Assessment Strategies for Moody ADHD in Children, Adolescents, and Adults

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Introduction

Mood and affect problems and symptoms of inattention, hyperactivity, and impulsivity are common in society, and particularly in mental health and primary care settings. Such problems impair patients' relationships with family and friends, their academic and occupational function, and ultimately the course of their lives. Careful and comprehensive assessment can lay the groundwork for effective treatments that can be life-changing. The list of differential diagnoses is long, and includes mood disorders, anxiety disorders, substance use disorders, personality disorders, and disruptive behavioral disorders, any of which can also have organic or substance-related etiologies. An effective initial interview will consider each of these groups of potential causes for the presenting symptoms, but may require multiple additional steps to gather more information. Sources of such information will include the patient and often other collateral informants, but may also include old medical, mental health, employment and academic evaluations, and sometimes behavioral comments on old report cards. Much of this information can be assimilated prior to the clinician's evaluation.

Often the clinician must integrate incomplete, potentially inaccurate, and sometimes contradictory information from different informants, and carefully weigh such informants' potential accuracy, biases, and motivations. Patients with ADHD, by definition, are inattentive, hyperactive or impulsive, and may give inaccurate answers, whether intentional or not. Patients or family members may underreport the patient's symptoms due to denial, poor insight, skepticism about mental illnesses, discomfort with the patient being "labeled," or simply to defy whichever party requested the evaluation without their blessing. In children or adolescents,

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such discordance may reflect parental conflicts with each other, with the patient, or with the school. Patients with ADHD often tend to overestimate their competence in various areas, a trait known as "positive illusory bias" [1, 2]. On the other hand, patients or family members may overreport the patient's symptoms when anxious or depressed [3], to seek academic or occupational accommodations or a medical excuse, or to obtain medications they hope will be therapeutic for the patient, or that they may divert or misuse. The late US president, Ronald Reagan, when asked about his confidence that his Russian counterparts would comply with a historical treaty intended to reduce both countries' nuclear arsenals, stated simply that he would "trust, but verify." Clinicians should use the same approach with information provided by patients and other informants, especially when their clinical observations and gut feelings raise doubts.

History of Present Illness, Past History, Family History, and Staging the Interview

For patients of all ages, proper psychiatric assessment will often require several stages [4–6]. The first stage will generally include brief introductions with the patient and other informants to review basic identifying information, chief complaints, goals for the evaluation, and further stages. At that time, the clinician can review aspects and limits of confidentiality. The next stages in the case of child or adolescent patients involve interviewing the child/adolescent and parent separately. This gives each party the chance to confidentially discuss their side of the story about the reported problems, as well as other potentially sensitive issues, and for the clinician to observe how reports, behaviors, and attitudes change when the other informant is no longer present. This also gives the clinician the chance to compare each party's answers to similar questions. The time spent with each party will vary, depending on the chief complaints, each party's willingness to participate in a separate interview, and the clinician's opinion about the relative reliability of each party in reporting their clinical concerns [6].

As a general rule, the proportion of time the clinician spends with a child or adolescent patient will generally increase with the patient's age, assuming he or she is cooperative and judged to be a good informant [4–6]. However, even brief interviews with younger children can provide useful observations about their activity level, mood and affect, developmental level, speech and language skills, and ability to handle a brief separation from their parent or other caregiver [4]. Clinicians should adjust their style and language level to the patient's maturity, intelligence and language skills [4, 5]. In young patients, it is particularly important to "break the ice" by adopting a comfortable and reassuring demeanor and asking less probing questions first, perhaps about hobbies, activities, friendships, experiences in school, and relationships with family [4, 5]. Any suggested problems can then be followed up with questions about mood, anxiety, obsessive compulsive, psychotic, and behavioral symptoms, and how those impact such activities. The individual interview also provides the chance to ask about trauma exposure, sexual activity, drug/alcohol use, suicidal ideations and behaviors, and other risky behaviors or

potential safety concerns. Reassuring patients that these are routine questions asked of all patients can make them more forthcoming in disclosing their problems and concerns. Above all, close observation of the patient's mood, affect, and behaviors during the interview is critical. Feelings the patient evokes in the examiner (e.g., sadness, anxiousness, hopelessness, pity, irritation) often provide important clues about patients' underlying mood and thoughts [4, 5].

