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Update on and Advances in Assessment and Cognitive–Behavioral Treatment of Anxiety Disorders in Children and Adolescents

Olivia N. Velting, Nicole J. Setzer, and Anne Marie Albano
New York University School of Medicine

Most child psychologists would agree that treating anxiety disorders in children is extremely challenging at times but also rewarding. This article provides an updated look at assessment strategies and promising psychosocial treatment techniques for children with 3 common anxiety disorders: separation anxiety disorder, social phobia, and generalized anxiety disorder. The need for comprehensive diagnostic evaluations is highlighted through information on the wide range of assessment procedures and instruments available to practicing psychologists interested in treating anxious youth. In addition, a treatment approach shown to be empirically efficacious for treating anxious children, cognitive–behavioral therapy, is described. We provide practical examples of assessment and treatment techniques for clinical practice. Tables are included that can serve as useful quick references for the 3 areas covered.

Although overshadowed by the externalizing disorders in terms of the number of child referrals made to mental health practitioners, anxiety disorders are the most prevalent mental health problems experienced by children and adolescents (Costello & Angold, 1995). In fact, in the United States, relatively recent large epidemiological studies estimated the prevalence of these disorders to be 12% to 20% in youth (Achenbach, Howell, McConaughy, & Stanger, 1995; Gurley, Cohen, Pine, & Brook, 1996; Shaffer et al., 1996). The past 20 years have advanced our understanding of the psychopathology, course, and disability associated with anxiety disorders in youth. These advances are occurring concurrently with the development of scientifically sound assessment and treatment techniques focused specifically on children and adolescents. Whereas anxiety was once thought to be just a normal part of growing up, professionals now recognize excessive anxiety as a debilitating condition with long-term consequences, especially if left untreated (e.g., Ialongo, Edelsohn, Werthamer-Larsson, Crockett, & Kellam, 1994, 1995).

OLIVIA N. VELTING received her PhD in clinical psychology from the State University of New York at Stony Brook. She is a clinical assistant professor of psychiatry at the New York University School of Medicine. Her areas of research include the etiology and treatment of anxiety and mood disorders in children and adolescents.

NICOLE J. SETZER received her PhD in clinical psychology from the Chicago Medical School. She is a cognitive–behavioral therapist who is now in independent practice in New York City. Her research interests include anxiety and mood disorders across the life span.

ANNE MARIE ALBANO received her PhD in clinical psychology from the University of Mississippi. She is the Recanati Family Assistant Professor of Psychiatry at the New York University School of Medicine. Her research examines the psychopathology and treatment of anxiety and mood disorders in youth.

ANNE MARIE ALBANO is the co-author of the Anxiety Disorders Interview Schedule for the fourth edition of the *Diagnostic Manual of Mental Disorders* (Child Version) that is discussed in this article.

CORRESPONDENCE CONCERNING THIS ARTICLE should be addressed to Olivia N. Velting, Institute for the Study of Anxiety and Mood Disorders, Child Study Center, New York University School of Medicine, 577 First Avenue, New York, NY 10016. E-mail: veltio01@med.nyu.edu

For example, imagine a very shy sixth grader who never speaks up in class, does not initiate play dates with friends, refuses to participate in sports because she is not "good enough," is afraid to speak to adults, and is commonly found with her head in a book when friends of the family are visiting. In the short term, this child will miss out on social and educational experiences and probably go through daily life feeling on edge, waiting for the next stressful social challenge to occur. Although she may once have been passed off as "in a phase" or as "a typical middle schooler," research has shown that these once seemingly innocuous behaviors are consistent with a diagnosis of an anxiety disorder (e.g., Beidel, Turner, & Morris, 1999). Moreover, a substantial literature indicates that, over the long term, this child is probably at risk for serious educational underachievement and/or underemployment; alcohol and drug use; other psychiatric problems, particularly major depression; and a lower level of social support (Costello & Angold, 1995; Eaton, 1995; Ferdinand & Verhulst, 1995; Kessler et al., 1994; Pine, Cohen, Gurley, Brook, & Ma, 1998).

