting: Participants were recruited through schools. Location: The Netherlands. Training of assessors: Not necessary for the SDQ.				

Reference: Muris p, Meesters C, Van den berg F. 2003. The Strengths and Difficulties Questionnaire (SDQ) European Child & Adolescent Psychiatry;12:1-8.	Number of patients: n=562 Random subsample second SDQ after 2 months: n=91 Age: 9-15 years (mean 12.3, SD 1.0) Subsample: 10-14 years (mean 12.2, SD 0.8) Sex: 45.2% boys. Subsample: 39.6% boys. Ethnicity: - Inclusion: - Exclusion: - Co-morbidity: - Other: SES, based on educational levels of parents: 21.2% low; 35.9% middle, 42.9% high.	Index test: SDQ; 25 items describing positive and negative attributes of children that can be allocated to 5 subscales of 5 items each: emotional symptoms, conduct problems, hyperactivity-inattention, peer problems, and prosocial behaviour. Each item has to be scored on a 3-point scale with 0='not true', 1='somewhat true', and 2='certainly true'. Subscale scores can be computed by summing scores on relevant items (after recoding reversed items; range 0-10). Higher scores on the prosocial behaviour subscale reflect strengths; higher scores on the other 4 subscales reflect difficulties. A total difficulties score can also be calculated by summing the scores on the emotional symptoms, conduct problems, hyperactivity-inattention, and peer problems subscales (range 0-40). Reference test: - Achenbach questionnaires; 118 items addressing emotional and behavioural problems of children on 3-point scales. Both the parent version, CBCL, and the self-report version, YSR, assess 2 broad domains: externalizing and internalising. Items can be grouped into 8 scales: withdrawn, somatic complaints, anxious-depressed, social problems, thought problems, attention problems, delinquent behaviour, aggressive behaviour. In all cases, higher CBCL/YSR scores reflect higher levels of problems. - CDI; scale for measuring severity of depression symptoms in children. 27 items relating to sadness, self-blame, loss of appetite, insomnia, interpersonal relationships, and school adjustment. Item scores range from 0 to 2. A total CDI score can be calculated by summing all item scores, with higher scores being indicative of	Target condition: Psychopathology. Prevalence in sample: - Results: Parent SDQ: 5 factors 47.6% of variance. 1 item had substantial secondary loading. Self-report SDQ: 5 factors 43.9% of variance; 4 items substantial secondary loadings. Internal consistency: α 0.7 parent and 0.64 self-report (acceptable). Correlation between SDQ difficulties scales were low to moderate. Correlations between parent and youth SDQ were modest and varied between 0.23 and 0.46. Varied not with age. Test-retest stability: except prosocial behavior all intraclass correlation > 0.70 (acceptable) Concurrent validity (good): Parent SDQ total diff -CBCL total 0.70 SDQ emotional – RCMAS 0.43-0.73 SDQ emotional – CIDI 0.67 SDQ hyperact – ADHDQ 0.52-0.73 Self-report SDQ total diff -CBCL total 0.74 SDQ emotional – RCMAS 0.58-0.75 SDQ emotional – CIDI 0.64 SDQ hyperact – ADHDQ 0.46-0.66	Valid reference test (+/-/?): +/- Independent assessment of reference and index test (+/-/?): ? Assessment index test independent of clinical information (+/-/?): ? No work-up or verification bias (+/-/?): + Reference test given before start of treatment (+/not relevant): na Consecutive patients or independent sample (+/-/?): - Disease spectrum in study is representative (+/-/?): + Index test described sufficient for reproducibility (+/-/?): + Conflicts of interest: No Overall quality of evidence: B - Unclear whether assessment was independent of clinical information and of different tests. - No teacher version was tested and no diagnostic interview was performed. - Study in Dutch general population.

		greater severity of depressive symptoms. - RCMAS; 37 dichotomous items of which 28 items assess anxiety symptoms in youths. Yes-responses are scored in the positive direction and summed to yield a total anxiety score or subscale scores of physiological anxiety, worry/oversensitivity, and fear/concentration. Remaining 9 items represent the 'lie' subscale which assesses children's' tendency to give socially desirable responses. - ADHDQ; 18-item questionnaire measuring 3 clusters of behavioural problems; attention-deficit, hyperactivity, and impulsivity. Respondents have to indicate on 5-point scales how frequently the pertinent problem occurs. Item scores are combined to a total score and subscale scores. - Specific parent and self-report versions of all abovementioned questionnaires were employed. <u>Time interval and treatment in between both tests:</u> -	<u>Conclusion:</u> It provides further support for the utility of the SDQ as an index of psychopathological symptoms in youths. The SDQ is particularly useful when a brief not too time-consuming questionnaire is needed. For example, the questionnaire can be employed by primary health care workers as an initial screening tool for detecting youths with psychiatric problems or by researchers as an index of therapy outcome. When a more extensive, standardised evaluation of youths' psychopathology is needed, clinicians and researchers may choose to employ the Achenbach scales or more DSM based questionnaires.	
<u>Study aim:</u> To examine the psychometric properties of the SDQ (parent, self-report) in Dutch youths: 1) factor structure of the SDQ; 2) reliability (internal consistency and test-retest stability); 3) concurrent validity of SDQ through its associations with other measures of psychopathology; 4) parent-youth agreement of the SDQ. <u>Study design:</u> Cross-sectional design. <u>Setting:</u> 7 regular primary and secondary				

schools. Location: The Netherlands. Training of assessors: -				
Referentie: Vogels AGC., Siebelink BM., Theunissen M., De Wolff M., Reijneveld SA. 2011 Vergelijking van de KIVPA en de SDQ als signaleringsinstrument voor problemen bij adolescenten in de Jeugdgezondheidszorg.	Aantal: 630 kinderen: 336 in onderzoeksgroep; 294 in non-respons groep. Gegevens responsgroep: Leeftijd: 11/12 jr.: 2% 13 jr.:46% 14 jr. 45% Ouder dan 14: 6%. Sekseratio: 47% jongens Etniciteit: Nederlands: 80% Westerse allochtoon: 2% Niet westerse allochtoon: 8% Onbekend: 10%. Inclusie: - Exclusie: - Ziekteprevalentie:? Co-morbiditeit:? Overig: -	Indextest: - SDQ (Strengths and Difficulties Questionnaire) - KIVPA (Korte Indicatieve Vragenlijst voor Psychosociale problematiek bij Adolescenten) Referentietest: - YSR: (Youth Self Report). - CBCL: (Child Behaviour Checklist) Tijdsinterval en behandeling tussen beide tests: ?	Onderzochte stoornissen: Problemen bij adolescenten op emotie/gedrag/sociaal vs. geen problemen. Prevalentie in respondenten: - Resultaten: Totale probleemschaal van de SDQ heeft een Cronbach's alfa van 0,75, bij de KIVPA is dat 0,78. Het onderzoek hanteert een ander afkappunt dan voorheen (>11 t.o.v. >16), want men wilde een sp >90. SDQ vs. YSR: Se: 0,75 Sp: 0,90 SDQ vs. CBCL: Se: 0,50 Sp: 0,90 Omdat de KIVPA en de SDQ elkaar overlappen kan op basis van de gegevens niet gezegd worden welk instrument beter is.	Valide referentietest: + Uitslagen referentie- en indextest onafhankelijk van elkaar beoordeeld: ? Beoordeling indextest onafhankelijk van klinische informatie: + Alle patiënten zowel index- als referentietest ondergaan: ? Referentietest voordat behandeling startte: niet relevant Opeenvolgende patiënten of aselecte steekproef: ? Ziektespectrum in studie representatief voor praktijksituatie: + Indextest voldoende beschreven voor reproduceerbaarheid:+ Belangenverstrengeling: - Bewijskracht studie: B - Niet alle onderzoeksfacetten zijn beschreven. - Men wilde Sp hoger dan 0,90, dus

				daarom afkappunt verlaagt. - Vreemd dat men een hoge Specificiteit wilden i.p.v. hoge sensitiviteit en ook onlogisch dat men het afkappunt verlaagd heeft.
<u>Doel studie:</u> - De schaalstructuur, de validiteit en de toegevoegde waarde voor de JGZ te evalueren van de SDQ Self Report (SR) in vergelijking met de KIVPA. - Nagaan of de SDQ Parent Form (SDQ PF; ingevuld door ouders) en de SDQ Teacher Form (SDQ TF; ingevuld door leerkrachten bij kinderen bij wie zij problemen vermoeden) de signalering verbeteren. <u>Studieopzet:</u> Cross-sectioneel design <u>Setting:</u> 1e lijn/scholen/Bureau jeugdzorg. <u>Locatie:</u> Nederland <u>Training onderzoekers:</u> -				

Evidencetabell voor de DAWBA

Reference: Foreman D, Morton S, Ford T. 2009. Exploring the clinical utility of the Development and Well-Being Assessment (DAWBA) in the detection of hyperkinetic disorders and associated diagnoses in clinical practice. J Child Psychology and Psychiatry;50(4):460-70.	Number of patients: n=84 Age: mean 9.43 years, SD 2.74 Sex: 85% boys Ethnicity: - Inclusion : An ADHD nurse received cases that had been identified as at risk of ADHD by SDQ and referral letter. Discussion had concluded that assessment of ADHD was warranted and the case complexity was not sufficient to mandate initial assessment by a child psychiatrist. Non-complicated referrals were randomized to assessment by nurse or psychiatrist. Exclusion: - Co-morbidity: - Other: Affluent area, but has pockets of substantial deprivation.	Index test: Development And Well-Being Assessment DAWBA: incorporates SDQ and integrates information from multiple informants. It allows yes/no and semi-structured (free text response to probe) data. 2 types of diagnostic output: computerized assessment and clinical diagnostic rating. The nurse did psychosocial assessment, DAWBA teacher, child (>11y) and caretakers version. Information discussed with psychiatrist. DAWBA data were accessed by other psychiatrist to assign diagnoses. Reference test: Clinical diagnosis. Time interval and treatment in between both tests: -	Target condition: Hyperkinetic disorders (non-hyperkinetic behavior disorders, emotional disorders, autistic disorders). Prevalence in sample: - Results (computer prediction ≥50% + positive DAWBA diagnosis)): (no absolute numbers, in figures) Hyperkinetic disorders: PV+: nearly 0.9 PV-: better than 0.8 Joint reliability DAWBA-clinical diagnosis: kappa=0.62 for DSM-IV and kappa=0.60 for ICD-10. Conclusion: The study provides good evidence that combining the DAWBA diagnosis and a threshold at or above 50% computer prediction band gives or excludes a diagnosis of hyperkinetic disorders with a similar degree of accuracy and precision as direct assessment. Diagnosis of ADHD made by a trained clinician scoring the DAWBA without meeting the patient are as accurate as a detailed assessment made in secondary care. The DAWBA is showing promise as a tool to allow the accurate detection of ADHD in primary care, which would enormously improve accessibility to treatment for this group of clients.	Valid reference test :+ Independent assessment of reference and index test : + Assessment index test independent of clinical information : + No work-up or verification bias: + Reference test given before start of treatment (+/not relevant): Not relevant Consecutive patients or independent sample: + Disease spectrum in study is representative: + Index test described sufficient for reproducibility : + Conflicts of interest: Foreman received an unrestricted educational grant from Lilly Pharmaceuticals to pilot a nurse-led ADHD clinic Overall quality of evidence: B - Results cannot be generalized to a not referred population.
Study aim: To evaluate if the DAWBA gives enough certainty to justify the initiation of treatment in primary				

care without referral to secondary care for additional information. Study design: Cross-sectional design. Setting: Secondary care team: 2 child psychiatrists, 2 nurses, family therapist, psychologist, psychiatric social worker. During the study period 66% of referrals came from primary care, 8% from education and 9% from social welfare or juvenile justice services. Location: Bracknell, UK. Training of assessors: Child psychiatrists trained in UK. Nurse qualified in general and mental health nursing.				