A similar approach in interviewing adult patients can be equally helpful, assuming they have age-appropriate maturity, communication and cognitive skills. Finding the proper balance between developing an alliance with the patient, and maintaining proper boundaries and a neutral perspective can be especially important but tricky. In adult patients who are the persons of interest, they should be allowed greater say regarding what happens during the diagnostic process and the degree that other informants may participate. The clinician, however, can also set limits when necessary, especially since the diagnosis of ADHD requires such collateral information, and when the patient's thoughts and behaviors represent potential safety concerns.

How patients present themselves in the interview can also be quite informative. Do they seem sincere and trustworthy? Are they appropriately dressed, with good hygiene, or seem disorganized or disheveled? Do they seem distracted, spacey, or forgetful? Do they show signs of hyperactivity such as fidgetiness, or impulsivity such as answering questions prematurely? Do they report cognitive and vegetative symptoms of depression or any signs and symptoms suggestive of mania or psychosis? What kind of feelings do they evoke in you as the clinician through their behaviors and interactions: sympathy, irritation, anxiety, skepticism, fear? Do they have appropriate feelings about their presenting complaints?

Time spent with the parents or other family members, either alone or with the patient, is essential in the case of child and adolescent assessments, and often helpful in the case of adult patients too. Parents and other family members will often be more reliable reporters regarding the patient's ADHD and other externalizing behaviors, and other potentially sensitive issues about the patient's substance use, and social, school, work, family, or legal problems. Parents often will be better able to provide past psychiatric, medical, family, and socio-developmental history as well as relevant stressors or trauma exposure that the patient has no awareness of, or has chosen to withhold [6]. The clinician may use separate time with only the parent of a child patient to share clinical impressions and propose next steps regarding assessment and treatment of the patient. This is often a good time to discuss making sure that the parent's or other family members' mental health needs are also being appropriately addressed. Such time with parents and other family members helps the clinician to anticipate potential problems the patient or parent could have in both accepting and complying with the clinician's recommendations for treatment.

Additional information about the patient's past psychiatric history from the patient or family can also be helpful, including past diagnoses, experiences with prior therapy or pharmacological treatments, suicide attempts or self-injury, hospitalizations and the indications for them. If considering pharmacotherapy, it is important to review any prior medications tried and the patient's response to them. Careful review of past medical history and reports of any current somatic symptoms could suggest a tendency to overreport physical complaints that could be blamed as a

medication side effect, or could suggest a potential medical problem that could interfere with treatment, or at least require a medical workup and medical clearance before starting pharmacotherapy.

Information about the family history, from either the patient or parent, is also useful in understanding the patient's current mental health issues and the environmental context in which they are occurring. Identifying past mental health issues in other family members can help to identify genetic risks for mood, ADHD, substance use, and autism spectrum disorders, as well as for suicidal behaviors. Information about family members' responses to pharmacological treatments can be helpful in anticipating the patient's responses to the same or similar medications. A family member at home with an active substance use problem could increase the patient's risk of environmental adversities and trauma exposure, and is a relative contraindication to prescribing controlled substances like stimulants to the patient.

The Physical and Mental Status Examination

Obtaining vital signs, including blood pressure, pulse, weight, and height, is recommended as a routine part of psychiatric care, especially when considering a trial of a stimulant medication or other ADHD medication. If considering a trial of an atypical neuroleptic, baseline tests, such as an Abnormal Involuntary Movements Exam and measurement of waist circumference, as well as ordering a fasting blood glucose and lipids are recommended [7]. Observations of either motor or vocal tics are important to document and potentially discuss with the patient and family. When considering pharmacological treatment for ADHD, especially with a stimulant, a complete baseline physical exam is recommended, since hypertension, tachycardia, and structural or other heart problems are potential contraindications to such a trial [8, 9].