Less generalized anxiety problems can also have important consequences. Imagine a young boy with a specific phobia of clowns and costumed characters who refuses to attend birthday parties, hides in his room on Halloween, and dictates family vacations to avoid places where encounters with such figures may occur. Short-term consequences of this fear (e.g., limited socialization experiences, teasing by other kids, and tension within the family) can easily result in long-term consequences, perhaps played out in lowered self-esteem and family conflict (see Albano, Chorpita, & Barlow, 1996). In this article, we describe the most recent advances in assessment and treatment strategies for the three most common and co-occurring anxiety disorders in children: separation anxiety disorder (SAD), social phobia (SoP), and generalized anxiety disorder (GAD).

A Focus on Three Anxiety Disorders

Although children and adolescents can suffer from any of the eight anxiety diagnoses described in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM–IV*;

American Psychiatric Association, 1994), we focus here on treatment of SAD, SoP, and GAD in youth. These three conditions tend to respond to similar psychosocial and pharmacological treatments and tend to co-occur with relative regularity. To expand on these points, adult and child studies have shown that SAD, SoP, and GAD respond to the same treatments (either psychosocial or medication) with roughly the same effect size, regardless of which disorder is primary and despite the high rate of comorbidity among the disorders (Barrett, 1998; Barrett, Dadds, & Rapee, 1996; Gould, Buckminster, Pollack, Otto, & Yap, 1997; Gould, Otto, Pollack, & Yap, 1997; Kendall, 1994; Kendall, Brady, & Verduin, 2001). Effective treatments for these disorders are generally consistent in terms of their theoretical rationale (e.g., the cognitive–behavioral model or the serotonin hypothesis). Moreover, research documents that these three specific disorders (a) share the same underlying construct of anxiety (see Albano et al., 1996; Barlow, 2002); (b) exhibit strong covariation with each other, both cross-sectionally and over time (Kendall & Brady, 1995); (c) infrequently occur as isolated conditions (Kendall & Brady, 1995); and (d) show similar familial relationships with adult anxiety and depressive disorders (Fyer, Mannuzza, Chapman, Martin, & Klein, 1995; Gurley et al., 1996; Last, Hersen, Kazdin, Orvaschel, & Perrin, 1991).

Recent therapeutic studies have shown that children with anxiety symptoms virtually always present with some combination of these diagnoses (Kendall, 1994; RUPP Anxiety Study Group, 2001). Finally, these three disorders have consistently been considered as a group distinct from other anxiety disorders such as panic disorder, obsessive–compulsive disorder (OCD), posttraumatic stress disorder, and simple phobia (Bell-Dolan & Brazeal, 1993; Birmaher et al., 1994; Kendall et al., 1997; Pine et al., 1998; Pine & Grun, 1998). Treatment protocols targeting the latter disorders are quite different from those addressing SAD, SoP, and GAD and typically call for unique components such as exposure and response prevention for OCD, emotional processing of traumatic events, relatively rapid exposure treatment for specific phobias, or exposure to the internal sensations associated with panic disorder (see Barlow, 2002, for a review).

Rather than restating the diagnostic criteria for the three disorders, we provide a brief summary of the main criteria for each disorder in Table 1. The reader is referred to the *DSM–IV* (American Psychiatric Association, 1994) for complete information. In addition, comprehensive overviews of phenomenology, epidemiology, associated features, age, and gender issues are beyond the scope of this article but can be found in relevant comprehensive chapters (e.g., see Albano, Causey, & Carter, 2001; Albano, Chorpita, & Barlow, 2003) or books (Eisen, Kearney, & Schaefer, 1996; March, 1995; Silverman & Kurtines, 1996) devoted to these conditions.