Evidence tabel voor de PSC-17

Methods	Patients	Instruments	Results	Quality Assesment
Reference: Gardner W, Lucas A, Kolko DJ, Campo JV. 2007. Comparison of the PSC-17 and alternative mental health screens in an at-risk primary care sample. J Am Acad Child Adolesc Psychiatry; 46(5):611-618.	Number of patients: n=269 Age: 8-15 years (mean 8.1, SD 2.1) Sex: 47%boys Ethnicity: White (90%), Black (6%), other (4%). Inclusion : Children 8-15 years who consecutively presented at primary care offices for well-child care, evaluation of recurrent abdominal pain, or assessment and management of other minor illnesses. Exclusion: - Co-morbidity: More anxiety and depression than in an unselected population (because of participation study). Other: -	Index test: PSC-17 is a parent-completed scale developed as a measure of child functioning, and subsequently used as a screen for symptoms of emotional and behavioral disorders. The PSC-17 is a short form of the PSC with 3 subscales measuring common childhood Attention, Externalizing (i.e., disruptive behavior), and Internalizing (i.e., depression and anxiety) problems. Reference test: Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime version (K-SADS-PL) Diagnostic interview child and parent + SCARED, CDI, CBCL, Children's Global assessment scale. Time interval and treatment in between both tests: -	Target condition: Common pediatric mental disorders. Prevalence in sample: ADHD: n=36 (13%) Depressive disorders: n=61 (23%) Anxiety disorders: n=112 (42%) Internalizing disorders (depression and anxiety): n=129 (48%) Externalizing disorders: n=49 (18%) Results: ADHD diagnosis of K-SADS-PL: CBCL Attention AUC 0.88 (0.80-0.96) PSC-17 Attention subscale AUC 0.86 (0.78 -0.94) PSC-17 cutoff point ≥5 (lowest calculated) Se: 0.88 Sp: 0.72 PPV: 0.14 (5%) 0.36 (15%) NPV: -0.99 (5%) 0.97 (15%) Conclusion study: The present study supports the validity of the PSC-17 as a screen for youth psychosocial impairment in primary care, but it also supported the ability of this brief 17-item screen and its subscales to identify youths with ADHD, disruptive behavior disorders, and depression in primary care. Further research is required to develop efficient yet accurate assessment tools.	Valid reference test (+/-/?):+ Independent assessment of reference and index test (+/-/?):+ Assessment index test independent of clinical information (+/-/?):+ No work-up or verification bias (+/-/?):+ Reference test given before start of treatment (+/not relevant):na Consecutive patients or independent sample (+/-/?):+ Disease spectrum in study is representative (+/-/?):- Index test described sufficient for reproducibility (+/-/?):+ Conflicts of interest: Dr. Campo has received grant support from Forest Laboratories and has been a consultant to Eli Lilly. The PSC-17 is in the public domain and none of the authors have a financial interest affected by the outcome of the evaluation of the PSC-17. Overall quality of evidence: A2

Study aim: To validate the 17-item version of the Pediatric Symptom Checklist (PSC-17) as a screen for common pediatric mental disorders in primary care, and how well the PSC-17 identified youths with psychosocial impairment, in which impairment was rated by either a psychiatrist or a parent. Study design: Cross sectional design. Participants of 2 longitudinal studies: Anxiety and Abdominal Pain; and Effectiveness of On Site Mental Health Services in Pediatric Primary Care. Setting: Primary care. 5 practices participating in a western Pennsylvania practice-based research network: 2 rural, 2 suburban, 1 urban. Location: Pennsylvania, United States of America. Training of assessors: The K-SADS interviewers were bachelors degree-level staff trained by senior staff at the Advanced Center for Intervention and Services Resources for Early-Onset Mood and Anxiety Disorder at the Department of Psychiatry at the University of Pittsburgh, where the K-SADS was developed.				

Evidence tabellen voor de CBCL

Methods	Patients	Instruments	Results	Quality Assesment
Reference: Derks EM, Hudziak JJ, Dolan CV, Ferdinand RF, Boomsma DI. 2006. The relations between DISC-IV DSM diagnoses of ADHD and multi-informant CBCL-AP syndrome scores. Compr Psychiatry; 47(2):116-122.	Number of patients: n=574 Age: 10-13 years (M=11.99) Sex: 283 boys 291 girls Ethnicity: - Inclusion: Twin registry Controls were matched on sex, cohort maternal age and ses. CBCl ratings: Children who scored low (controls), children who scored high (probands), and children who obtained an intermediate score (intermediate group). Twin pairs were selected if at least one of the twins scored high on AP (probands) or if both twins scored low on AP (controls). Exclusion: If maternal ratings were available only at one time, or if they suffered from a severe handicap, which disrupts daily functioning. Co-morbidity: - Other: -	Index test: CBCL: a standardized questionnaire for parents to report the frequency and intensity of behavioral and emotional problems exhibited by their child in the past 6 months. AP scale: Subscale attention problems Reference test: DISC-IV structured diagnostic interview with mother. It can be used to assess the presence of DSM-IV diagnoses, including ADHD. Time interval and treatment in between both tests: 4 months between interview and CBCL maternal.	Target condition: ADHD Prevalence in sample: n=81 (boys n=45; girls n=36) Results: Children with a low AP score obtained a negative ADHD diagnosis in 96% of cases. Children with a high AP score obtained a positive diagnosis in 36% (girls) and 59% (boys) of cases. *Boys* Se 0.74 Sp 0.92 PV+ 0. 59 PV- 0.96 LR+ 8.73 LR- 0.28 *Girls* Se 0.80 Sp 0.81 PV+ 0.36 PV- 0.97 LR+ 4.24 LR- 0.25 Conclusion study: CBCL can be used as a screening instrument for ADHD and children, who score high on the CBCL have to be examined with additional methods to verify if they indeed have ADHD. The PPP was higher in boys than in girls. The association	Valid reference test (+/-/?):+ Independent assessment of reference and index test (+/-/?): + Assessment index test independent of clinical information (+/-/?):+ No work-up or verification bias (+/-/?):+ Reference test given before start of treatment (+/not relevant):na Consecutive patients or independent sample (+/-/?): - Disease spectrum in study is representative (+/-/?):+ Index test described sufficient for reproducibility (+/-/?):+ Conflicts of interest: nothing mentioned Overall quality of evidence: A2 -Screening for the presence is associated with a high proportion of false positive cases.

			between paternal and maternal AP ratings and ADHD was the same, whereas the association between teacher AP ratings and ADHD was low.	
Study aim: To investigate the association between CBCL-AP and DSM-IV ADHD. Study design: Cross-sectional study in a longitudinal study. Setting: The Netherlands Twin registry longitudinal study; mothers and fathers are asked to complete the CBCL. In the present cross-sectional study, 356 families from the cohorts 1989 to 1992 were selected based on the maternal AP scores obtained at age 7, 10, and 12 years. Location: Community. Training of assessors: Diagnostic interview by 2 experienced research assistants				

Reference: Aebi M, Winkler MC, Steinhausen HC. Accuracy of the DSM-oriented attention problem scale of the child behavior checklist in diagnosing attention-deficit hyperactivity disorder. J Atten Disord 2010; 13(5):454-463.	Number of patients: Community: n=392 (319 screen-positive) At Stage 1, the application of various screens including several CBCL syndrome scales allowed the differentiation between screen-positive and screen-negative participants for Stage 2 of the assessment process that used structured interviews to arrive at clinical diagnoses. Outpatient: matched for sex and age: n=392 Age: Community: 6-17 years (M=12.6 , SD=2.59) Outpatient: 6-17 years (M=12.6 , SD=2.64) Sex: Community: 217 boys; 175 girls Outpatient: 217 boys; 175 girls Ethnicity: - Inclusion : The community-based sample was taken from ZESCAP cohort study. Its methodology is described in Steinhausen et al. 1998. A total of 557 screen-positive students and a randomized control sample of 122 screen-negative students were identified for further parental diagnostic interviews. Following mailed invitation, 416 parents were willing to cooperate. Due to	Index test: DSM-oriented attention problem scale of the CBCL. Reference test: Original attention problem scale of the CBCL. Time interval and treatment in between both tests: Not reported. Psychiatric diagnosis: DISC 2.3	Target condition: ADHD Prevalence in sample: Community: n=47 (12%) Outpatient: n=65 (16.6%) Results: - The reduced 5-item *DSM*-ADH Scale showed a good prediction of ADHD in the community sample with an AUC of 0.88 and 0.89 and still showed a fair to good prediction of ADHD in the outpatient sample with an AUC of 0.79 and 0.80, respectively. - The present study improved the validity of the original Attention Problem Scale for predicting ADHD in a community-based sample without participants from psychiatric institutions. -Optimal cut-point (raw score) was 5 to 6. Analyses for cutoff point=5: Community prediction subsample: Se 0.77 Sp 0.85 PV+ 0.40 PV- 0.97 Outpatient prediction subsample: Se 0.72 Sp 0.77 PV+ 0.36 PV- 0.94 Conclusion study: The adapted DSM-Oriented Attention Problem Scale of the CBCL is a useful screening instrument for ADHD with adequate	Valid reference test (+/-/?):+ Independent assessment of reference and index test (+/-/?): + Assessment index test independent of clinical information (+/-/?): - No work-up or verification bias (+/-/?): + Reference test given before start of treatment (+/not relevant): not relevant Consecutive patients or independent sample (+/-/?): - Disease spectrum in study is representative (+/-/?): + Index test described sufficient for reproducibility (+/-/?):+ Conflicts of interest: Not mentioned Overall quality of evidence: A2/B - The community cohort is more strongly affected by various emotional en behavioral problems than in the normal population.

	missing items, the final community-based sample with both screening and interview assessment consisted of 392 participants. Out of the outpatient cohort a random subsample matched for sex and age to the community sample of 392 participants was drawn. Exclusion:- Co-morbidity: 50% in both samples had at least one comorbid psychiatric disorder. Other: -		diagnostic accuracy in community and outpatient samples. However, only the improvement in the outpatient sample was significant.	
Study aim: Testing the diagnostic accuracy of the adapted CBCL *DSM*-ADH Scale (5 items) compared to the original Attention Problem Scale. Study design: Cross-sectional; community and outpatient samples, both split into subsamples(prediction and cross-validation subsample) so that results could be cross-validated. Setting: Community and psychiatric outpatient sample. Location: Switzerland Community: participants of Zurich Epidemiological Study of Child and Adolescent				

Psychopathology (ZESCAP); Outpatient: referrals to child and adolescent psychiatry service Zurich (2001-2006). Training of assessors: Outpatient: psychiatric diagnosis; postgraduate clinician and senior child and adolescent psychiatrist, interviews with parents, children and teachers.				
Reference: Hudziak JJ., Copeland W.,Stanger C., Wadsworth M. 2004. Screening for DSM-IV externalizing disorders with the Child Behavior Checklist: a receiver-operating characteristic analysis. Journal of Child Psychology and Psychiatry 45:7, pp 1299–1307	Number of patients: N=370 N=187 probands N=183 siblings Age: 6-18 years. Probands: mean age 10.88 Siblings: mean age 10.66 Sex: Probands boys: N=114 Siblings boys: N=101 Ethnicity: - Inclusion : *Probands:* – Proband child had to be between the ages of 6 and 18; – (2) Proband lived with at least one biological parent; – Proband had at least 1 sibling between the ages of 6 and 18. Exclusion:	Index test: CBCL: used to assess emotional and behavior problems in children. Checklist for parents to report the frequency of 120 problem behaviors on a 3 point scale. Reference test: Diagnostic interview based on DSM-IV WISC III. Time interval and treatment in between both tests: the same period.	Target condition: ADHD vs. ODD/CD. Prevalence in sample: *Probands:* N=95 ADHD 8N=9 ODD/CD - N=50 ODD without CD; - N=39 ODD and CD. *Sibling:* N=66 ADHD N=68 ODD/CD - N=49 only ODD; - N=19 ODD and CD. Results: Results siblings for ADHD attention problems. Cut-off point t score: 55. Se: 0.83 Sp: 0.88 PV+ : 0.80 PV- : 0.90 Conclusion: CBCL syndromes display good	Valid reference test:+ Independent assessment of reference and index test :? Assessment index test independent of clinical information: ? No work-up or verification bias:+ Reference test given before start of treatment: not relevant Consecutive patients or independent sample: + Disease spectrum in study is representative: - Index test described sufficient for reproducibility :+ Conflicts of interest:- Overall quality of evidence:

	Probands: −IQ fell at or below 70, <u>Co-morbidity:</u> <u>Other:</u> Probands were recruited to fill 4 groups corresponding to various levels of externalizing behavior problems for genetic analyses. Each group was defined by the CBCL scores of the proband.		diagnostic efficiency for assessing common externalizing disorders in children.	B - They say that they analyzed the sibling and proband groups separate, but they say nothing about blindness. - There were a lot of probands and siblings who had comorbidity; probably because a significant portion of the sample was recruited from an outpatient psychiatric clinic.
<u>Study aim:</u> Testing the diagnostic accuracy of the CBCL for assessing ADHD and also testing the diagnostic accuracy of the CBCL for assessing ODD with or without CD. <u>Study design:</u> Cross sectional design <u>Setting:</u> Children participated in a family study (recruited from a university-based outpatient clinic and from the community via posters and newspaper ads). <u>Location:</u> Norteasthern United States of America. <u>Training of assessors:</u> Not necessary.				