Structured Interviews and Rating Scales

As summarized in Table 2.1, there are several well-validated structured or semi-structured interviews to help clinicians' reach more accurate diagnoses in patients of all ages. Though such interviews are considered the gold standard for mental health assessment, they are often time-consuming, impractical in clinical settings, and require training to be used validly.

Instead, the current standard of care for patients of all ages is a careful diagnostic interview, supplemented with collateral information from validated rating scales, screening for various diagnoses that could explain patients' presenting complaints, or may require additional attention. Table 2.2 lists multiple different rating scales, along with relevant references. Using additional time during the interview to gather more information about symptoms reported on the questionnaires can be especially helpful. Reports by interview or rating scales about trauma exposure and other recent or ongoing stressors are especially important because they suggest contributing factors that could be targeted and mitigated with psychosocial interventions.

Table 2.1 Structured and semi-structured diagnostic interviews

Measure name	Patient_age informants	Contents	Comments
Kiddie Schedule for Affective Disorders and Schizophrenia for school-age children- Present and Lifetime DSM-5 Version (K-SADS-PL) [17]	6–18 years SR PR	Multiple sections to assess mood disorders, anxiety, disorders, psychotic disorders, trauma-related disorders, eating disorders, substance use, and global assessment of functioning; comprehensive except that it does not contain an autism section	A widely used semi-structured interview for clinician researchers; child and parent interviewed separately, then together to resolve differences in reported sxs. Available at no cost
Diagnostic interview for children and adolescents (DICA) [18]	6–18 years SR PR	Structured interview, which can be used by trained lay-interviewer; multiple sections separately screen patient and parent for various diagnoses based on DSM-criteria for pediatric psychiatric disorders	Available in a computer administered form in which patient reads the questions
Diagnostic Interview Schedule for Children (DISC) [19]	9–17 years SR PR	Structured interview containing multiple sections. Positive screening items open up sections for closer review. Screens for over 30 psychiatric diagnoses in DSM-IV	Used by lay-interviewers with training Computerized version available that reads questions aloud
Mini International Neuropsychiatric Interview for Children and Adolescents (MINI-KID) [20]	6–17 years SR PR	Short battery of questions based on general categories of psychiatric sxs as described in DSM-IV; meant to take less than an hour to interview both child and parent	Parent and child interviewed together for most items, but child/adolescent interviewed alone for items that may be uncomfortable to endorse with parent present
Structured Clinical Interview for DSM-5 (SCID-5) [21]	18+ years SR	Thorough assessment that can take a half hour to 2 h to administer depending on how many screening items are endorsed	This is the most commonly used diagnostic interview and has versions for clinicians (SCID-CV) and for clinical trials (SCID-CT)
Structured Clinical Interview for DSM-5 Personality Disorders (SCID-PD) [22]	18+ years SR	Screening questions based on criteria for all personality disorders described in DSM-5 personality disorders; time required 30″	Adaptation of the SCID used to diagnose personality disorders
Composite International Diagnostic Interview (CIDI) [23]	18+ years SR	Questions regarding 276 sxs related to DSM-IV diagnostic criteria	From the WHO website, but scoring requires special training

DSM Diagnostic and Statistical Manual, *PR* Parent report, *SR* Self Report, *Sxs* symptoms, *TR* Teacher report, *Yrs* years

