

# Contents

Contributors.....	ix
Foreword .....	xv
Alan F. Schatzberg, M.D.	
Preface .....	xvii
Manpreet Kaur Singh, M.D., M.S.	
Acknowledgments .....	xxi
Manpreet Kaur Singh, M.D., M.S.	

## Part 1 Diagnosis

<b>1</b>	Principles of Assessment of Mood Disorders in Childhood.....	3
Manpreet Kaur Singh, M.D., M.S.		
<b>2</b>	DSM-5 Diagnosis of Mood Disorders in Children and Adolescents.....	23
Anna Van Meter, Ph.D.		
<b>3</b>	Addressing Clinical Diagnostic Challenges in Pediatric Mood Disorders..	51
Gabrielle A. Carlson, M.D.		

- 4** Principles of Treatment of  
Mood Disorders Across Development ... 83  
Isheeta Zalpuri, M.D.  
Manpreet Kaur Singh, M.D., M.S.
- 5** Neuroscience of Early-Onset Depression .. 105  
Uma Rao, M.D.  
Tiffany Lei, B.S.
- 6** Neuroscience of Childhood-Onset  
Bipolar Disorder ..... 147  
Amber C. May, M.D.  
Sally M. Weinstein, Ph.D.  
Julie Carbray, Ph.D.  
Mani N. Pavuluri, M.D., Ph.D.

## **Part 2**

### **Treatment**

- 7** Evidence-Based Psychotherapies for  
Pediatric Depressive Disorders..... 181  
Pilar Santamarina, Ph.D.  
M. Melissa Packer, M.A.
- 8** Evidence-Based Psychotherapies for  
Pediatric Bipolar Disorders..... 223  
David J. Miklowitz, Ph.D.

**9** Pharmacotherapy for  
Pediatric Depression .....241

Gyung-Mee Kim, M.D., Ph.D.

Raghu Gandhi, M.D.

Kathryn R. Cullen, M.D.

**10** Pharmacotherapy for  
Pediatric Bipolar Disorders.....277

Luis R. Patino, M.D., M.Sc.

Melissa P. Delbello, M.D., M.S.

**11** Longer-Term Management of  
Mood Disorders in Youth .....313

Rasim Somer Diler, M.D.

Boris Birmaher, M.D.

**12** Assessment, Prognosis, and Treatment  
of Subthreshold Mood Symptoms .....353

Danella Hafeman, M.D., Ph.D.

Meredith Spada, M.D.

**13** Management of Suicidal Youth .....391

Stephanie Clarke, Ph.D.

Erica Ragan, Ph.D.

Michele Berk, Ph.D.

**14** Management of Common Co-occurring  
Conditions in Pediatric Mood Disorders ...423

Daniel Azzopardi-Larios, M.D.

Cathryn A. Galanter, M.D.

**9** Pharmacotherapy for  
Pediatric Depression .....241

Gyung-Mee Kim, M.D., Ph.D.

Raghu Gandhi, M.D.

Kathryn R. Cullen, M.D.

**10** Pharmacotherapy for  
Pediatric Bipolar Disorders.....277

Luis R. Patino, M.D., M.Sc.

Melissa P. Delbello, M.D., M.S.

**11** Longer-Term Management of  
Mood Disorders in Youth .....313

Rasim Somer Diler, M.D.

Boris Birmaher, M.D.

**12** Assessment, Prognosis, and Treatment  
of Subthreshold Mood Symptoms .....353

Danella Hafeman, M.D., Ph.D.

Meredith Spada, M.D.

**13** Management of Suicidal Youth .....391

Stephanie Clarke, Ph.D.

Erica Ragan, Ph.D.

Michele Berk, Ph.D.

**14** Management of Common Co-occurring  
Conditions in Pediatric Mood Disorders ...423

Daniel Azzopardi-Larios, M.D.

Cathryn A. Galanter, M.D.

**15** School-Based Interventions for  
Pediatric-Onset Mood Disorders .....457

Shashank V. Joshi, M.D.

Nadia Jassim, M.F.A.

**16** Preventative and Emerging  
Pharmacological and  
Nonpharmacological Treatments .....485

Daniel P. Dickstein, M.D.

Paul E. Croarkin, D.O., M.S.

## **Part 3**

### **Appendixes: Resources and Readings and Quick Reference Facts**

Appendix A: Resources and Readings ...517

Manpreet Kaur Singh, M.D., M.S.