Evidence tabel voor YSR

Methods	Patients	Instruments	Results	Quality Assesment
Reference: Doyle R, Mick E, Biederman J. 2007. Convergence between the Achenbach youth self-report and structured diagnostic interview diagnoses in ADHD and non-ADHD youth. J Nerv Ment Dis; 195(4):350-352.	Number of patients: n=251 probands and siblings. Age: 12-18 years (mean 14.6, SD1.9) Sex: 75% boys Ethnicity: White, non-Hispanic. Inclusion : Probands were white, nonhispanic males 12-18 years; the sibling sets included both boys and girls. Exclusion: - Co-morbidity: CD, MD, multiple anxiety disorders. Other: -	Index test: Youth Self Report (YSR) is a standardized self assessment and produces the following clinical subscales: withdrawn, somatic complaints, anxious/depressed, social problems, thought problems, attention problems, delinquent behavior, and aggressive behavior. Scores on the scales are reported as T-scores having a mean of 50 and a standard deviation of 10. Each scale was dichotomized at a T-score of greater than 60 to indicate clinical impairment. Reference test: DSMIII-R-based structured diagnostic interview covering the past 2 years with child. Psychiatric assessments made with the Schedule for Affective Disorders and Schizophrenia for School-Aged Children and Adolescents, Epidemiologic Version (Kiddie SADS-E). Diagnoses were based on independent interviews with the mother and direct interviews of children. Diagnoses were considered positive only if criteria were met to a degree that would be clinically meaningful. Time interval and treatment in between both tests: -	Target condition: ADHD. Prevalence in sample: ADHD: 11% (n=27) Conduct disorder: 4% Major depression: 13% Multiple anxiety disorders: 2% Results: Total predictive value in ADHD group (n=27) of YSR Scales: Withdrawn 0.88 Somatic complaints 0.85 Anxious/depressed 0.88 Social problems 0.87 Thought problems 0.88 *Attention problems 0.90* Delinquent behavior 0.85 Aggressive behavior 0.87 Attention problems OR 12.5 (1.7-91.9) Conclusion study: There is evidence for selective and syndrome congruent associations between YSR attention problems with the structured interview derived diagnosis of ADHD. These results suggest that the YSR may serve as a rapid and cost-effective alternative to structured diagnostic interviews to help identify cases likely to meet clinical criteria for ADHD and comorbid psychopathology.	Valid reference test (+/-/?):+ Independent assessment of reference and index test (+/-/?): ? Assessment index test independent of clinical information (+/-/?): ? No work-up or verification bias (+/-/?):+ Reference test given before start of treatment (+/not relevant): Consecutive patients or independent sample (+/-/?): ? Disease spectrum in study is representative (+/-/?):+ Index test described sufficient for reproducibility (+/-/?):+ Conflicts of interest: Not mentioned Overall quality of evidence: B -It is unclear whether the assessment of the tests was independent. - Samples are high risk adolescents.
Study aim: To evaluate the association				

between the clinical scales of the YSR and directly assessed structured diagnostic interview assessments. Study design: Cross-sectional study in a longitudinal study of youth with and without ADHD and their siblings. Setting: Outpatient. Location: USA. Training of assessors: -				

Evidence tabellen voor de BRIEF

Methods	Patients	Instruments	Results	Quality Assesment
Reference: Mc Candless S, O'Laughlin L. 2007. The Clinical Utility of the Behavior Rating Inventory of Executive Function (BRIEF) in the Diagnosis of ADHD. Journal of Attention Disorders 10: 381.	Number of patients: n=70 Age: 5-13 years (mean 8.24, SD 1.85) Sex: 70% boys Ethnicity: Caucasian (94%) Inclusion : - Exclusion: Clients with incomplete data (e.g. teacher BRIEF missing), those with a full-scale IQ	Index test: BRIEF. The usefulness of BRIEF as a diagnostic screening tool was assessed by determining its ability to correctly discriminate between the ADHD and non-ADHD groups. BRIEF comprises 8 empirically derived scales; 2 global scales, the Behavioral Regulation index (BRI) and the Metacognitive Index (MI) were created following examination of factor analysis of the 8 scales. 86 items; Cut-off: t-score>65. Reference test: - BASC (Behavior Assessment System for Children). - IVA-CPT (Integrated Visual and Auditory Continuous Performance	Target condition: ADHD-Inattentive Type (IT) or ADHD-Combined-Type (CT) vs. Non-ADHD. Prevalence in sample: n=70 ADHD-IT: n=11 ADHD CT: n=34 Non-ADHD: n=25 Results (calculated AB): Se: 0.78 Se: 0.76 Sp: 0.64 PV+: 0.85 PV-: 0.66 LR+: 3.2 LR-: 0.29	Valid reference test :+ Independent assessment of reference and index test : + Assessment index test independent of clinical information : + No work-up or verification bias:+ Reference test given before start of treatment (+/not relevant): Not relevant Consecutive patients or independent sample: +

	<75, and children taking medication at the time of the evaluation. <u>Co-morbidity:</u> - Children were diagnosed in ADHD Inattentive Type or ADHD-Combined-Type of Non-ADHD (but than they could have ODD, learning disability (LD), anxiety or depression disorder or no diagnosis). 58% of the ADHD combined type also had a comorbid diagnosis (ODD, LD, or anxiety/depressive). <u>Other:</u> - Participants came largely from low- to middle-income families, with approximately 50% of the sample reporting a family income of $30,000 or less.	Task). - Children were classified according DSM-IV. <u>Time interval and treatment in between both tests:</u> -	- Percentage of cross-validated grouped cases correctly classified: 77.1%. - There are differences between teacher and parent scale scores. - To capture the full picture of child executive functioning, consideration and integration of both the parent and teacher responses to BRIEF is recommended. <u>Conclusion:</u> Parent report on the Behavior Regulation scale differentiates the ADHD–Combined Type group from the ADHD–Inattentive Type and non-ADHD groups, and the Metacognitive Index differentiates both ADHD subtypes from the non- ADHD group, thus supporting the clinical utility of this measure in a clinic-referred sample.	Disease spectrum in study is representative: - Index test described sufficient for reproducibility : ? Conflicts of interest: No Overall quality of evidence: B - Parent and teacher ratings on BRIEF scales were found to be significantly associated both with reports on BASC and IVA-CPT. - All participants are children from a ADHD clinic, this can be a bias. - Clinicians were blind to BRIEF scores when making a diagnosis.
<u>Study aim:</u> Evaluated the ability of BRIEF to differentiate children diagnosed with ADHD-Combined Type, those diagnosed with ADHD-Inattentive Type, and those given no ADHD diagnosis. Examined interrater reliability between parent and teacher reports on BRIEF. <u>Study design:</u> Cross-sectional design. <u>Setting</u>: University based ADHD clinic. <u>Location:</u>				

Indiana, USA. Training of assessors: Not described.				
Reference: Mahone EM, Cirino PT, Cutting LE, Cerrone PM, Hagelthorn KM, Hiemenz JR et al. 2002. Validity of the behavior rating inventory of executive function in children with ADHD and/or Tourette syndrome. Arch Clin Neuropsychol; 17(7):643-62. Study aim: Explore the convergent and discriminant validity of the BRIEF in children with Tourette syndrome (TS) and/or ADHD by administering the BRIEF Parent Form along with a selected set of both broad-band and ADHD-specific behavior rating scales, as well as performance-based measures of executive function (EF) and traditional measures of intellectual and educational competence. Study design: Cross-sectional design. Setting: - Location: - Training of assessors: -	Number of patients: n=76 Age: 6-16 years Sex: ADHD: 66.7% boys TS: 71.4% boys TS and ADHD: 82.3% boys Control: 30.0% boys Ethnicity: - Inclusion : No history of seizures, head injury, or other neurologic illness. In order to be included in the Tourette Syndrome group, children had to manifest all the following symptoms: (1) onset of tic symptoms before age 21; (2) multiple motor tics; (3) one or more vocal tics; (4) tic frequency that changes over time; (5) duration of tic symptoms > 1 year; (6) tics not secondary to other medical conditions; (7) tics are witnessed by a reliable observer. Overall, tic severity was reported to be mild to moderate in the TS group sample, although individual measurement of tic severity was not obtained. Exclusion: - Co-morbidity: ADHD: Among clinical groups, diagnosis of ADHD was made after participants met the following criteria: (1) identification and referral by professionals (psychologists, psychiatrists, pediatricians, and neurologists) in the local	Index test: BRIEF. The BRIEF Parent Form consists of 86 items sampled from practicing neuropsychologists, based on theoretical and empirically based definitions of the EF construct. Parents rate their child's behavior on a 3-point Likert scale (never, sometimes, and often). 8 scales are obtained (Initiate, Working Memory, Plan/Organize, Organization of Materials, Monitor, Inhibit, Shift, Emotional Control), along with a Metacognition Index (MCI), Behavior Regulation Index (BRI), and a Global Executive Composite (GEC). Reference test: Rating scales and structured interview: ADHD-RS: ADHD Rating Scale IV-Home Version CBCL: Child Behavior Checklist-Parent Report Form DICA-IV: Diagnostic Interview for Children and Adolescents, Fourth Edition Psycho educational (PE) measures WISC-III: Wechsler Intelligence Scale for Children, Third Edition WIAT: Wechsler Individual Achievement Test. Time interval and treatment in between both tests: all the same day.	Target condition: Correlation among BRIEF scales and parent rating scales. Prevalence in sample: n=76 ADHD: n=18 Tourette Syntrom (TS): n=21 TS + ADHD: n=17 Control: n=20 Results: - Correlation among BRIEF scales and parent rating scales. - All correlations among rating scales were highly significant (P < 0 .0001). BRIEF Global Executive Composite: CBCL Attention Problems scale (r=0.82) DICA-IV ADHD Scale (r = 0.78) ADHD Rating Scale IV : inattention symptoms r = 0.79; hyperactivity–impulsivity symptoms r=0.69. - Although all correlations were significant, a pattern emerged suggestive of discriminant validity between ADHD subtypes. Conclusion: BRIEF index scores showed no significant correlation with performance-based EF or PE measures, with the exception of math achievement; however, the BRIEF showed a strong relationship with interviews and other parent rating measures of behaviors seen in ADHD.	Valid reference test : + Independent assessment of reference and index test : + Assessment index test independent of clinical information : + No work-up or verification bias : + Reference test administered before start of treatment (+/not relevant): Not relevant Consecutive patients or independent sample : + Disease spectrum in study is representative : ? Index test described sufficient for reproducibility : + Conflicts of interest: No Overall quality of evidence: A2 - Small sample but good quality. - Evaluators were blind to subjects' diagnosis.