Table 2.2 Rating Scales and Questionnaires

Measure name	Patient age informants	Contents	Comments
Attention deficit hyperactivity, oppositional defiant and conduct disorders			
Vanderbilt Parent and Teacher Behavioral Scales [24, 25]	11–18 years PR TR	55 questions on parent version and 43 questions on teacher version. Questions assess sxs of ADHD (inattentive and hyperactive clusters), ODD, Conduct Disorder, depression, anxiety, and functional impairment; based on DSM criteria; items considered positive if rated at least "often"	Teacher version combines ODD and Conduct disorder questions into single group; helpful in diagnosis process, treatment-sensitive; no cost
Conners Comprehensive Behavior Rating Scales (CBRS) [26]	8–18 years for CBRS-SR; 6–18 years for CBRS-PR and CBRS-TR	An extensive instrument intended for multiple informant types to provide a full review of behaviors, emotions, and academic/social function	Clinical Index is an auxiliary scale used to help review sxs for specific DSM disorders
Short SNAP-IV [27]	6–18 years PR TR	26-item version of original 90-item SNAP-IV; Questions screen for ADHD and ODD sxs per DSM-IV	Sxs rated "often" or "very often" are counted positive. No cost
Adult ADHD Self-report Scale (ASRS) [28, 29]	18+ SR	18 questions based on DSM-IV criteria for ADHD. Part A Screen: 4 inattentive and 2 hyper/impulsive sxs; Part B has 12 remaining sxs	The 6 Part A items are best discriminators of adult ADHD
Conner's Adult ADHD Rating Scales (CAARS) [30]	18+ years SR	26-item and 66-item forms measuring ADHD and related sxs on 4-point scale. Subscales: *Inattention-Memory, Hyperactive-Restlessness; Impulsivity-Emotional lability* subscale measures sxs of ED [31].	Long form has an Inconsistency Index that measures differing answers to similar questions
The Brown Attention-Deficit Disorder Scale (BADDS) for Adults [32]	18+ years SR or clinician-administered	Developed and normed to assess for poor executive function and ADHD sxs; 40 items rated on a 4-point scale	*Emotional Control* cluster for frustration management and emotional modulation
Behavioral Rating Inventory of Executive Function (BRIEF-A) [33]	18+ years SR Other informant report	75 items of executive function and self-regulation scored on a 3-point scale [33]; gives an overall Global Executive Composite score, a Behavioral Regulation Index (with Emotional Control and 3 other component scales); and a Metacognition Index (of executive function and ADHD). Raw scores can convertible to standard T scores	T-scores of 50 equivalent to population's mean, and T-scores ≥65 are 1.5 standard deviations above it, and suggest the problems are clinically significant [34]

Objective measures of ADHD			
Conners Continuous Performance Test-II [11]	8 years to adult Task-based	A 14″ computerized challenge, in which patients are given a series of letters at varying intervals and told to push the space bar whenever they see any letter other than "X." Measures errors of omission, commission, and declining accuracy over time of test, each suggesting possible ADHD	Provides a score suggesting relative likelihood of ADHD; moderate correlation with parent- and teacher ADHD ratings; treatment-sensitive to ADHD meds [35–38]
Test of Variable Attention (TOVA) [12]	4 years to adult Task-based	22 min computerized assessment for ages 6 and up. Ages 4–5 can take an 11 min test instead	As with CPT-II above, lacks sensitivity and specificity, but is treatment-sensitive
NEBA EEG-Based Test [15]	6–18 years 20–30″	Uses modified EEG to measure electrical activity in the front part of the brain, *specifically the ratio of theta to beta waves*, which has been found to be a biomarker of potential ADHD [16]. Results categorize youths as: (1) is likely to have ADHD, (2) needs additional assessment for ADHD sxs, and (3) needs additional assessment for "other conditions"	Unclear if treatment-sensitive
General measures of symptoms, dysfunction, and change with treatment			
Achenbach System of Empirically Based Assessment (ASEBA) [39]	1.5–5 years for pre-school PR; 6–18 years for School age PR or TR; 11–18 years for Youth SR	4 pages of 100 or more questions about general level of functioning, and questions about problematic behaviors. Behaviors included are: Aggressive, anxious/depressed, attention problems, rule-breaking behavior, somatic complaints, social problems, thought problems, and withdrawn/depressed. All versions take about 30″ to complete	Available in >90 languages with normative data from multiple different societies. The previous version was the Child Behavior Checklist (CBCL) [40]
Strength and Difficulties Questionnaire [41]	2 years to adult SR PR TR	25 items in five categories: Emotional sxs, conduct problems, hyperactivity/inattention, peer relationships, pro-social behaviors	Widely used in clinical settings and studies, especially in Europe; multiple translations available; no cost
Columbia Impairment Scale [42]	9–17 years SR or PR	13 items related to interpersonal relations, occupation, schoolwork, use of leisure time, and affect. Originally meant to done by interview	More recently used as a questionnaire; no cost

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Table 2.2 (continued)