Assessment of Anxiety Disorders in Children

Although our current diagnostic system has made tremendous advances in facilitating and clarifying the diagnostic process, determination of exactly which disorders are present or predominant in a child can still be a complicated matter. Fortunately, the development of reliable measures of psychological constructs and disorders, including anxiety, has flourished over the past few decades. However, while determining *DSM–IV* diagnoses is important, the psychiatric diagnosis alone is inadequate for guiding treatment. A more complete diagnostic picture consisting of the child's strengths and weaknesses across settings will better ensure that treatment addresses his or her unique clinical presentation. In

Table 1
Key DSM–IV Diagnostic Criteria for Separation Anxiety Disorder, Social Phobia, and Generalized Anxiety Disorder

DSM–IV diagnosis	Symptoms	Duration of impairment
Separation anxiety disorder	Developmentally inappropriate and excessive anxiety concerning separation from home or from those to whom the individual is attached, as evidenced by three (or more) of the following: distress when separation is anticipated or occurs, worry about harm befalling others, worry that an untoward event will result in separation, refusal to go to school or elsewhere, fear or reluctance to be alone at home or in other settings, refusal to sleep away from attachment figures, repeated nightmares, and physical complaints at separation	At least 4 weeks
Social phobia	A marked and persistent fear of one or more social or performance situations in which the person is exposed to unfamiliar people or to possible scrutiny by others. The individual fears that he or she will act in a way (or show anxiety symptoms) that will be humiliating or embarrassing. The feared social or performance situations are avoided or else are endured with intense anxiety or distress	At least 6 months
Generalized anxiety disorder	Excessive anxiety and worry occurring more days than not about a number of events or activities. The child finds it difficult to control the worry, and the anxiety is associated with at least one of the following symptoms: restlessness or feeling keyed up or on edge, being easily fatigued, difficulty concentrating or mind going blank, irritability, muscle tension, or sleep disturbance	At least 6 months

Note. *DSM–IV* = *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.).

addition, a thorough assessment provides quantifiable data by which treatment progress and outcomes can be monitored.

A multimethod assessment approach is commonly used in the evaluation of anxiety disorders in youth (March & Albano, 1996). Such an approach allows the clinician to gain information about the child across contexts and from a variety of sources (e.g., child, parents, teachers, and peers), and this information can be synthesized to create the best and most comprehensive treatment plan. In the sections to follow, we describe the four basic modalities for assessing anxiety in children. Table 2 provides details regarding the measures of child anxiety disorders and related constructs briefly mentioned in this article.

Table 2
Measures of Child Anxiety Disorders and Related Constructs

Measure	Focus	Respondent(s)	Publisher/source of psychometric data
	Interview		
Anxiety Disorders Interview Schedule for *DSM–IV*	Anxiety, mood and externalizing disorders, with screens for learning and developmental disorders, substance abuse, eating disorders, psychotic symptoms, and somatoform disorders	Child and parent	Psychological Corporation (1996); Silverman & Albano (1996a, 1996b)
	Broad self-report measures of anxiety		
Revised Children's Manifest Anxiety Scale	General levels of anxiety with three clinical subscales (Worry, Concentration, Physiological Arousal) and 1 validity scale (Lie scale)	Child	Reynolds & Richmond (1978)
State–Trait Anxiety Inventory for Children	State and trait levels of general anxiety	Child	Spielberger (1973)
Multidimensional Anxiety Scale for Children	Physical anxiety (tense/restless and somatic/autonomic), harm avoidance (perfectionism and anxious coping behaviors), social anxiety (humiliation fears and performance anxiety), and separation anxiety	Child	Multi-Health Systems (1997); March et al. (1997)
Screen for Child Anxiety Related Emotional Disorders	Panic disorder, generalized anxiety disorder, separation anxiety disorder, social phobia, and school phobia	Child and parent	Birmaher et al. (1997)
	Self-report measures of specific anxiety constructs		
Fear Survey Schedule for Children–Revised	Specific fear sensitivities	Child and parent	Ollendick (1983)
Social Phobia and Anxiety Inventory for Children	Social anxiety and avoidance	Child	Beidel et al. (1995)
Social Anxiety Scale for Children–Revised	Social anxiety and avoidance	Child and parent	La Greca et al. (1988)
Penn State Worry Questionnaire for Children	Severity of worry	Child	Chorpita et al. (1997)
	Self-report measures of related constructs		
School Refusal Assessment Scale	Motivating and maintaining factors of school refusal behavior	Child and parent	Kearney & Silverman (1993); also Kearney & Albano (2000a, 2000b) and Kearney (2001)
Child Anxiety Sensitivity Index	Aversion to somatic forms of anxiety	Child	Silverman et al. (1991)
Fear and Avoidance Hierarchy	Top 10 feared and avoided situations, ideographic to the child	Child and parent	Ideographic

Note. References are for main psychometric studies and/or publisher of instrument and accompanying manuals. *DSM–IV* = *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.).