Appendix B: Quick Reference Facts for the  
Treatment of Pediatric Mood Disorders...521

Manpreet Kaur Singh, M.D., M.S.

Index.....543

# 1

## Principles of Assessment of Mood Disorders in Childhood

Manpreet Kaur Singh, M.D., M.S.

**I**t has been 4 months since Blue broke up with his girlfriend. They dated until his fifteenth birthday, when Blue discovered that she was flirting with another guy in his class on social media. Blue was heartbroken when they ended their steady relationship, crying every day and having trouble sleeping. After a couple of weeks, he felt better, convincing himself that he was better off without her and could now spend more time focusing on his schoolwork. A month later, Blue started to feel down again, initially for a few days at a time, and then eventually more frequently, to the point at which he would snap at his friends and family nearly every day. Much like his mom, he viewed the glass as half empty, and he spent most of nearly every day in a low mood. It would take him 2–3 hours to fall asleep most nights, and several times a week he found himself awoken from sleep by a nightmare or needing to use the bathroom. He would feel tired the next day from fitful sleep and would drag himself out of bed, frequently missing his first period in school. Blue spent most of the time watching videos on the

Internet or listening to heavy metal music in his room. He no longer enjoyed wrestling, playing the saxophone, or hanging out with his friends over the weekend. Instead, he would sneak junk food into his room, and sometimes he would get high with edible marijuana brownies to escape from his troubles. Candy would lift him out of a low mood for just enough time for him to start his homework, but then he would get distracted, look at himself in the mirror, feel guilty for overeating, and fall back into a slump. Consequently, his grades started to fall, and his teachers expressed concern. After several weeks, Blue started to feel hopeless that he wouldn't be able to catch up in school and wondered whether he would be better off dead. This thought scared him, so he asked his mom to take him to his pediatrician.

What principles apply for the initial assessment of Blue? In the pediatrician's busy practice, what questions can be asked and what assessments can be conducted to determine whether Blue's condition can be managed in a primary care setting? How would the pediatrician know when to refer Blue to more specialized care? How does she determine whether Blue has depression or another psychiatric disorder, or is adjusting to his breakup from his girlfriend? How does she determine whether his mood symptoms are secondary to an underlying medical condition or due to recreational drug use? This chapter will aim to provide introductory answers to these questions, which will be elaborated on in specialized ways throughout this handbook.

Even with the burgeoning field of neuroscience and multiple valid screening and assessment tools, the gold-standard approach to the diagnosis of mood disorders in youth is still the clinical interview, ideally one involving multiple informants. Clinicians in a variety of settings can ask simple but key questions to assess for mood symptoms in youth and to determine severity, as well as how these symptoms relate to a child's day-to-day functioning. Once a core low or elevated mood symptom is endorsed, its persistence, associated factors, and functional impact can help a clinician efficiently decide whether it falls within the scope of his or her practice. Underlying neurophysiological contributors such as anemia, altered thyroid function, and vitamin D and lead levels can all be assessed with a single blood draw while referrals for more in-depth evaluations are being considered. Furthermore, asking youth about recreational drug use individually and directly is generally preferred over urine toxicology screening in an outpatient setting. This underscores the point that because no validated diagnostic biomarkers or confirmatory tests for mood disorders yet exist, healthcare providers must rely on clinical criteria and diagnostic acumen to diagnose these conditions early and accurately.

Because symptoms of mood disorders may resemble and co-occur with other conditions or psychiatric problems, a comprehensive assessment of endorsed symptoms as well as pertinent positive and negative symptoms will likely yield the most accurate primary and secondary diagnoses, which may merit a more in-depth interview or referral to a mental health professional. Indeed, life problems such as a relationship breakup, academic stress, or bullying can trigger and perpetuate mood symptoms. One goal of a careful diagnostic assessment is to help a patient cultivate insight about what factors contribute to triggering, perpetuating, or alleviating mood symptoms. Helping the patient describe symptoms in his or her own words supports this goal and establishes an early alliance between the patient and clinician for the purpose of understanding mood symptoms and their impact and for collaboratively monitoring these symptoms as they evolve with treatment.