Measure name	Patient age informants	Contents	Comments
Clinician Global Impressions of Severity Scale (GGI-S) [43]	All ages Clinician-rated estimate of clinical severity relative to other patients with that diagnosis	Widely used in research and clinical practice to assess baseline severity and changes over time. Rater uses all available clinical info including clinical observations. CGI-S ratings from 1 to 7: (1) Normal, not at all ill; (2) Borderline mentally ill; (3) Mildly ill; (4) Moderately ill; (5) Markedly ill; (6) Severely ill; (7) Among the most extremely ill	Suggested by the Texas medications algorithm group to track patients' responses to various treatments, and to guide further treatment decisions. No cost [44]
Clinician Global Impressions of Improvement Scale (GGI-I) [43]	All ages. Clinician-rated estimate of clinical improvement from baseline	Companion measure to CGI-S, used to assess response to treatment. CGI-I ratings from 1 to 7: (1) very much improved; (2) much improved; (3) minimally improved; (4) no change; (5) minimally worse; (6) much worse, and (7) very much worse). Responders often defined in trials by a CGI-I ≤2	Persistent CGI-I of 5 or 6 suggests the need to consider a change treatment. No cost [44]
Mood disorders			
Patient Health Questionnaire (PHQ-9) [45]	18+ years SR	None questions about frequency of MDD sxs per DSM-5 criteria. No cost	Useful self-administered screening tool, quick to complete and score
PHQ-9 for Adolescents [46]	13–18 years for SR 6–18 years for PR	13-item measure, with 9 DSM-based sxs of major depression rated on 4-point scale according to frequency	Modified from Adult PHQ-9 to screen for frequency of DSM-5 major depression sxs. No cost
Mood and Feelings Questionnaires (MFQ) [47]	8–18 years SR or PR versions	33 items scale, rating current depressive sxs on a 3-point scale: 0 = "not true," 1 = "sometimes," 2 = "true." Treatment-sensitive; 6–7 year olds can also complete if adult reads the questions [48]	13-item version also available [49]
Children's Depressive Rating Scale, Revised (CDRS-R) [50]	8–18 years SR PR	17-item interview-rated, based on input from both SR and PR. Ratings are on a 5- or 7-item scales. Widely used in research to track changes in the severity of depressive sxs	Score ≥40 indicate clinically significant sxs; score <28 used to define depressive remission
Beck Depressive Inventory Version 2 (BDI-2) [51]	13+ years SR	21 items rated on a 3-point scale to assess DSM-IV criteria for depression, created for adult use	Occasionally used in studies with adolescents

Children's Depressive Inventory (CDI) [52]	7–18 years SR	27 items on a 3-point scale. Modeled after BDI, to assess depressive sxs in juveniles	Treatment-sensitive
Center for Epidemiologic Studies Depression Scale (CESD) [53]; CESD-Revised (CESD-R) [54]	18+ years SR	20 items measure the frequency of 9 depressive sxs as defined by DSM-IV. Developed for adults but has been used in adolescent studies; can be administered by phone	No cost
Parent General Behavior Inventory (P-GBI) [55]; Brief P-GBI Mania Scale (GBI-10) [56]	5–17 years PR	The 73-item P-GBI, includes a 28-item Hypomanic/Biphasic and 45-item Depressive subscales. Hypomanic/Biphasic subscale strongly discriminates pediatric bipolarity from ADHD or other psychopathology. Treatment-sensitive [57]	A 10-item brief version of P-GBI (GBI-10) also a valid screen for pediatric mania [56]
Child Mania Rating Scale [58, 59]	9–17 years SR and PR	21-item screen for current sxs of mania based on DSM-IV. 10-item short form also available	Does not assess for lifetime mania. No cost
Young Mania Rating Scale [60] Young Mania Rating Scale-Parent Version [55]	9–17 years Clinician-rated YMRS; Also a PR version	11 questions based on DSM criteria for mania in adults, later modified to be applicable in youths. Newer parent-version enables them to report on potential manic signs/symptoms in juveniles	Often used as an outcome measure in trials of bipolar patients of all ages. No cost
The Mood Disorders Questionnaire (MDQ) adolescent version [61]	11+ years PR SR	Both adolescent SR and PR versions have 13 items related to manic sxs, plus additional items to determine if sxs occurred concurrently, and were impairing; associated with significant impairment	Modified from adult MDQ; only PR version validated for identifying bipolar youth; no cost
Mood Disorders Questionnaire, Adult-version [62]	18+ years SR	13 items of manic sxs, plus additional items assess if reported sxs were concurrent, and significantly impairing	Instead of current sxs, screens for lifetime history of manic sxs No cost
Hamilton Depression Rating Scale (HRDS or HAM-D) [63, 64]	18+ years PR	The original has 17 questions to assess depressive sxs but the most recent revision contains 29 questions	Widely used in adult clinical trials, treatment-sensitive