Clinical Interviews

The clinical interview remains one of the most important sources of information gathering (Stallings & March, 1995). The most reliable diagnoses are made with structured or semistructured interviews; the semistructured format allows the clinician the flexibility to pursue specific questions in greater detail when deemed necessary (March & Albano, 1996). In addition to permitting diagnoses to be made in a reliable manner, structured and semistructured clinical interviews allow clinical observation of the child and parents and their interactions.

One semistructured interview designed specifically to assess anxiety in youth 6 to 17 years of age is the Anxiety Disorders Interview Schedule for DSM-IV, Child and Parent Versions (ADIS-IV; Silverman & Albano, 1996a, 1996b). These separate parent and child interviews evaluate the presence and severity of anxiety, mood, and externalizing disorders, as well as screen for learning and developmental disorders, substance abuse, eating disorders, psychotic symptoms, and somatoform disorders. Information from the interviews is combined to form a composite profile of diagnoses and associated clinician severity (impairment) ratings. Impairment ratings generated for each diagnosis, labeled clinician severity ratings (which range from 0 to 8; a rating of 4 or more is required to assign a diagnosis), are used to categorize all positive diagnoses as principal (the "worst" or most disabling condition), co-principal (two or more disorders sharing the highest clinician severity rating), or additional (any/all other disorders with lesser clinician severity ratings). A true benefit of the ADIS-IV over other available semistructured interviews is its clear and detailed sections evaluating each of the anxiety disorders individually. The clinician severity ratings allow the clinician to prioritize the disorder(s) causing the greatest distress and impairment in the child's functioning and to then develop a treatment plan to address the condition(s). The ADIS has good interrater reliability ($r = .98$ for the parent interview and $r = .93$ for the child interview; Silverman & Nelles, 1988) and retest reliability (e.g., $k = 0.76$ for the parent interview; Silverman & Eisen, 1992), and it has shown sensitivity to treatment effects in studies of youth with anxiety disorders (e.g., Dadds, Heard, & Rapee, 1992; Kendall et al., 1997). Psychometric studies of the *DSM–IV* version of the instrument have shown excellent results (Silverman, Saavedra, & Pina, 2001).

Other semistructured psychiatric interviews for children and adolescents include the Schedule for Affective Disorders and Schizophrenia in School-Aged Children (K-SADS; Puig-Antich & Chambers, 1978), the Child Assessment Schedule (CAS; Hodges, Kline, Stern, Cytryn, & McKnew, 1982), the National Institute of Mental Health Diagnostic Interview Schedule for Children, Version 2.3 (DISC 2.3; Shaffer, et al., 1996), the Interview Schedule for Children (ISC; Kovacs, 1985), and the Diagnostic Interview for Children and Adolescents (DICA; Herjanic & Reich, 1982). Each of these interviews includes sections through which the clinician specifically assesses the presence or absence of anxiety disorders. Overall, studies have shown that structured interviews generally provide reasonably accurate data regarding the primary aspects of anxiety in children (Schniering, Hudson, & Rapee, 2000).

An important issue regarding the information gathered through separate interviews with parents and children is variation between their reports. Frequently, children report fewer symptoms than their parents (Silverman & Eisen, 1992). Reasons for this discrepancy include the child's desire to answer in a socially desirable manner and the child's limited comprehension of interview questions. Also, children tend to be less reliable than parents in reporting details regarding the onset and duration of anxiety symptoms (Schniering et al., 2000). Thus, it is obviously important to keep this in mind when using such interviews.