	community as having a current diagnosis of ADHD; (2) independent DSM-IV diagnosis of ADHD (any type) based on interview at the time of testing; (3) parent rating of 2 or higher (on a 4-point Likert scale ranging from 0 to 3) for 6 of 9 items assessing inattention and/or 6 of 9 items assessing hyperactivity-impulsivity on the ADHD Rating Scale IV.			
Reference: Jarratt KP, Riccio CA, Siekierski BM. 2005. Assessment of attention deficit hyperactivity disorder (ADHD) using the BASC and BRIEF. Appl Neuropsychol; 12(2):83-93.	Number of patients: n=68 Age: 9-15 years (mean11.8, SD 2.1) Sex: 69% boys Ethnicity: Caucasian (78%), African American (11%), Hispanic (8%), other (1%) Inclusion : - IQ ≥ 80 - Had to speak and read English. Exclusion: - Previous diagnosis of schizophrenia. - History of severe head injury. - Children with other learning or psychiatric disorders who did not meet criteria for ADHD. Co-morbidity: - Other: -	Index test: - BRIEF (Behavior Rating Inventory of Executive Function). 86-items questionnaire. The BRIEF included apparent and a teacher form. - BASC (Behavior Assessment System for Children); parent and a teacher rating scale; 9 scales. Reference test: - Comprehensive evaluation of cognition, achievement, language, memory, executive function, attention, and behavior-emotional status. Diagnoses were made independently by 2 raters based on DSM-IV. - WISC-III; The Wechsler Intelligence Scale for Children-Third Edition is the most frequently used measure of cognitive ability for child populations. Scores: *For the BASC and the BRIEF:* T-scores with a mean of 50 and a standard deviation of 10, and higher obtained *T*-scores are indicative of a higher degree of dysfunction. Time interval and treatment in	Target condition: ADHD vs. no-diagnosis Prevalence in sample: n=68 No-diagnosis: n=26 ADHD: n=42 Of the ADHD children: n=14 ADHD-Inattentive type; n=27 ADHD Combined type; n=1 ADHD not otherwise specified. Results: *Parent BASC:* Significant between-group differences: - Hyperactivity No-diagnosis 44.85 (SD. 9.49) ADHD 60.81 (SD 16.72) - Attention problems: No-diagnosis: 52.08 (8.13) ADHD 71.19 (SD. 9.09) *Teacher BASC:* Significant between-group differences: - Hyperactivity No-diagnosis 47.44 (SD. 7.32) ADHD 55.97 (SD 9.12) - Attention problems: No-diagnosis: 48.00 (11.19) ADHD 60.80 (SD. 10.48)	Valid reference test:+ Independent assessment of reference and index test :+ Assessment index test independent of clinical information :+ No work-up or verification bias :+ Reference test administered before start of treatment : Not relevant Consecutive patients or independent sample :+ Disease spectrum in study is representative: ? Index test described sufficient for reproducibility :+ Conflicts of interest: No Overall quality of evidence: B

		between both tests: -	*BRIEF Parent version:* Global Executive Composite: No-Diagnosis: 50.35 (SD 9.02) ADHD: 69.36 (SD 10.89) *BRIEF Teacher*: Global Executive Composite: No-Diagnosis: 55.75 (SD 12.17) ADHD: 71.54 (SD 13.19) Conclusion: The BASC and BRIEF appear to be measuring similar behavioral constructs, but the BRIEF focuses more on specific areas pertaining to meta cognition and working memory. - The use of the BASC and BRIEF in combination as components to comprehensive ADHD assessment seems promising and may generate additional areas in need of intervention (e.g. study skills, metacognition). - The BRIEF does not appear to tap into internalizing disorders to the same extent as the BASC.	- Small study - It seems as a good quality article. Raters were blind and diagnoses were made independently.
Study aim: Compare the results of the BASC and the BRIEF for a sample of children with no clinical diagnosis versus children with ADHD to determine their usefulness in identifying children with attention problems. Study design: Cross-sectional design. Setting: Children and adolescents who were recruited for a Memory,				

Attention, and Planning Study at a large university in the southwest. Participants for the larger study were recruited with announcements distributed to local physicians, schools, bulletin boards, a counseling center, and the newspaper. Location: University counseling and assessment clinic in the USA. Training of assessors: -				
Reference: LeJeune B, Beebe D, Noll J, Kenealy L, Isquith P, Gioia G, 2010. Psychometric support for an abbreviated version of the Behavior Rating Inventory of Executive Function (BRIEF) Parent Form. Child Neuropsychology. 16:182-201.	*There were 3 samples; 1 sample described the se and sp. of the normative sample. The normative sample is described in this table.* Number of patients: n=1,419 Age: 5-18 years Sex: 43% boys Ethnicity: White (80.5%), African American (11.9%), Hispanic (3.1%), Asian/Pacific Islander (3.8%), Native American/Eskimo (0.5%) Inclusion : - Exclusion: - Co-morbidity: -	Index test: Short-Form BRIEF Included the Behavioral Regulation Index (BRI) 3 subscales (Inhibit, Shift, Emotional Control), a Metacognition Index (MI) that is comprised of items from 5 subscales (Initiate, Working Memory, Plan/Organize, Organization of Materials, Monitor), and an overall Global Executive Composite (GEC) that sums all 24 items. Reference test: Original BRIEF: a standardized rating scale- based instrument with 86 items that allows for parent and teacher reports of executive behaviors and neuropsychological measures as observed on a day-to-day basis for children from 5-18 years old. Time interval and treatment in between both tests: -	Prevalence in sample: Normative sample: no information of the prevalence. Results: Short-Form Composite Index T-Scores ≥ 65 in Identifying Subjects with Comparably Elevated Scores on the Original BRIEF within the Normative Sample (n=1,419). Behavioral Regulation Index Se: 0.78 Se: 0.99 PV+: 0.86 PV-: 0.98 Metacognition Index Se: 0.81 Se: 0.99 PV+: 0.90 PV-: 0.98 Global Executive Composite Se: 0.85	Valid reference test : + Independent assessment of reference and index test: ? Assessment index test independent of clinical information : ? No work-up or verification bias : + Reference test administered before start of treatment (+/not relevant): Not relevant Consecutive patients or independent sample : + Disease spectrum in study is representative: + Index test described sufficient for reproducibility : +

	Other: They had no history of special education or history of using psychotropic medication.		Se: 0.98 PV+: 0.84 PV-: 0.99 Kappa's values subscales for normative group: - Ranged from 0.56 (inhibit) to 0.80 (organization of materials) ADHD sample: 0.63 (Shift) to 0.82 (Emotional control). Conclusion: The results provide strong evidence that the short-form of the BRIEF has the potential to meet important needs of the pediatric neuropsychologist, general clinical psychologist, or medical professional, to advance the scientific investigation of neuropsychological morbidity in medically involved populations, and to improve our theoretical and conceptual understanding of executive functioning as a construct.	Conflicts of interest: No Overall quality of evidence: B - No information about blindness. - The normal BRIEF is the reference test (it was better also to do a DSM-IV observation).

Study aim: Systematically develop and evaluate the psychometric properties of an abbreviated version of the Behavior Rating Inventory of Executive Function (BRIEF) Parent Report. Study design: Cross-sectional design. Setting: Recruited through public and private schools. Location: - Training of assessors: -				
Reference: Mahone EM, Hoffman J. 2007. Behavior ratings of executive function among preschoolers with ADHD. Clin Neuropsychol; 21(4):569-86.	Number of patients: n=50 (25 children for every group) Age: 36 and 71 months (mean 58 months) Sex: In both groups 80% boys Ethnicity: ADHD Group: Caucasian (60%),biracial (4%), African-American (36%) Control group: Caucasian (72%), African-American (28%) Inclusion : - Not yet in first grade. - Were free of evidence of prior diagnoses of	Index test: BRIEF-P: Behavior Rating Inventory of Executive Function, Preschool Version designed for use with children aged 2.0-5.11 years. It is organized into 5 clinical scales, 3 clinical indexes and a Global Executive Composite. T-scores >65 were considered representing clinically significant areas of concern. Reference test: - CPRS-R (Conners' Parent Rating Scale-Revised, Short Form) - PPVT-3 (Peabody Picture Vocabulary Test, Third Edition) Time interval and treatment in between both tests:	Target condition: ADHD vs. control group. Prevalence in sample: n=50 ADHD: n=25 Control: n=25 Results: Correlation between BRIEF-P and CPRS-R ratings (ADHD group n=25). ADHD index on the Global Executive Composite: 0.81. BRIEF-P T-scores: Global Executive Composite: ADHD: 130.6 (SD. 28.0) Control: 85.2 (SD. 1.3)	Valid reference test : + Independent assessment of reference and index test: +? Assessment index test independent of clinical information: - No work-up or verification bias:- Reference test administered before start of treatment: not relevant. Consecutive patients or independent sample: ?

	mental retardation, neurological disorder, or visual impairment. - Children were not taking psychotropic medication of any kind at the time of testing. Exclusion: - Co-morbidity: - Other: Children were included in the ADHD group as follows: identification and referral by professionals in the community as having a suspected or current diagnosis of ADHD; independent DSM-IV diagnosis of ADHD based on interview with a licensed psychologist or physician at the time of testing; parent-derived T-score > 64 on the Hyperactivity Scale or ADHD Index of the CPRS-R; Parent report of symptoms lasting at least 6 months, adversely affecting functioning in more than one setting.	Children in the ADHD group completed a brief neuropsychological assessment, and were rated by parents on the BRIEF-P on the same day as the assessment. The matched controls did not complete a performance-based neuropsychological assessment.	- Compared to age and sex matched controls, preschool children with ADHD were rated as having greater impairment on all scales and indices of the BRIEF-P. - The effect sizes for all group comparisons were consistently large, both when using raw scores and standard scores. - All BRIEF-P scales are highly sensitive to symptom of ADHD. Parent ratings on the BRIEF-P overlap significantly with ratings on the CPRS-R. - Children with ADHD were rated significantly higher than controls ($p<0.01$) on all 5 primary scales and on all 4 indices. Conclusion: All 5 BRIEF-P clinical scales were significantly intercorrelated in the control group, and 7of 10 scale inter correlations were significant in the ADHD group. Within the ADHD group, the BRIEF-P Index scores were significantly correlated with ratings on the CPRS.	Disease spectrum in study is representative: Index test described sufficient for reproducibility :+ Conflicts of interest: No Overall quality of evidence: B - Small number of patients. - The standardization (control) group was not administered the performance-based tests, and the correlations between the BRIEF-P and laboratory tests were made only on the ADHD group.