Children and adolescents may experience a spectrum of mood symptoms, which in early stages of development may be ill-defined diagnostically and may change over time. For example, the most common first episode in bipolar disorder is a depressive episode that, when treated with an antidepressant, may trigger mania or mania-like symptoms. To ensure that the full spectrum of mood disorders is considered at any and all clinical evaluations of a child presenting with mood symptoms, all index mood symptoms, including sad mood, anhedonia, and irritability for major depressive disorder (MDD) and explosive irritability and euphoria for bipolar disorder, should be considered and explored. Index mood symptoms are solicited in the patient's own words first, followed by secondary or "Criterion B" symptoms of depression and mania as defined in DSM-5 (American Psychiatric Association 2013).

In MDD, S-I-G-E-C-A-P-S remains a popular mnemonic, where *S* generally stands for sleep abnormalities (insomnia or hypersomnia; initial/middle/terminal), *I* for diminished interest or pleasure in the things youth normally find to be fun, *G* for guilt or self-blame, *E* for low energy, *C* for concentration difficulties or poor decision making, *A* for appetite changes (increases or decreases with corresponding weight changes), *P* for psychomotor agitation or retardation, and *S* for suicidal ideation or related behavior. A major depressive episode requires at least 2 weeks of an index depressed mood and four additional Criterion B symptoms. In bipolar disorder, index euphoria on a daily basis for over 50% of the day for at least a week is accompanied by at least three additional symptoms (four if the index mood is explosive irritability) and is captured in the mnemonic D-I-G-F-A-S-T, where *D* stands for distractibility or motor hyperactivity, *I*

for increased goal-directed activity, *G* for grandiosity, *F* for flight of ideas and racing thoughts, *A* for accelerated speech, *S* for decreased *need* for sleep, and *T* for “trouble,” or engagement with impulsive risk-taking or hypersexual behaviors that have the potential for dangerous consequences for the patient or others. In youth, general examples of high-risk behaviors include staying out all night, spending a lot of money, and taking trips unexpectedly. Adolescents might report that during a manic episode, they got involved in relationships quickly, had a lot of one-night stands, or drove recklessly. Preadolescents might also report that they jumped from elevated places, went on long trips without planning or supervision, played serious pranks in school, or engaged in inappropriate sexual behavior during mania. These symptoms manifest differently depending on age and should therefore be contextualized developmentally.

Establishing the timeline of onset and offset of mood symptoms early in the interview allows a clinician to quickly and easily rule in or rule out a major mood disorder such as bipolar I disorder or MDD. The clinician can then proceed systematically down a list of potential diagnoses of exclusion and co-occurring conditions. Unfortunately, clinicians in naturalistic and often busy clinical settings tend to underuse DSM, frequently not collecting sufficient information to establish a correct diagnosis for most psychiatric disorders (Nakash et al. 2015). Moreover, research diagnostic assessments and clinical evaluations have only low to moderate agreement (Rettew et al. 2009). Missing diagnostic information may result in poor reliability and clinical decision making (Jensen-Doss et al. 2014), delaying effective treatment or resulting in the implementation of inappropriate, costly, or potentially harmful treatments. Thus, accurate and effective diagnostic skills can prevent adverse clinical and financial outcomes at multiple levels.

Indeed, efforts to systematically evaluate clinicians’ assessment processes in naturalistic settings may help to identify the best diagnostic probes to use in clinical practice to improve diagnostic accuracy and efficiency. For the busy clinician, access to a toolkit of feasible assessments that are integrated into practice and supported by billing structures may facilitate use of more systematic approaches to making a diagnosis. Several measurement-based care solutions are being developed by for-profit and not-for-profit organizations to try to improve real-time clinical decision making, enhance reimbursement, and optimize resource utilization in behavioral health. Because measurement-based care is still emerging, data to demonstrate its efficacy in improving diagnostic accuracy and treatment outcomes are still pending. What follows is a brief summary of some well-validated structured clinical interviews and clinical and self-report rating scales we have

used frequently in research and in clinical practice. Validity measurements for these assessments are widely available, but there is no substitute for personal experience for becoming proficient at conducting these assessments and determining their utility in measuring symptom severity or treatment response or predicting long-term outcome.