In terms of utility in clinical practice, structured diagnostic interviews allow the trained clinician to arrive at a *DSM* diagnosis with a relatively good degree of confidence. Thus, when determination of a diagnosis is necessary, structured interviews should be considered. However, the length of time necessary to administer a complete diagnostic interview varies depending on a number of factors, including the cooperation of the child and parents, along with the degree to which they talk and provide more or less information; the level of impairment in functioning of the interviewees; and the degree and type of comorbidity present (e.g., young people or parents with OCD may take an excessively long time to respond to inquiries, and oppositional defiant youth may be reluctant to participate). In addition, interviews generally take longer to complete by inexperienced interviewers and/or those who are less familiar with the interview and disorders in question. Thus, in our clinical experience, a comprehensive interview can require anywhere from 2 hr to 3 or more hr. Any length of time over 2 hr is understandably unrealistic in most practice settings, especially when families are limited in the number and type of sessions allowed by their insurance carriers. Therefore, a clinician may wish to have a copy of a structured interview for ready use or reference if a difficult differential diagnostic decision needs to be made. The interview (e.g., the ADIS or K-SADS) may provide the clinician with alternative ways to ask questions of the child or parents for arriving at a diagnosis and prioritizing the targets for treatment.

Self-Reports/Rating Scales

In contrast to diagnostic interviews, self-report scales and rating scales provide information about anxiety processes, behavioral reactions, or specific anxiety constructs (e.g., social anxiety or worry) but do not yield a clinical diagnosis. Self-reports are often used to provide ancillary information to a diagnostic interview, to allow the child or adolescent a less demanding format for reporting feelings (paper and pencil, as opposed to direct questioning), and to garner more detailed information about specific processes than may be covered during a scheduled visit (March & Albano, 1996). Most questionnaires require a second- or third-grade reading level and take roughly 10 to 15 min to complete. If a child can read on his or her own, the questionnaire(s) of interest can be administered in the waiting room, before a session. In addition, many questionnaires can be quickly hand scored, and norms for various levels of the construct of interest are available to determine whether the child is reporting normative or problematic levels of anxiety.

Self-administered reports and rating scales assessing child anxiety are numerous. Table 2 summarizes the most popular standardized self-report measures of child anxiety and related constructs. The scales most often used to assess the broad construct of anxiety in children include the Revised Children's Manifest Anxiety Scale (RCMAS), the State-Trait Anxiety Inventory for Children (STAI-C), the Multidimensional Anxiety Scale for Children (MASC), and

the Screen for Anxiety and Related Emotional Disorders (SCARED). Although the RCMAS and the STAI-C have been around for many years, these scales are generally used in research settings and have little utility in clinical practice. Most problematic is that these measures usually correlate highly with measures of depression or other constructs in addition to anxiety, and they also fail to predict the presence of anxiety diagnoses (see March & Albano, 2002; Perrin & Last, 1992).

In contrast, the MASC and the SCARED were developed specifically to be sensitive and specific to assessing clinical levels of anxiety in youth. The MASC (March, Parker, Sullivan, Stallings, & Connors, 1997) is a 39-item, 4-point Likert self-report rating scale that has shown robust psychometric properties in clinical, epidemiological, and treatment studies, in addition to discriminating youth with anxiety disorders from those with depression or no disorder (Dierker et al., 2001). The MASC includes four factors: physical symptoms (tense/restless and somatic/autonomic subfactors), social anxiety (humiliation/ rejection and public performance subfactors), harm avoidance (anxious coping and perfectionism subfactors), and separation/panic anxiety. Three-week test–retest reliability for the MASC has been reported as .79 in clinical samples (March et al., 1997) and .88 in school-based samples (March & Sullivan, 1999). The SCARED (Birmaher et al., 1997, 1999) is a 41-item child and parent self-report instrument that assesses *DSM–IV* symptoms of panic, SAD, SoP, and GAD, as well as symptoms of school refusal. The SCARED has shown very good psychometric properties in two different large clinical samples (Birmaher et al., 1997, 1999) and in a community sample (Muris et al., 1998).