Study aim: Examine the convergent and discriminant validity of the BRIEF-P in preschool children with ADHD. Study design: Cross-sectional design. Setting: Children in the ADHD group were recruited from local preschools and day-care centers in the metropolitan Baltimore area and from outpatient clinics at the Kennedy Krieger Institute. Location: United States of America Training of assessors: -				
Reference: Sullivan JR, Riccio CA. 2007. Diagnostic group differences in parent and teacher ratings on the BRIEF and Conners' Scales. J Atten Disord; 11(3):398-406.	Number of patients: n=92 Age: 9-15 years (mean 11.32, SD1.99) Sex: 67% boys Ethnicity: White (80%), African American (11%), Hispanic (8%), Asian (1%). Inclusion : - Full Scale IQ ≥80 on the WISC-III ; Wechsler,1991. - Ability to speak and read English.	Index test: - Behavior Rating Inventory of Executive Function (BRIEF). Parent form and teacher form; 86 items both provide scores on 8 clinical scales and 3 broad indexes. - Conners' Rating Scales Revised–Short Form (CPRS-short form). 27-item rating scale completed by parents to assess characteristics of ADHD and oppositional behaviors. - The Conners' Teacher Rating Scales (CTRS)-Short Form is the teacher completed version and includes 28 items. Scores: BRIEF: T-scores with a mean of 50	Target condition: ADHD vs. no-diagnosis or another clinical group. Prevalence in sample: n=92 ADHD: n=41 No-diagnosis: n=26 Other clinical group: n=25. Results: *BRIEF Parent version:* Global Executive Composite: No-Diagnosis: 50.4 (SD 9.0) ADHD: 70.0 (SD 10.2) Other Clinical: 66.0 (13.6). *BRIEF Teacher*:	Valid reference test: + Independent assessment of reference and index test :+ Assessment index test independent of clinical information :+ No work-up or verification bias:+ Reference test administered before start of treatment : not relevant Consecutive patients or independent sample:+

	- No history of severe head injury. - No previous diagnosis of schizophrenia. <u>Exclusion:</u> - <u>Co-morbidity:</u> Of the participants in the other clinical group diagnoses included learning disabilities, adjustment disorders, mood disorders, substance use disorders, and conduct and oppositional defiant disorders.	and a standard deviation of 10, and higher obtained T-scores are indicative of a higher degree of dysfunction. For the Conners' scales: a higher obtained T-scores represents a higher degree of pathology or dysfunction. <u>Reference test:</u> Comprehensive psychological evaluation that included measures of cognitive ability, achievement, language, memory, executive function, attention, behavior, and emotional functioning. Diagnoses were made independently by 2 raters based on the DSM-IV. <u>Time interval and treatment in between both tests:</u> -	Global Executive Composite: No-Diagnosis: 55.8 (SD 12.2) ADHD: 72.3 (SD 13.0) Other Clinical: 70.7 (17.5). *CPRS: ADHD Index:* No-Diagnosis: 52.7 (SD 9.8) ADHD: 69.8 (SD 12.1) Other Clinical: 66.7 (14.5). *CTRS: ADHD Index:* No-Diagnosis: 51.1 (SD 11.6) ADHD: 63.7 (SD 13.5) Other Clinical: 62.4 (13.4). - Data suggest that the BRIEF and Conners' scales were able to distinguish clinical from nonclinical participants and that there was a moderate level of agreement between parents and teachers in describing children's behavior with these instruments. The results in T-scores were statistically significant. - At the same time, the scales were less successful at discriminating children with ADHD from those with other clinical diagnoses. <u>Conclusion:</u> The measures were successful at distinguishing clinical from nonclinical participants, but their ability to distinguish among different clinical groups deserves further investigation.	Disease spectrum in study is representative: ? Index test described sufficient for reproducibility: + Conflicts of interest: No Overall quality of evidence: A2 - Good described article.
<u>Study aim:</u> Examine differences among participants in a no diagnosis group, ADHD group, and other clinical group in terms of parent and teacher ratings on				

the Behavior Rating Inventory of Executive Function (BRIEF) and Conners' Rating Scales Revised–Short Form. Study design: Cross sectional design Setting: Children and adolescents who were recruited for a Memory, Attention, and Planning Study at a large university in the southwest. Participants for the larger study were recruited with announcements distributed to local physicians, schools, bulletin boards, a counseling center, and the newspaper. Location: University counseling and assessment clinic in the United States of America. Training of assessors: -				

Evidence table voor SNAP-IV

Methods	Patients	Instruments	Results	Quality Assesment
Reference: Bussing R, Fernandez M, Harwood M, Wei H, Garvan CW, Eyberg SM et al. 2008. Parent and teacher SNAP-IV ratings of attention deficit hyperactivity disorder symptoms: psychometric properties and normative ratings from a school district sample.	Number of patients: Eligible sample: n=3,158; n=2,035 children contacted. Phase 1 parent-rated sample: n=1,613 Phase 1 teacher-rated-sample: n=1,205 Phase 2: n=266	Index test: SNAP-IV parent and teacher. The 26 items of the MTA SNAP-IV include the 18 ADHD symptoms (9 for inattentive, 9 for hyperactive/impulsive) and 8 ODD symptoms specified in the *DSM-IV*. Items are rated on a 4-point scale from (0) *not at all* to (3) *very much*. Average rating-per-item (ARI) subscale scores for both parent and	Target condition: ADHD. Prevalence in sample: Of the 1,613 children (parent version): 8% (n=127) diagnosed ADHD. 12% (n=191) suspected ADHD. 27% (n=437) general concern.	Valid reference test (+/-/?):+?-concern Independent assessment of reference and index test (+/-/?): + Assessment index test independent of clinical information (+/-/?):+

Assessment; 15(3):317-328.	Age: Phase 1, parent-rated sample: Mean 8.40 years; SD 1,59 Phase 1, teacher-rated sample: Mean 7.67 years; SD 1,77 Phase 2: Mean 8.03 years; SD 1,73 Sex: Phase 1: 34% boys (girls were oversampled) Phase 2: 51% boys Ethnicity : Phase 1, parent-rated sample: White (69%), African American (31%) Phase 1, teacher-rated sample: White (70%), African American (30%) Phase 2: White (67%), African American (33%) Inclusion : Phase 1: if they lived in a household with a telephone and were from White or African American backgrounds. Phase 2: if they were diagnosed with or undergoing treatment for ADHD; either their parents or teachers had voiced concern about possible ADHD; or either their parents or teachers had voiced behavioral (but not specific ADHD) concern, and they received elevated scores on the SNAP-IV parent rating scale. Exclusion:	teacher scales are calculated for the inattention, hyperactivity/impulsivity, and opposition/defiance domains, resulting in 6 SNAP-IV subscale scores that can range from 0 to 3, abbreviated subsequently as P-Inatt, P-Hyp/Imp, P-Odd, T-Inatt, T-Hyp/Imp, and T-Odd. Reference test: Concern screening; DISC-IV P diagnosis; Phase 2: diagnostic interviews, self-report measures and services assessments. Time interval and treatment in between both tests: -	Results: - Coefficient alpha for overall parent ratings was 0.94 and for overall teacher ratings was 0.97. There were no significant variations in internal consistency by gender or race for either parent or teacher SNAP-IV ratings. - Factor Analysis results indicated a better fit for the 3-factor model than the 4-factor model for parent and for teacher data. - None of the effect size estimates was of large size; subsequent analyses were not stratified by age, gender, race, or poverty. - Average parent and teacher SNAP-IV subscale scores increased significantly with rising ADHD concern. - Parent SNAP-IV scores above 1.2 increased probability of concern (LR > 10) and above 1.8, of ADHD diagnosis (LR > 3). Teacher hyperactivity/impulsivity scores above 1.2 and inattention scores above 1.8 increased probabilities of concern only (LR = 4.2 and >5, respectively). Conclusion study: 1. No need for age- gender- and race specific cutoff points. 2. Internal consistency, item selection, and factor structure of the SNAP-IV were found acceptable and consistent with the constructs put forth in the DSM-IV. *3.* As a screening measure for emotional/behavioral concerns, the SNAP-IV performs adequately, with modest parent or teacher	No work-up or verification bias (+/-/?):+ Reference test given before start of treatment (+/not relevant): - Consecutive patients or independent sample (+/-/?):+ Disease spectrum in study is representative (+/-/?):+ Index test described sufficient for reproducibility (+/-/?):+ Conflicts of interest: - Overall quality of evidence: B -Sample is restricted to one school district with high poverty and limited diversity. -Two phases of screening in study do not reflect usual care.

	Phase 1: receiving special education services for mental retardation or autism. Other ethnic background than white or African American. Co-morbidity: - Other: Unclear whether patients diagnosed with ADHD were treated.		subscale score elevations predicting useful increases in the likelihood of Concern. 4. Differentiating ADHD positive from negative cases, parent hyperactivity/impulsivity scores above 1.8 and parent inattention scores above 2.4 increase the probability of ADHD diagnosis but with lower posttest probabilities than achieved for identifying Concern.	
Study aim: 1. To examine the psychometric properties of the MTA (=short) 26-items version of the parent and the teacher SNAP-IV and to explore the need for age-, gender-, and race-specific normative data. 2. To investigate the utility of the SNAP-IV rating scale population screening and for diagnostic assessment of ADHD symptoms. Study design: Cross-sectional design. Part of a longitudinal study on ADHD detection and service use. Parent interviews en teacher mail SNAP-IV. Phase 1 risk-screening phase; Phase 2 diagnostic and services assessment phase. Setting: Student sample from elementary schools. Location: North Central Florida, USA				

Training of assessors: Computer-assisted *DISC-IV-P* interviews were conducted by the principal investigator, co-investigator, and 3 senior psychology graduate students, after intensive training sessions and establishment of interrater reliability (99%).				

Evidence tabellen voor de CPRS en de CTRS

Methods	Patients	Instruments	Results	Quality Assesment
Reference: Loughran SB. 2003 Agreement and Stability of Teacher Rating Scales for Assessing ADHD in preschoolers. Early Childhood Education Journal, Vol. 30, No. 4; 247-253.	Number of patients: n=60 Age: Mean age time 1: 4.2 years Mean age time 2: 8.9 years Sex: 47% boys 53% girls Ethnicity: - Inclusion : - Exclusion: - Co-morbidity: - Other: Children were from a suburban, upper-middle-class community where each of the children had attended the same private preschool. Number of patients: n=60	Indextest: - The *CTRS-28* is a 28-item questionnaire concerning various types of child behavior problems and widely used for clinical and research applications with children. Cut-off: The Hyperactivity Index was the scale used in this study, and the appropriate norms were used for each group. Reference test: - The ADHD Rating Scale is a scale using the 14 items of DSM-III-R for ADHD. Cut-off: the 6-12 year norms of 8 or more symptoms were used as the cut-off score. - The CAP: Child Attention Profile. Composed of 12 items taken from the Child Behavior Checklist Teacher Report Form. Cut-off: The normative cut-off point at the 93 percentile was the threshold used. The only norms available for the CAP	Target condition: ADHD vs. No-ADHD. Prevalence in sample: Overall score for the rating process was: Time 1: ADHD n=10 n=1 correct, n=1 missed, n=8 false positive. Time 2: ADHD n=2 n=2 correct, n=0 missed, n=0 false positive. Results: Results from teachers and assistant teachers. Correlation between rating scales: *Time 1* - ADHD-RS/CAP: Teachers: 0.83; assistant teachers:0.85 - ADHD-RS/CTRS: Teachers: 0.74; assistant teachers:0.75 - CAP/CTRS: Teachers: 0.71; assistant teachers: 0 .95 *Time 2* - ADHD-RS/CAP: Teachers: 0.93; assistant teachers: 0.85 - ADHD-RS/CTRS: Teachers: 0.93; assistant teachers: 0.92 - CAP/CTRS: Teachers: 0.95; assistant teachers:0.91	Valid reference test :+ Independent assessment of reference and index test : ? Assessment index test independent of clinical information :+ No work-up or verification bias:+ Reference test administered before start of treatment (+/not relevant):+ Consecutive patients or independent sample :+ Disease spectrum in study is representative :+ Index test described sufficient for reproducibility :+ Conflicts of interest: No Overall quality of evidence: B

	Age: Mean age time 1: 4.2 years Mean age time 2: 8.9 years Sex: 47% boys 53% girls Ethnicity: - Inclusion : - Exclusion: - Co-morbidity: - Other: Children were from a suburban, upper-middle-class community where each of the children had attended the same private preschool.	were for 6-16 year age group. For the ADHD-RS and the CAP; there were no pre-school norms or threshold data. Time interval and treatment in between both tests: - 4 years between time 1 and time 2; there is no assessment. - Observations for time 1 were made over a longer period of time than observations at time 2. Time 2 was 1 single day of 5 hours. Indextest: - The *CTRS-28* is a 28-item questionnaire concerning various types of child behavior problems and widely used for clinical and research applications with children. Cut-off: The Hyperactivity Index was the scale used in this study, and the appropriate norms were used for each group. Reference test: - The ADHD Rating Scale is a scale using the 14 items of DSM-III-R for ADHD. Cut-off: the 6-12 year norms of 8 or more symptoms were used as the cut-off score. - The CAP: Child Attention Profile. Composed of 12 items taken from the Child Behavior Checklist Teacher Report	Agreement between teachers and assistant teachers for different rating scales at time 1 and time 2. *Time 1* - ADHD-RS: 0.61 - CAP: 0.62 - CTRS-28: 0.60 *Time 2* - ADHD-RS: 0.75 - CAP: 0.80 - CTRS-28: 0.80 Conclusion article: Teacher ratings scales provide a valuable piece of the information needed to evaluate and diagnose a child presenting the symptoms of ADHD in the preschool setting and in elementary school setting. Target condition: ADHD vs. No-ADHD. Prevalence in sample: Overall score for the rating process was: Time 1: ADHD n=10 n=1 correct, n=1 missed, n=8 false positive. Time 2: ADHD n=2 n=2 correct, n=0 missed, n=0 false positive. Results: Results from teachers and assistant teachers. Correlation between rating scales: *Time 1* - ADHD-RS/CAP: Teachers: 0.83; assistant teachers:0.85 - ADHD-RS/CTRS: Teachers: 0.74; assistant teachers:0.75 - CAP/CTRS: Teachers: 0.71; assistant teachers: 0 .95	- There is a significant change in number of children identified as potential ADHD risks. - There is not much information about the patient characteristics. - There is no statistical information. Valid reference test :+ Independent assessment of reference and index test : ? Assessment index test independent of clinical information :+ No work-up or verification bias:+ Reference test administered before start of treatment (+/not relevant):+ Consecutive patients or independent sample :+ Disease spectrum in study is representative :+ Index test described sufficient for reproducibility :+ Conflicts of interest: No Overall quality of evidence: B - There is a significant change in number of children identified as potential ADHD risks. - There is not much information about the patient characteristics. - There is no statistical information.