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Table 2.2 (continued)

Measure name	Patient age informants	Contents	Comments
Anxiety disorders			
Multidimensional Anxiety Scale for Children (MASC) [65]	Child and adolescent SR	39 items classified by four domains of sxs: Physical (tense/restless and somatic/autonomic), social anxiety (humiliation/rejection and public performance fears), harm avoidance (perfectionism and anxious coping), and separation anxiety	Widely used, commercially available under copyright
Screen for Child Anxiety-Related Disorders (SCARED) [66]	8–18 year SR and PR versions	41 items: Generalized Anxiety, Panic Disorder, Separation Anxiety, Social Anxiety, and School Avoidance	Specific scores for sub-categories suggest positive screens; no cost
Zung Self-Rating Anxiety Scale (SAS) [67]	18+ years SR	20-item, with four groups of sxs: Cognitive, autonomic, motor	Widely available
Generalized Anxiety Disorder 7 (GAD7) [68]	Adolescent and adult SR	7 items that screen for generalized anxiety disorder, rated on 4-point scale	Often used in Primary Care (has also been used in adolescents); no cost
Obsessive compulsive disorder			
Children's Yale-Brown Obsessive Compulsive Scale (CY-BOCS) [69]	Child or adolescent Clinician-administered child- or parent-rated interview	Informants first identify OCD sxs from a long list provided by the clinician, then are asked to rate the most sxs based on their severity and levels of interference	A pediatric version modeled after the adult Yale-Brown Obsessive Compulsive Inventory [70]; used in clinical trials and clinical practice [71]
Short Leyton Obsessional Inventory for Children and Adolescents [72]	8–18 years PR SR	11-item, abbreviated version of the 20-item Leyton Obsessional Inventory-Child Version; OCD sxs rated on a 4-point scale. Modified from OCD measure in adults [73]	Brief; separates OCD cases from depressed and community controls; no cost [71]
Obsessive-Compulsive Inventory-Child Version [74]	7–17 years 21-items; a SR or PR screen for OCD	A relatively new, child-version of the Obsessive-Compulsive Inventory (OCI-CV); 6 domains of sxs like original adult measure; scores correlate with clinician-rated OCD severity; treatment-sensitive	Enables brief assessment of pediatric OCD across multiple domains of sxs [75]
Obsessive-Compulsive Inventory-Revised [76]	18+ years SR	18 items rated on a 5-point scale, summed to generate a total score. Contains six subscales: Washing, checking, ordering, obsessing, hoarding, and mental neutralizing; treatment-sensitive [71]	Total scores reported to correlate with clinician-rated measures of OCD severity