## Structured and Semi-structured Clinical Interviews

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The gold-standard method for evaluating for a pediatric mood disorder is to use structured or semi-structured clinical interviews. Researchers and clinicians use this method for its systematic approach to ruling in and ruling out a psychiatric diagnosis, and such assessments serve as benchmarks for comparisons with other methods of deriving a psychiatric diagnosis, including self-, parent-, or teacher-administered instruments or observations. Although the specificity of a mood disorder diagnosis remains high between a structured clinical interview and a self-administered instrument, the sensitivity decreases, so the most reliable method of identifying cases of MDD remains the structured clinical interview (Martin et al. 2017). Importantly, a family history of depression increases the chances of a more reliable diagnosis from a structured interview than from a self-administered rating, suggesting some advantage of having a family member with depression to improve reliable reporting of depressive symptoms (Verweij et al. 2011). On the other hand, sometimes parents affected by mood disorder symptoms experience an attribution bias, projecting symptoms onto their children or other family members. When there is a misattribution, this can cause undue stress in a family and consequent overdiagnosis and treatment seeking in youth who are otherwise well adapted. A systematic assessment of mood and other psychopathology in parents can provide important context for how symptoms are reported in a child. Thus, for all youth presenting with mood symptoms, a family history of mood and other psychiatric disorders not only informs risk and prognostic factors but also contextualizes the potential for informant bias.

There are two main disadvantages of using a structured clinical interview: 1) the time that it takes to train on and conduct these interviews, and 2) the cost associated with having an expert rater conduct these interviews. In contrast, studies have shown that patients have a high acceptance of and satisfaction with structured interviews even when their clinicians estimate that patients' acceptance would be lower than it actually is (Bruchmüller et al. 2011). Anecdotal feedback frequently given by pa-

tients who receive both a clinical psychiatric interview and a research-based structured diagnostic interview suggests that the latter makes them feel heard and increases their confidence that an accurate diagnosis is being made. Structured interviews abidingly attempt to comprehensively capture all symptoms experienced, with follow-up clarifying questions posed to determine levels of associated impairment. Such interviews can increase the number of diagnoses ascribed to a patient but reduce the number of non-specific (e.g., “unspecified”; formerly “not otherwise specified”) diagnoses given (Matuschek et al. 2016).

Several structured clinical interviews have been validated for youth with mood disorders across the age spectrum (Table 1–1). The relative strengths and limitations of the most commonly used interview instruments have been reviewed by Leffler et al. (2015), who suggest that in order to choose the most appropriate instrument for diagnostic decision making and treatment planning, the clinician begin the interview with a bio-psycho-socio-cultural history, to increase the success and reliability of the diagnostic interview. In the young child, the Preschool Age Psychiatric Assessment (PAPA) has been validated for administration to parents of youth between 2 and 7 years of age (Egger et al. 2006). This parent interview has proven useful both to characterize symptom manifestations of mood disorders in very young children (Luby and Belden 2008) and to predict future patterns of psychopathology in school-age children (Dougherty et al. 2015; Kertz et al. 2017) and adolescents (Finsaas et al. 2018; Luby et al. 2014). As demonstrated by systematic prospective follow-up using age-appropriate structured clinical interviews, preschool-onset depression is no longer considered a developmentally transient syndrome; rather, it is thought to be a chronic and recurrent syndrome that may evolve and warrant observation over time.

In school-age children 6 years and older, trained interviewers assess for the presence or absence of a psychiatric disorder by semi-structured diagnostic interviews administered separately to youth and their parents (about the youth). Interviews from which to choose include the Kiddie Schedule for Affective Disorders and Schizophrenia (for School-Age Children)—Present and Lifetime Version (K-SADS-PL; Kaufman et al. 1997); the mood sections of the Washington University (St. Louis) Kiddie Schedule for Affective Disorders and Schizophrenia (WASH-U K-SADS; Geller et al. 2001), for more detailed questions about the nature and course of childhood-onset mood disorders; and the Mini International Neuropsychiatric Interview for Children and Adolescents (MINI-KID; Sheehan et al. 2010). The latest version of the K-SADS-PL combines dimensional and categorical assessment approaches to diagnose current and past episodes

of psychopathology in children and adolescents according to DSM-5 criteria. Probes included in the interview illustrate ways to elicit information but are not intended to be recited verbatim; thus, the interview is considered semi-structured. Rather, the interviewer is encouraged to adjust the probes to the developmental level of the child, and to use language provided by the parent and child when asking about specific symptoms. Parent and child ratings may be optimally obtained separately, and summary ratings are achieved by including all sources of information (i.e., parent, child, school, chart, or other). The order of administration may vary case by case, but in general, it is recommended that the interviewer conduct the parent interview first for preadolescents and the child interview first for adolescents. When discrepancies between sources of information arise, the rater uses clinical judgment to determine the final summary score, and possibly probes the informants further about discrepant information.