		Form. Cut-off: The normative cut-off point at the 93 percentile was the threshold used. The only norms available for the CAP were for 6-16 year age group. For the ADHD-RS and the CAP; there were no pre-school norms or threshold data. Time interval and treatment in between both tests: - 4 years between time 1 and time 2; there is no assessment. - Observations for time 1 were made over a longer period of time than observations at time 2. Time 2 was 1 single day of 5 hours.	*Time 2* - ADHD-RS/CAP: Teachers: 0.93; assistant teachers: 0.85 - ADHD-RS/CTRS: Teachers: 0.93; assistant teachers: 0.92 - CAP/CTRS: Teachers: 0.95; assistant teachers:0.91 Agreement between teachers and assistant teachers for different rating scales at time 1 and time 2. *Time 1* - ADHD-RS: 0.61 - CAP: 0.62 - CTRS-28: 0.60 *Time 2* - ADHD-RS: 0.75 - CAP: 0.80 - CTRS-28: 0.80 Conclusion article: Teacher ratings scales provide a valuable piece of the information needed to evaluate and diagnose a child presenting the symptoms of ADHD in the preschool setting and in elementary school setting.	
Study aim: Investigated the agreement and stability of 3 teacher rating Scales used to assess ADHD in preschool children: the ADHD Rating Scale, the Child Attention Profile (CAP), and the Conners' Teacher Rating Scale-28 (CTRS-28). Study design: Follow-up study. Setting:				

Preschool and Primary school. Location: USA. Training of assessors: Teacher had participated in a staff development workshop on ADHD prior to time 1.				
Reference: Purpura DJ, Lonigan CJ. 2009. Conners' Teacher Rating Scale for preschool children: a revised, brief, age-specific measure. J Clin Child Adolesc Psychol; 38(2):263-272.	Number of patients: N=669 participants Age: 25-74 months (Mean age: 51.35 months SD 8.52). Sex: 53.7% boys. Ethnicity: 44.4% African American; 45.4% Caucasian 10.2% other. Inclusion :? Exclusion:? Co-morbidity:? Other: Data were collected in public and private preschools serving children from low- to upper–middle socioeconomic statuses as part of two larger studies.	Index test: CTRS Observations of children behavior using the 44-item hybrid version of the CTRS. The hybrid version was constructed by combining the 28 items from the CTRS–R:S with the non overlapping items from the original CTRS short form Reference test: ADHD-Rating scale The Checklist was completed by an intervention instructor for a sample of 268 children from one of the larger projects. Time interval and treatment in between both tests: ?	Target condition: Behavioral problems (Inattention, Hyperactivity=Impulsivity, and Oppositional behaviors) vs. no-behavior problems. Prevalence in sample: ? Results: Factor correlations: ● The 5-item scale for Hyperactivity /Impulsivity was significantly correlated with the other two Hyperactivity/Impulsivity scales: (CTRS–R:S, r=.94, p<.001; Hybrid CTRS, r=.94, p<.001). ● The 5-item scale for Inattention was significantly correlated to the other two Inattention scales: (CTRS–R:S, r=.32, p<.001; Hybrid CTRS, r=.92, p<.001). ● The 5-item scale for oppositional behavior was significantly correlated to the other two Opposition scales: (CTRS–R:S, r=.91, p<.001; Hybrid CTRS, r=.96, p<.001). Conclusion: The revised scales significantly reduce the time needed for teachers to complete the measures while retaining the scales' ability to discriminate children with different levels of behavioral	Valid reference test:+ Independent assessment of reference and index test:? Assessment index test independent of clinical information:? No work-up or verification bias :? Reference test administered before start of treatment (+/not relevant):+ Consecutive patients or independent sample :+ Disease spectrum in study is representative :+ Index test described sufficient for reproducibility :? Conflicts of interest: - Overall quality of evidence:

			problems. Teachers could use the CTRS–15 as a screening tool to refer children with potential behavior problems for further evaluation.	B - It's not clear which children had both tests; there're 669 participants from lager studies and 268 participants had the ADHD-RS. - It's not clear how many children had real behavior problems.
Study aim: To construct a measure of behavioral problems (Inattention, Hyperactivity=Impulsivity, and Oppositional behaviors) from the CTRS that was closely associated with DSM–IV–TR behavioral problems that was brief, psychometrically sound, and appropriate for use with preschool children. Study design: Cross sectional Setting: Location: United States of America Training of assessors: -				
Reference: Charach A, Chen S, Hogg-Johnson S, et al 2009 Using the Conners' Teacher Rating Scale-revised in school children referred for assessment. Can J psychiatry:54;232-41	Number of patients: n=1,038 Age: 6-12 years (M=8.8; SD=2.1) Sex: 24,5% girls	Index test: CTRS-R, subscales L M N. CTRS-R is a reliable and valid 59-item teacher self-report form designed to identify children with ADHD and associated behavioural difficulties. Each item can be scored from 0 to 3; where 0	Target condition: ADHD Prevalence in sample: 53.7% Results: *T* scores of 60 and above on all CTRS-R DSM-IV	Valid reference test (+/-/?):+ Independent assessment of reference and index test (+/-/?): + Assessment index test independent of clinical information (+/-/?):+

	75,5% boys Ethnicity: - Inclusion : Behavioural difficulties with inattention, hyperactivity and (or) impulsivity, living with at least one parent, parent and child willing to participate in research assessment, and the child's teacher being able to participate in assessment by telephone. Exclusion: Attendance at a full-time residential or day treatment program, premature birth, history of serious head trauma, a chronic medical condition requiring ongoing medical treatment, the child was adopted, recent history of physical or sexual abuse, and parental disagreements regarding custody, children on psychotropic medications other than stimulants (antidepressants, atomoxetine, beta-blockers, or atypical neuroleptics). Co-morbidity: Reading disability, language impairment, IQ<85, ODD, CD. Other: -	represents an item is not present and 3 represents an always or definitely present symptom. There are 12 subscales, of which 3 (subscales L, M, and N) are designed to identify DSM-IV subtypes. Reference test: TTI-IV: interview with teacher. TTI-I is a reliable and valid semi-structured clinical interview for obtaining teacher descriptions of child behaviour in classroom and schoolyard settings. The clinician judges presence and (or) absence of impairing behaviours (inattention, hyperactivity, impulsiveness, opposition,defiance, and aggression) resulting in symptom counts consistent with DSM-IV ADHD, ODD, and CD. Inter-rater reliability is high, and the interview shows good convergent and divergent validity with standardized teacher-reported measures of impairment and child classroom behaviours. Time interval and treatment in between both tests: Not reported.	subscales offered high sensitivity, from 91% to 94%. Only on subscales M (hyperactive–impulsive) and N (total) did *T*- scores of less than 60 offer posttest probabilities of less than 10%, confirming that a child does not reach diagnostic threshold by interview. *T* scores of 80 and more offered high specificity, from 88% to 93%, but did not provide high posttest probabilities that children reach diagnostic criteria. Conclusion study: The ability of the CTRS-R to predict whether clinically referred children reach DSM-IV criteria for ADHD at school is limited. CTRS-R DSM-IV subscales can be a useful adjunct in individual clinical assessments of primary school children with ADHD. Clinicians can depend on the screening tool to rule out ADHD symptoms meeting DSM-IV diagnostic criteria at school when the T score from the teacher rating scale is I< 60 for subscale M (hyperactive–impulsive) or for subscale N (total) symptoms; in these situations, the rating scales can be used as a substitute for a clinical interview with the teacher. In other situations, clinicians will need additional information about the child's behaviour in school to clarify whether the child reaches DSM-IV criteria in school. Teacher rating scale DSM-IV classification errors appear more likely for girls who have cognitive and language impairments and for young boys who show oppositional behaviours	No work-up or verification bias (+/-/?):+ Reference test given before start of treatment (+/not relevant): na Consecutive patients or independent sample (+/-/?):+ Disease spectrum in study is representative (+/-/?):+/- Index test described sufficient for reproducibility (+/-/?):+ Conflicts of interest: Dr Schachar is a consultant to Eli Lilly Canada Inc and to Purdue Pharma. Overall quality of evidence: A2 -Sample taken from children referred to outpatient speciality clinic

Study aim: 1. Evaluate the diagnostic accuracy of the CTRS-R DSM-IV subscales using *T* score cut-offs. 2. To investigate whether specific patterns of comorbid conditions associated with classification errors can be identified. Study design: Cross-sectional study. Setting: Clinical sample of children 6-12y referred for evaluation of attention, learning and behavioural difficulties. Location: Outpatient speciality clinic in a large pediatric hospital in Toronto, Canada. Training of assessors: Not reported.				
Reference: Deb S, Dhaliwal A.-J, Roy M. 2007 The usefulness of Conners'Rating Scales-Revised in screening for Attention Deficit Hyperactivity Disorder in children with ittelectual disabilities and boreline intelligence. J Intell Dis Res 53;11:950-965 Study aim: To find cut-off scores for the Conners'Parent Rating Scales-	Number of patients: n=151 Age: 3-17 years (3-9 years n=54; 10-15 years n=73; 16-17 years n=24). Sex: 42 girls 109 boys Ethnicity : -	Index test: CTRS-R CPRS-R. There are two versions of the CRS-R, one to be completed by a parent (CPRS-R), the other by a teacher (CTRS-R). The CPRS-R has 27 questions and the CTRS-R has 28 questions. Both are designed for use in children aged 3–17 years. Most of the questions are loosely based on behavioural characteristics that are described in the DSM-IV diagnostic guidelines for	Target condition: ADHD with ID Prevalence in sample: ADHD: n=68 Combined type: n=36 Inattentive type: n=16 Hyperactive-impulsive type: n=16 Results: Among children with ID, a CPRS-R total score of 42 provided a sensitivity of 0.90 and a specificity of 0.67 with an area under the curve of 0.84. Similarly, a CTRS-R total score of 40 provided a	Valid reference test (+/-/?):+ Independent assessment of reference and index test (+/-/?): + Assessment index test independent of clinical information (+/-/?):+ No work-up or verification bias (+/-/?):+ Reference test given before start of treatment (+/not relevant): na