Yale-Brown Obsessive Compulsive Scale [70]	Adult Clinician-rated, 10-item scale	10-item scale; Patient first reviews a list of OCD sxs, then rates the severity of impairment related to these sxs, with impairment from obsessions and compulsions rated separately; treatment-sensitive	Used in OCD research and clinical treatment; no cost
Trauma-related disorders			
Clinician-Administered PTSD Scale for DSM-5 (CAPS-5) [77];	18+ years SR *11–18* *SR and PR*	30-item interview of recent (weekly and monthly versions) and lifetime sxs, frequency, and impairment related to DSM-5 criteria A-G for PTSD; *New Child/ Adolescent version also available (CAPS-CA-5)* [78]	Currently a gold standard for assessing for PTSD at no cost
Traumatic Events Screening Inventory (TESI) [79]	8+ years for SR Any age for PR	Items ask about lifetime history of 14 types of events and level of distress (e.g. disasters, wrecks, illness, domestic violence, community violence, physical abuse, sexual assault, etc.); measures non-victimization and victimization events	Victimization events linked with depression and suicidal behaviors [79, 80]; no cost
Life Events Checklist for DSM-5 [81]	8+ years SR	16 items regarding occurrence of different potentially traumatic events	
UCLA PTSD Reaction Index for DSM-5 [82]	7–12 years for Child SR 13–18 years for Adolescent SR	Based on DSM-5 criteria; 33 items about traumatic events, and patient's immediate and persistent reactions. 18 items asked by clinician, 15 by patient	Common outcome measure in pediatric PTSD research
Trauma Symptom Checklist for Children/for Young Children [83]	PR for all ages SR for 8–16 years	54 questions in SR and 90 in PR. Child asked to describe frequency of thoughts, feelings, behaviors	
Child PTSD Symptom Scale [84]	8–18 years SR	26 items related to traumatic events, PTSD sxs, impairment; based on DSM-IV criteria	
Young Child PTSD Checklist [85]	1–6 years PR	12 questions about the occurrence of traumatic events and 30 questions about specific sxs	
PTSD Checklist for DSM-5 (PCL-5) [86]	18+ years SR	20-item measure based on diagnostic criteria for PTSD from DSM-5; military and civilians versions	No cost

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Table 2.2 (continued)

Measure name	Patient age informants	Contents	Comments
Autism spectrum disorders			
Modified Checklist for Autism in Toddlers (M-CHAT) revised [87]	16–30 months 20-item parent/caregiver report	Widely used screening to assess for risk for autism spectrum disorders. Often administered and scored as part of a well-child check-up; On-line version too	Allows parent and clinician to estimate autism risk. No cost
Social Responsiveness Scale version 2 (SRS2) [88]	4–18 years PR and TR (both have 65 items)	Dimensional measure of social ability; 5 subscales (Social Awareness, Social Cognition, Social Communication, Social Motivation, Restricted interests/Repetitive Behaviors), consistent with DSM-5 criteria of Autism Spectrum Disorder	Generates raw scores, and T-scores based on normative samples; can assess syndromal and sub-syndromal cases
Gilliam Autism Rating Scale 3rd Edition (GARS-3) [89]	3–22 years PR and TR	56 items, 6 subscales (Restrictive/Repetitive Behaviors, Social Interaction, Social Communication, Emotional Responses, Cognitive Style, Maladaptive Speech; sxs updated based on DSM-5 criteria for autism spectrum disorders	Total and subscale scores suggest probability of an autism spectrum disorder and severity of sxs; Yields raw and T-scores
The Autism Diagnostic Observation Schedule, 2nd Edition (ADOS-2) [90]	Toddlers-adults 50″ clinician-administered, interview with patient alone	Semi-structured, play based; assesses communication, social interaction, play, and restricted/repetitive behaviors, using specific tasks to elicit certain behaviors; objective; standardized; requires training to use validly	Offers age-specific information for equivocal cases of autism
Substance use disorders			
Child CRAFFT Questionnaire [91]	12–18 years SR	9-question screening tool to assess exposure to, use of, and consequences from drug use. Easy to administer and score with high sensitivity; newest CRAFFT 2.0 version asks about specific substances	Acronym for high risk behaviors: Car, Relax, Alone, Forget, Friends, Trouble. No cost
Alcohol Use Disorder Identification Test—Consumption (AUDIT-C) [92]	Any age	Three questions scored according to frequency of alcohol use. The higher the score, the more likely an alcohol use disorder (AUD) is present	Positive screens: 4+ for men and 3+ for women; no cost