Other scales have been developed to measure specific aspects of anxiety, including specific fear sensitivities (Revised Fear Survey Schedule for Children [FSSC-R]), social anxiety (Social Phobia and Anxiety Inventory for Children and Revised Social Anxiety Scale for Children [SASC-R]), and worries (Penn State Worry Questionnaire for Children). Finally, two scales that clinicians may find particularly helpful in treating children with anxiety are the School Refusal Assessment Scale (SRAS), which assesses the motivating and maintaining variables of school refusal behavior that could be secondary to anxiety, and the Children's Anxiety Sensitivity Index, which measures a child's negative reaction to the physical symptoms of anxiety.

Because of the private and subjective nature of anxiety, child self-report measures are important, yet parent and teacher report forms are useful in completing the diagnostic picture. Parents and teachers can capture aspects that the child fails to report because of social desirability issues, embarrassment, or obstinacy. Beyond the popular parent and teacher rating scales used to assess anxiety within a broader range of childhood problems, such as the Child Behavior Checklist (Achenbach & Edelbrock, 1983) and the Teacher Report Form (Achenbach, 1991), parent versions exist for the FSSC-R, SCARED, SASC-R, and SRAS. Although the information obtained from different sources may sometimes be conflicting, gathering youth, parent, and teacher reports regarding a youth's anxiety provides important information about the child's appearance and behavior across settings, as well as how each person in the youth's environment perceives him or her. Administration of the more general measures of psychopathology is also helpful in putting children's anxiety symptoms in the context of other problems they may be experiencing. This is particularly important considering the high level of comorbidity between anxiety disorders and other problems, especially mood and behavioral disorders (Kendall & Brady, 1995; Kendall et al., 2001).

In terms of utility in clinical practice, questionnaires are useful for establishing a baseline level and tracking a construct of interest or cluster of symptoms/problems over the course of treatment. Self-report and parent report forms are generally easy to administer in the waiting room, whereas teacher input can be garnered by sending the forms, via mail or fax, to the school personnel most familiar with the child. Teachers may be more willing to assist with such assessments when the burden is kept low (e.g., requiring no longer than 15 min or involving relevant questions) and when the information can be delivered in confidence to the therapist via mail, e-mail, or fax. Use of self-report and parent questionnaires along with teacher report forms provides clinicians with data from multiple informants and allows them to piece together a comprehensive picture of the child's functioning and problem areas. Overall, these measures are time and cost efficient in terms of their use as screening tools and/or to track certain processes and feelings, but they should not be used in lieu of a diagnostic interview to determine the presence of a diagnosis.

Diaries and Fear Hierarchies

Nonstandardized self-report formats can also be clinically useful, especially in terms of assessing an individual's progress in treatment (e.g., Beidel & Turner, 1998). Children and adolescents can be assigned self-monitoring in the form of a daily diary in which they record anxiety-provoking situations as they occur. Although the format will vary according to the problem and the youth's developmental level, the youth is typically instructed to record a brief description of the situation and his or her accompanying thoughts, physical sensations, behaviors, and anxiety rating (on a 0–100 scale, for example). Daily diaries have been shown to be useful in providing access to a youth's anxiety intensity levels, specific anxious thoughts, and antecedents to and consequences of anxious behaviors (e.g., Beidel, Neal, & Lederer, 1991).

Another ideographic self-monitoring format that is particularly useful in cognitive–behavioral assessment and treatment is the Fear and Avoidance Hierarchy (FAH). During the initial assessment, a hierarchical list of the youth's "top 10" anxiety-provoking situations is constructed (see the Appendix). On a weekly basis thereafter, the youth fills in his or her current anxiety and avoidance ratings on a 0 (*not at all*) to 8 (*extreme*) scale. Parents can also complete a weekly FAH for their child. Thus, levels of fear and avoidance in the situations that are most ecologically valid for the individual youth are monitored through treatment. The FAH is particularly useful in determining specific exposure targets in the treatment of SoP and SAD (e.g., Albano, 1995; Silverman & Kurtines, 1996).