Revised (CPRS-R) and the Conners' Teacher Rating Scale-Revised (CTRS-R) that will give optimum levels of sensitivity andspecificity for screening for ADHD among children with intelectual disabilities (ID) and borderline intelligence. Study design: Retrospective study on copies of questionnaires found in medical records. Setting: Specialist clinic for children with ID and behavioural problems. Location : Birmingham, United Kingdom. Training of assessors: Not reported.	Inclusion : 1) age 3-17 years; 2) copy of a completed CPRS-R or CTRS-R in their medical case records, which had been completed at the time of their 1st appointment (i.e. before a clinical diagnosis was made or any intervention/ treatment implemented); 3) a clinical assessment of their ID level; 4) assessed by a clinician for ADHD using the DSM-IV-TR diagnostic criteria. Exclusion: - Co-morbidity: ID (n=109; 73%) or borderline IQ (n=42; 27%) Other: -	ADHD. Each question asks for a score from 0 to 3 to be chosen, where 0 = not true at all/never, 1 = just a little true/occasionally, 2 = pretty much true/often, and 3 = very much true/very often. Reference test: Clinically DSM-IV. Time interval and treatment in between both tests: Not reported.	sensitivity of 0.69 and a specificity of 0.67 with an area under the curve of 0.7. Overall, the CPRS-R seemed to be able to produce cut-off scores that had higher levels of specificity and sensitivity than the CTRS-R. This indicates that the CPRS-R could be a more reliable screening instrument than the CTRS-R. There is a very poor correlation between the scores of the CPRS-R and the CTRS-R scores. Conclusion study: The CPRS-R scores may distinguish between children with ID with and without ADHD but not the CTRS-R scores. It only can be used as an aid in screening. Many items in the CPRS-R and the CTRS-R are not applicable to children with severe and profound ID who do not have speech. The CPRS-R and the CTRS-R scores did not correlate with each other. There is a need to develop an ADHD screening instrument specifically for children with ID.	Consecutive patients or independent sample (+/-/?):+ Disease spectrum in study is representative (+/-/?):- Index test described sufficient for reproducibility (+/-/?):+ Conflicts of interest: nothing mentioned Overall quality of evidence: B -The participants were recruited from a clinical sample, with a small number of children (with ADHD).
Reference: Forbes GB. 2001 A comparison of the Conners' Parent and Teacher Rating Scales, the ADD-H Comprehensive Teacher's Rating Scale, and the Child Behaviour Checklist in the clinical diagnosis of ADHD. J. Att Dis;5:25-40 Study aim: Investigate the diagnostic utility of the CTRS-28, CPRS-48, ACTeRS and CBCL. Identify factors from each scale that make unique contributions to	Number of patients n=145 Age: 6-12 years Sex: 109 boys 36 girls Ethnicity: 100% European-American. Inclusion : children were referred	Index test: Conners Teacher Rating Scale-28 (CTRS-28), Conners Parent Rating Scale-48 (CPRS-48), ADD-H Comprehensive Teacher's Rating Scale (ACTeRS), Chils Behaviour Checklist (CBCL) Reference test: Child and parental interview using DSM-IV criteria Time interval and treatment in between both tests:	Target condition: ADHD-Inattentive Type or ADHD-Combined-Type (=combined + hyperactive/impulsive type) or non-ADHD Prevalence in sample: n=81 (n=61 boys) ADHD, combined n=7 (n=7 boys) ADHD, predominantly Hyperactive/Impulsive n=27 (n=17 boys) ADHD, Inattentive (=ADD group) n=30 (n=23 boys) non-ADHD Results: - Of the 25 variables studied statistically significant	Valid reference test (+/-/?):+ Independent assessment of reference and index test (+/-/?): - Assessment index test independent of clinical information (+/-/?):- No work-up or verification bias (+/-/?):+ Reference test given before start of treatment (+/not relevant): na

the discriminations of ADHD combined form, inattentive form en ADHD-like symptoms caused by other factors. Investigate effectiveness of various cutoff scores. Study design: Cross-sectional study. Setting: Private practice of clinical child psychology. Location: United States of America Training of assessors: Author is the assessor.	to determine if they had ADHD. The referral, which was almost always (n=141) initiated by learning or behavioural problems at school, was almost always(n=137) made by the child's physician, teacher or other professional. Exclusion: Children with mental retardation, psychosis, significant sensory or neurological limitations, taking medications for behavioral or emotional problems. Other than European-American background. Children for whom teacher ratings were not available and who were referred for problems other than suspected ADHD. Co-morbidity: ADHD: n=48 (54%) ODD or CD. ADD: n=13 (46%) ODD or CD. Other: Sample came from a homogeneous population of middle to upper middle class, European-American children without obvious emotional or medical problems, who impressed 1 or more knowledgeable professionals as possibly having ADHD.	Not reported.	differences between the ADHD and ADD groups were found on 3 variables from the CTRS-28, 2 from the CPRS-48, 1 from the ACTeRS and 1 from the CBCL. - The discriminant analysis indicated that none of the scales, alone or in combination could differentiate the ADHD and ADD groups at a clinically useful level. Combinations of factors from the CTRS-28 and CPRS-48 and to a lesser extent, combinations of factors from other pairs of scales, can contribute to the differentiation between ADHD and non-ADHD. Conclusion study: Popular rating scales do not produce clinically meaningful discriminations between ADHD and ADD. However, dual cutoff score bases on positive predictive power and negative predictive power with combinations of parent and teacher-completed ratings can be used to discriminate between children with ADHD and ADHD-like symptoms from other causes. Combination of CTRS and CPRS may contribute to the differentiation between ADHD and ADD	Consecutive patients or independent sample (+/-/?):? Disease spectrum in study is representative (+/-/?):- Index test described sufficient for reproducibility (+/-/?):+ Conflicts of interest:- Overall quality of evidence: B Sample came from a homogeneous sample, referred to private practice, is small and the study has only one assessor=author.
Methods	**Patients**	**Instruments**	**Results**	**Quality Assesment**
Reference: Hale JB, How SH, Dewitt MB, Coury DL. 2001 Discriminant	Number of patients: n=184	Index test: Conners Parent Rating Scale (CPRS-48) is a 48–item	Target condition: ADHD:HIC (hyperactive) and ADHD:I (inattentive) with and without comorbid conditions.	Valid reference test (+/-/?):+

Validity of the Conners' Scales for ADHD Subtypes. Current Psychology 20(3):231-249	Age: 5-16 years (M=9y9mo; SD=26.5 months) Sex: Ratio boys:girls = 4:1 Ethnicity: 71% Caucasian, 26% African-American. Inclusion: Children 5-16 years with: 1) no history of brain trauma or other medical condition affecting psychological functioning at the time of evaluation; 2) no current psychotropic drug use; 3) a developmental-behavioral pediatrician diagnosis of ADHD:I or ADHD:HIC based on physical examination, semi-structured parent and child interviews, completed medical charts, and relevant DSM criteria. Exclusion: ADHD:I and ADHD:HIC children who met criteria for more than 1 additional diagnosis (therefore, it was not possible to have a subject with ADHD:HIC + ODD/CD + LD). Co-morbidity: ODD, CD, LD. Other: For those with previous	questionnaire yielding five factors, including the Conduct Problem, Learning Problem, Psychosomatic, Impulsive-Hyperactive, and Anxiety subscales, and the Hyperactivity Index. Each item is rated on a 0 to 3 Likert scale, indicating the behavior is not at all a problem to very much a problem. Subscale *t*-scores are provided. Conners Teacher Rating Scale (CTRS-28) is a 28–item questionnaire for rating behavior problems in the classroom. Each item is rated on a 0 to 3 Likert scale and *t*-scores are provided for each subscale. This scale yields Conduct Problem, Hyperactivity, and Inattentive-Passive subscales, and the Hyperactivity Index. Academic ratings: Prior to the diagnostic interview, clinicians reviewed teacher ratings of referred students on Academic Performance, Social Behavior, and Work Habits scales. Reference test: Clinical review of interview and physical exam. Time interval and treatment in between both tests: Not reported	Prevalence in sample: ADHD:HIC: n=87 ADHD:HIC + ODD/CD: n=24 ADHD:HIC + LD: n=24 ADHD:I: n=31 ADHD:I + LD: n=18 ADHD:I + ODD/CD: n=4 Results: - Subtype classification was comparatively poor for all subtypes except the ADHD:HIC group (79%). - Less than half of the subjects in the other groups were correctly classified using the discriminant functions, ranging from only 29% of ADHD:I subjects correctly classified to 50% of the ADHD:I + LD subjects. Conclusion study: Conners rating scales are useful as screening tools Although discriminant analyses suggest several Conners' subscales help differentiate subtypes, multimethod evaluations using a variety of data sources are necessary for accurate identification and classification of the disorder with and without comorbid conditions.	Independent assessment of reference and index test (+/-/?):+ Assessment index test independent of clinical information (+/-/?):+ No work-up or verification bias (+/-/?):+ Reference test given before start of treatment (+/not relevant):na Consecutive patients or independent sample (+/-/?):? Disease spectrum in study is representative (+/-/?):- Index test described sufficient for reproducibility (+/-/?):+ Conflicts of interest: nothing mentioned Overall quality of evidence: B Sample is restricted to children referred to university outpatient clinic

	psychological testing (n = 68), Full Scale IQ scores were within the average range (M=94.59; SD=12.23)			
Study aim: To describe ADHD population characteristics and determine if the Conners' parent and teacher subscales differentiated the subtypes with comorbid learning and behavior problems. Study design: Cross-sectional study Setting: Children referred to a university affiliated outpatient developmental behavioral pediatric clinic for evaluation of learning and behavior problems. Location: United States of America Training of assessors: Not reported				

Evidence tabel voor de BITSEA

Methods	Patients	Instruments	Results	Quality Assesment
Reference: Karabekiroğlu K, Briggs-Gowan MJ, Carter AS, Rodopman-Arman A, Akbas S. 2010. The clinical validity and reliability of the Brief Infant-Toddler Social and Emotional Assessment (BITSEA).	Number of patients: n=112 Control group: Community sample: n=462 Age: 14-42 months (mean 29.9	Index test: BITSEA, Turkish version: Problem scale (BTSEA/P) 31 items and Competence scale (BITSEA/C) 11 items. Higher total scores on BITSEA/P indicate a higher level of behavioral and emotional problems and lower total scores on BITSEA/C indicate a	Target condition: Psychosocial problems. Prevalence in sample: 2-3 years (n=57): n=18 autism, n=9 language disorders, n=8 anxiety/ depression, n=7 disruptive behavior	Valid reference test (+/-/?): + Independent assessment of reference and index test (+/-/?): + Assessment index test independent of clinical information (+/-/?): ?

Infant Behavior & Development;33 :503-9.	months, SD 7.3) Community sample: 14-42 months (mean 24.6, SD 7.9) Sex: 70.5% boys Ethnicity: Inclusion: Age <42 months, no serious medical illness or severe motor and/or mental retardation. Exclusion: - Co-morbidity: - Other: -Community sample participants were assumed as representative for the general population. - Average age mothers 29.9 years, average age fathers 34.5 years. 25% of the mothers were working. 22.3% of mothers and 29.5% of fathers had university degree; 30.4% of mothers and 28.6% of fathers graduated from high school. - Age and educational level of the mothers and fathers similar for both groups.	lower level of competence. The reliability and validity of the Turkish version of BITSEA was established in a community sample of 462 toddlers (Karabekiroğlu et al., 2009). Both mothers and fathers completed the BITSEA. Reference test: - Comprehensive mental status examination (ITSME); consensus 2 psychiatrists; blind to the questionnaire data. - Zero-to-three Psychiatric Assessment Sociodemographic Form. - Parents completed the Autistic Behaviour checklist (AuBC) and Aberrant Behaviour checklist-Community (ABC). - Only mothers completed the CBCL/2-3. Time interval and treatment in between both tests: -	disorders. >3 years: n=9 autism, n=5 DBD, n=5 language disorders. Results: - Internal consistency father vs. mother: BITSEA/P Cronbach's α=0.80 (good to exclellent); BITSEA/C Cronbach's α=0.69 (good). - Interrater reliability father vs mother good to excellent: BITSEA/P Spearman's ρ= 0.66; BITSEA/C Spearman's ρ=0.63. - BITSEA/P scores significantly correlated with CBCL internalizing, externalizing and total problem scores, all subscores of ABC and total score of AuBC. - BITSEA/C score significantly inversely correlated with CBCL internalizing scored and significantly inversely correlated with AuBC total and ABC lethargy scores. - BITSEA/P scores were higher and BITSEA/C scores were lower than those observed in the community sample. - BITSEA/P scores significantly higher in disruptive behavior disorder and anxiety/depression groups. BITSEA/C significantly lower in autism group. Conclusion: BITSEA is a valid a reliable measure for assessing social and emotional problems and delays in competence in a psychiatric clinical sample of toddlers, as well in a community sample. Promising screening tool for primary health care settings.	No work-up or verification bias (+/-/?): + Reference test given before start of treatment (+/not relevant): na Consecutive patients or independent sample (+/-/?): + Disease spectrum in study is representative (+/-/?): + Index test described sufficient for reproducibility (+/-/?): + Conflicts of interest: No Overall quality of evidence: B - BITSEA is reliable instrument in Turkey. - Other population and health care, generalizability is limited.