CAGE Questionnaire [93]	Any age SR	Four questions screening for the likelihood of AUD: **C**ut down, **A**nnoyed, **G**uilty, and **E**ye-opener; CAGE alludes to topics of the 4 questions	No cost
Opioid-Related Behaviors in Treatment (ORBIT) Scale [94]	18+ years SR	10 items track recent behaviors related to opioid use (both aberrant use and clinical use)	
Drug Abuse Screening Test (DAST) [95]	Adolescent and adult SR versions	10, 20, or 28-item screens for substance abuse	Moderate to high validity, sensitivity, and specificity; no cost
Short Michigan Alcohol Screening Test (SMAST) [96]	Various SR versions by age	10 to 24 item versions	Shorter versions less specific but still sensitive in detecting alcohol disorders; no cost
Emotional Dysregulation			
The Wender-Reimherr Adult Attention Deficit Disorder Scale (WRAADDS) [97]	18+ years Clinician-administered scale	Based on the Utah Criteria, which view inattention and hyperactivity, but not impulsivity, as the core sxs of ADHD [97–99]. Assesses multiple sxs within seven symptom domain categories: Difficulties sustaining attention, Disorganization. Hyperactivity/ restlessness, Impulsivity, Temper, Mood lability, and Emotional over-reactivity	Emotion Dysregulation Scale is sum of scores on Emotional overreactivity, Mood lability, and Temper; no cost [100]
Behavior Rating Inventory of Executive Function for Adults (BRIEF-A) [33]	18+ years SR	75 items scored on a 3-point scale; categories include Emotional Control and Metacognition	
Emotional Impulsiveness Scale (EIS) [101]	18+ years SR Other informant	Screens for 7 sxs of emotional dysregulation: (1) impatient; (2) quick to anger; (3) easily frustrated; (4) over-reacts; (5) easily excited; (6) loses temper; (7) touchy/easily annoyed	

CNS central nervous system, *DSM* Diagnostic and Statistical Manual, *EEG* electroencephalogram, *PR* Parent report, *SR* Self Report, *Sxs* symptoms, *TR* Teacher report, *Yrs* years

Neuropsychological, Continuous Performance, and Electroencephalogram (EEG) Tests

Although neuropsychological testing has been suggested to be an important potential component of the workup for ADHD in patients of all ages [10], such testing is often time-consuming and expensive, and not designed specifically to diagnose ADHD at any age according to both the American Academy of Pediatrics [9] and the American Academy of Child and Adolescent Psychiatry [8]. However, neuropsychological testing can be helpful in situations in which an underlying learning disorder or developmental language disorder is suspected, or when accommodations at school or in taking standardized tests are being considered. If possible, this could be done through the school's special education team as it can be quite expensive and insurance may not cover it.

Multiple continuous performance tests have been available for years [11, 12], and are sometimes used in the assessment of potential individuals with ADHD of all ages. A recent literature review of the available options suggested they often have shown problems with retest reliability and in discriminating patients with and without ADHD, due to unacceptably high false positive and false negative tests, especially in the presence of comorbid psychiatric disorders or other brain problems [13]. Continuous performance tests are not a substitute for a good clinical interview. However, they have been treatment-sensitive in pharmacological trials of ADHD medications [14]. Table 2.2 has additional information about these too.

A test involving EEGs (known as NEBA) has recently been validated, and approved by the Food and Drug Administration, as a supplemental test for ADHD in children and adolescents [15]. The NEBA test involves an approximately 25 min EEG in which the patient's ratio of theta to beta waves is determined. This ratio has been demonstrated to be a biomarker of ADHD [16], and may be useful in equivocal cases. See Table 2.2 for more information.

Summary and Next Steps

A careful psychiatric assessment is the cornerstone for diagnosing and effectively treating ADHD and the many disorders of moodiness associated with it. This requires a carefully staged interview of the patient and other key informants about the patient's recent past history of mental health problems. Such interviews vary according to age, cooperativeness, and perceived ability of the patient and other informants to provide useful and accurate information about the reported problems. Rating scales about patients' symptoms and associated impairment can help in screening, and guiding the interview, and may highlight and help to resolve contradictory reports. Once working diagnoses are determined, rating scales can be used subsequently to monitor changes in the patient's symptoms with treatment, and to help guide further adjustments to the treatment. The next chapter will review potential organic causes of moodiness and ADHD symptoms. Later chapters will discuss assessment and treatment strategies for various potential causes of moodiness or mood problems in patients with ADHD.

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