Mood disorders frequently run in families. Although systematic and quantitative data on familial aggregation of mood disorders are still emerging (Fears et al. 2014), it is well recognized that offspring of parents who are both affected by mood disorders are far more likely to have a mood disorder compared with families in which only one parent is affected (Goodwin and Jamison 1990). The Structured Clinical Interview for DSM-5 (SCID-5; First et al. 2016) and a family history interview such as the Family Interview for Genetic Studies (FIGS; Maxwell 1982) or the Family History—Research Diagnostic Criteria (FH-RDC; Andreasen et al. 1977) may be administered in order to assess parental and other family history of mood and other psychiatric disorders. Both the FIGS and the FH-RDC start with a pedigree drawing, which can be a great way to organize and stratify family history loading based on first-, second-, and other degree-relative psychiatric family histories. Any clinical encounter of a youth with mood symptoms should assess for mood symptoms and disorders (specifically bipolar and depressive disorders), suicide completions, sudden death, substance use, and schizophrenia in family members. This information can then be used both diagnostically and for treatment planning.

To track psychiatric symptoms in youth over time, the Longitudinal Interval Follow-up Evaluation (LIFE; Keller et al. 1987) provides a weekly prospective assessment of mood, psychotic, and other psychiatric symptoms tracked on a week-by-week basis using this instrument's Psychiatric Status Rating (PSR) scales. The PSR scales assign numeric values that can be operationally linked to DSM criteria, with assessment made in the interview and then translated into ratings for each week of the follow-up period. The ratings reflect symptom severity and impairment during an episode and capture periods of recurrence or recovery. For mood disorders,

**TABLE 1–1. Structured and semi-structured clinical interviews for pediatric mood disorders**

<b>Clinical interview</b>	<b>Age validated for use</b>	<b>Description</b>
Preschool Age Psychiatric Assessment (PAPA; Egger et al. 2006)	2–7 years	Structured assessment used to interview parents about preschool-age youth down to age 2 for DSM-related mood and other psychiatric symptoms and disorders
Kiddie Schedule for Affective Disorders and Schizophrenia—Present and Lifetime Version (K-SADS-PL; Kaufman et al. 1997)	6–17 years	Semi-structured interview that combines dimensional and categorical assessment approaches to diagnose current and past episodes of psychopathology in children and adolescents using DSM criteria
Washington University (St. Louis) Kiddie Schedule for Affective Disorders and Schizophrenia (WASH-U K-SADS; Geller et al. 2001)	6–17 years	Specialized and expanded semi-structured interview for the diagnosis of mood disorders; sometimes combined with the K-SADS-PL to provide a complete assessment of all current and past psychopathologies
Mini International Neuropsychiatric Interview for Children and Adolescents (MINI-KID; Sheehan et al. 2010)	6–17 years	A short, structured diagnostic interview for DSM and ICD-10 psychiatric disorders in children and adolescents; standard version assesses the 30 most common and clinically relevant disorders or disorder subtypes in pediatric mental health; tracking yields a quantitative score that can be used to monitor treatment response over time

**TABLE 1-1. Structured and semi-structured clinical interviews for pediatric mood disorders (continued)**

Clinical interview	Age validated for use	Description
Structured Clinical Interview for DSM-5 (SCID-5; First et al. 2016)	18 years and over	A semi-structured interview guide to making the major DSM-5 diagnoses in adults; it is administered by a clinician or trained mental health professional who is familiar with the DSM-5 classification and diagnostic criteria; the interview subjects may be either psychiatric or general medical patients—or individuals who do not identify themselves as patients, such as participants in a community survey of mental illness or family members of psychiatric patients
Family Interview for Genetic Studies (FIGS; Maxwell 1982)	All ages	Interview used to assess psychopathology in all first- and second-degree relatives
Family History—Research Diagnostic Criteria (FH-RDC; Andreasen et al. 1977)	All ages	Interview used to assess psychopathology in all first- and second-degree relatives
Longitudinal Interval Follow-up Evaluation (LIFE; Keller et al. 1987)	All ages	Interview used to longitudinally track mood and other psychiatric symptoms; the LIFE interview provides a weekly longitudinal assessment of mood and psychotic symptoms and suicidal ideation