Study aim: To investigate construct validity and reliability of Turkish version of BITSEA and BITSEA/C cutpoints. Study design: Cross-sectional design. Setting: Child psychiatry outpatient clinic. Location: Turkey. Training of assessors: -				

Evidence tabel voor de Sociaal Emotionele Vragenlijst (SEV)

Methods	Patients	Instruments	Results	Quality Assesment
Reference: Scholte EM, Van Berckelaer-Onnes I, Van der Ploeg JD. 2008. Rating scale to screen symptoms of psychiatric disorders in children. 23:47-62.	Number of patients: N=2,536 Age: 10.1 years (sd:3.2 years). Sex: 51% boys. Ethnicity: 92% Dutch Inclusion : - Parents who agreed to participate. Exclusion:- Co-morbidity:-	Index test: 72-items questionnaire, which is named the SEV in Dutch (Sociaal Emotionele Vragenlijst); 5-point scale Reference test: CBCL; Child behaviour checklist. Time test-re-test: In this study a test-retest period of about 3 weeks between both test administrations was used.	Target condition: Children with developmental disorders. Prevalence in sample: - Results: Internal consistency ADHD-combined type;10.94 ADHD- inattentive subtype; 0.89 ADHD- hyperactive/impulsive subtype; 0.88 Prediction table discriminant analysis. 1) 1st split-half sample (*N*=1,208) Se:0.88 Sp; 0.94 PV+ ;0.73 PV- ;0.98	Valid reference test :+ Independent assessment of reference and index test : + Assessment index test independent of clinical information:+ No work-up or verification bias:+ Reference test administered before start of treatment : + Consecutive patients or independent sample :+ Disease spectrum in study is representative : +

	Other: The symptoms of the following seven childhood disorder categories were included: - Attention deficit hyperactivity disorder (ADHD), - Oppositional-defiant disorder (ODD), - Conduct disorder (CD), - Generalized Anxiety disorder (GAD), - Social phobia, - Depressive mood, - Autistic disorder.		LR+ :15.03 LR- :0.13 2) 2nd split-half sample (*N*=1,178) Se: 0.83 Sp: 0.92 PV+: 0.65 PV-: 0.97 LR+:10.27 LR- :0.18 Conclusion: The internal, inter-rater and test-retest reliabilities all meet the requirements set out for rating scales intend for diagnostic purposes. Parental ratings show a consistent pattern of convergent and divergent validity with CBCL scores. Predictive validity was demonstrated in reference to children receiving mental health services.	Index test described sufficient for reproducibility:+ Conflicts of interest:- Overall quality of evidence: A2 - Good described article about the SEV.
Study aim: To develop a rating scale that specialised teachers and clinicians working in institutions for children with special needs can easily use to screen the symptoms of the major psychiatric disorders that can occur in children. - a questionnaire was constructed according DSM and ICD - symptoms have to be rated on 5-point scales by parents or teachers. Study design: Cross sectional design. Setting: Children from primary,				

secondary and special education. Location: The Netherland s Training of assessors: Not necessary for the CBCL.				

Methods	Patients	Instruments	Results	Quality Assesment
Reference: Scholte EM, Van Berckelaer-Onnes I, Van der Ploeg JD. 2008. Rating scale to screen symptoms of psychiatric disorders in children. 23:47-62.	Number of patients: N=2536 Age: 10.1 years (sd:3.2 years). Sex: 51% boys. Ethnicity: 92% Dutch Inclusion : - Parents who agreed to participate. Exclusion:- Co-morbidity:- Other: The symptoms of the following seven childhood disorder categories were included: - attention deficit hyperactivity	Index test: 72-items questionnaire, it's named the SEV in Dutch (Sociaal Emotionele Vragenlijst). five-point scale Reference test: CBCL *; Child behaviour checklist* Time test-re-test: In this study a test–retest period of about three weeks between both test administrations was used.	Target condition: children with developmental disorders Prevalence in sample: Results: Internal consistency ADHD-combined type;10.94 ADHD- inattentive subtype; 0.89 ADHD- hyperactive/impulsive subtype; 0.88 Prediction table discriminant analysis. 1) First split-half sample (*N* = 1208) Se:0.88 Sp; 0.94 PV+ ;0.73 PV- ;0.98 LR+ :15.03 LR- :0.13 2) Second split-half sample (*N* = 1178)	Valid reference test :+ Independent assessment of reference and index test : + Assessment index test independent of clinical information:+ No work-up or verification bias:+ Reference test administered before start of treatment : + Consecutive patients or independent sample :+ Disease spectrum in study is representative : + Index test described sufficient for reproducibility:+ Conflicts of interest:- Overall quality of evidence: A2 Good described article about the

	disorder - (ADHD), - oppositional-defiant disorder (ODD), - conduct disorder (CD), generalized Anxiety disorder (GAD), - Social phobia, - Depressive mood - Autistic disorder.		Se:0.83 Sp: 0.92 PV+: 0.65 PV- : 0.97 LR+ :10.27 LR- :0.18 <u>Conclusion:</u> The internal, inter-rater and test–retest reliabilities all meet the requirements set out for rating scales intend for diagnostic purposes. Parental ratings show a consistent pattern of convergent and divergent validity with CBCL scores. Predictive validity was demonstrated in reference to children receiving mental health services.	SEV.
<u>Study aim:</u> develop a rating scale that specialised teachers and clinicians working in institutions for children with special needs can easily use to screen the symptoms of the major psychiatric disorders that can occur in children. - a questionnaire was constructed according DSM and ICD - symptoms have to be rated on five-point scales by parents or teachers. <u>Study design:</u> Cross sectional design <u>Setting:</u> Children from primary, secondary and special				

education. Location: Netherland s Training of assessors: Not necessary for the CBCL.				

Evidence tabel voor SDQ:

Methods	Patients	Instruments	Results	Quality Assesment
Reference: Muris p, Meesters C, Van den berg F. 2003. The Strengths and Difficulties Questionnaire (SDQ) European Child & Adolescent Psychiatry;12:1-8.	Number of patients: n=562 Random subsample second SDQ after 2 months: n=91 Age: 9-15 years (mean 12.3, SD 1.0) Subsample: 10-14 years (mean 12.2, SD 0.8) Sex: 45.2% boys. Subsample: 39.6% boys. Ethnicity: - Inclusion: - Exclusion: - Co-morbidity: - Other: SES, based on educational levels of parents: 21.2% low; 35.9% middle, 42.9% high.	Index test: SDQ; 25 items describing positive and negative attributes of children that can be allocated to 5 subscales of 5 items each: emotional symptoms, conduct problems, hyperactivity-inattention, peer problems, and prosocial behaviour. Each item has to be scored on a 3-point scale with 0='not true', 1='somewhat true', and 2='certainly true'. Subscale scores can be computed by summing scores on relevant items (after recoding reversed items; range 0-10). Higher scores on the prosocial behaviour subscale reflect strengths; higher scores on the other 4 subscales reflect difficulties. A total difficulties score can also be calculated by summing the scores on the emotional symptoms, conduct problems, hyperactivity-inattention, and peer problems subscales (range 0-40). Reference test: - Achenbach questionnaires; 118 items addressing emotional and behavioural problems of children on 3-point scales. Both the parent version, CBCL, and the self-report version, YSR, assess 2 broad domains: externalizing and internalising. Items can be grouped into 8 scales: withdrawn, somatic	Target condition: Psychopathology. Prevalence in sample: - Results: Parent SDQ: 5 factors 47.6% of variance. 1 item had substantial secondary loading. Self-report SDQ: 5 factors 43.9% of variance; 4 items substantial secondary loadings. Internal consistency: α 0.7 parent and 0.64 self-report (acceptable). Correlation between SDQ difficulties scales were low to moderate. Correlations between parent and youth SDQ were modest and varied between 0.23 and 0.46. Varied not with age. Test-retest stability: except prosocial behavior all intraclass correlation > 0.70 (acceptable) Concurrent validity (good):	Valid reference test (+/-/?): +/- Independent assessment of reference and index test (+/-/?): ? Assessment index test independent of clinical information (+/-/?): ? No work-up or verification bias (+/-/?): + Reference test given before start of treatment (+/not relevant): na Consecutive patients or independent sample (+/-/?): - Disease spectrum in study is representative (+/-/?): + Index test described sufficient for reproducibility (+/-/?): + Conflicts of interest: No Overall quality of evidence:

		complaints, anxious-depressed, social problems, thought problems, attention problems, delinquent behaviour, aggressive behaviour. In all cases, higher CBCL/YSR scores reflect higher levels of problems. - CDI; scale for measuring severity of depression symptoms in children. 27 items relating to sadness, self-blame, loss of appetite, insomnia, interpersonal relationships, and school adjustment. Item scores range from 0 to 2. A total CDI score can be calculated by summing all item scores, with higher scores being indicative of greater severity of depressive symptoms. - RCMAS; 37 dichotomous items of which 28 items assess anxiety symptoms in youths. Yes-responses are scored in the positive direction and summed to yield a total anxiety score or subscale scores of physiological anxiety, worry/oversensitivity, and fear/concentration. Remaining 9 items represent the 'lie' subscale which assesses children's' tendency to give socially desirable responses. - ADHDQ; 18-item questionnaire measuring 3 clusters of behavioural problems; attention-deficit, hyperactivity, and impulsivity. Respondents have to indicate on 5-point scales how frequently the pertinent problem occurs. Item scores are combined to a total score and subscale scores. - Specific parent and self-report versions of all abovementioned questionnaires were employed. <u>Time interval and treatment in between both tests:</u> -	Parent SDQ total diff -CBCL total 0.70 SDQ emotional – RCMAS 0.43-0.73 SDQ emotional – CIDI 0.67 SDQ hyperact – ADHDQ 0.52-0.73 Self-report SDQ total diff -CBCL total 0.74 SDQ emotional – RCMAS 0.58-0.75 SDQ emotional – CIDI 0.64 SDQ hyperact – ADHDQ 0.46-0.66 <u>Conclusion:</u> It provides further support for the utility of the SDQ as an index of psychopathological symptoms in youths. The SDQ is particularly useful when a brief not too time-consuming questionnaire is needed. For example, the questionnaire can be employed by primary health care workers as an initial screening tool for detecting youths with psychiatric problems or by researchers as an index of therapy outcome. When a more extensive, standardised evaluation of youths' psychopathology is needed, clinicians and researchers may choose to employ the Achenbach scales or more DSM based questionnaires.	B - Unclear whether assessment was independent of clinical information and of different tests. - No teacher version was tested and no diagnostic interview was performed. - Study in Dutch general population.
<u>Study aim:</u> To examine the psychometric properties of the SDQ (parent, self-report) in Dutch youths:				

1) factor structure of the SDQ; 2) reliability (internal consistency and test-retest stability); 3) concurrent validity of SDQ through its associations with other measures of psychopathology; 4) parent-youth agreement of the SDQ. <u>Study design:</u> Cross-sectional design. <u>Setting:</u> 7 regular primary and secondary schools. <u>Location:</u> The Netherlands. <u>Training of assessors:</u> -				