Behavioral Observation

Behavioral observations of anxious children can occur in structured or unstructured situations and involve only the individual youth or include family members. Unstructured behavioral observation typically occurs during the interview process (e.g., the clinician takes note of the child's body posture, facial expressions, verbal abilities, and so forth) but can also take place during visits

to the child's environment (e.g., school, home, or locations of extracurricular activities). In these naturalistic situations, the clinician is an objective observer, and the information regarding the child gathered in these situations can be compared with that reported by the child, parents, and teachers.

Behavioral approach tests (BATs) provide the opportunity for more structured behavioral observations. A BAT involves purposely exposing the child to a feared object or situation while the clinician concurrently assesses the child's subjective level of anxiety, physiological reactions, and motoric or other behavioral responses. Targets of the BAT can include items from the child's FAH (e.g., "being alone in my dimly lit bedroom") or standardized situations (e.g., "sitting in the waiting room for 15 minutes without checking to see where my parents are"; see Silverman & Kurtines, 1996). During exposure to the feared stimuli, the child reports his or her subjective level of anxiety on a 0 to 100 scale, and the clinician solicits and records the ratings each minute. Physiological reactions can be monitored through the use of cardiovascular and electrodermal monitoring equipment, although normative child data from such instruments have yet to be established (Kendall, Chu, Pimentel, & Choudhury, 2000). Before the child is informed of the task, and again immediately before the task is initiated, baseline ratings of the child's anxiety level and physiological data should be obtained to provide some points of comparison for the data obtained during the BAT. Depending on the developmental level of the child, additional data obtained from a BAT can include a list of thoughts that the child recalls having during the task, which he or she is asked to write down immediately following its completion. Thus, the BAT can provide data on three important components of anxiety: behaviors, thoughts, and physiological changes.

Innovative research is examining whether parents of anxious children tend to focus on and misinterpret as threatening the content of ambiguous situations, resulting in anticipation of negative outcomes and reinforcement of an anxious, avoidant behavioral style. This process has been termed the FEAR ("family enhancement of avoidant responding") effect (Barrett, Rapee, Dadds, & Ryan, 1996; Dadds, Barrett, Rapee, & Ryan, 1996). Using various experimental paradigms broadly falling under the rubric of the Family Behavioral Test (FAM-BAT), a number of investigators have studied this process with the hopes of uncovering family interaction patterns involved in the etiology and/or maintenance of anxiety disorders in youth (e.g., Barrett, Rapee, et al., 1996; Chorpita, Albano, & Barlow, 1998; Cobham, Dadds, & Spence, 1999; Dadds et al., 1996; Logsdon-Conradsen, 1998; Shortt, Barrett, Dadds, & Fox, 2001). A typical FAM-BAT paradigm involves presenting an anxious child with the following scenario:

> You go out to the playground and want to join a group of kids. They are playing together, and as you get closer they start laughing. Some of the children glance over towards you. What do you think is happening? How anxious would you be? What should you do?

The experimenter typically codes the child's response for level of anxiety and degree of coping or avoidant responding. Next, the parents are brought into the room with the child and the scenario is repeated, with the instructions for the parents to talk with the child about how to handle the situation. Responses of both the parents and child are coded for a range of variables designed to assess (a) whether parents encourage proactive problem solving or avoidant responding, (b) parental anxiety levels, and (c) whether, following this discussion, the child or teen changes his or her own assessment of the situation and potential solution on the basis of his or her parents' influence.

The results of these studies have been somewhat equivocal. Several studies have shown that parents of anxious children tend to interpret these ambiguous situations in a negative way and inadvertently encourage escape or avoidant responses (e.g., "Maybe these kids are mean. They aren't nice kids. Perhaps you should just go play somewhere else"; e.g., Barrett, Rapee, et al., 1996; Chorpita, Albano, & Barlow, 1996). However, other studies have not fully replicated the FEAR effect (Cobham et al., 1999; Logsdon-Conradsen, 1998). For example, one study showed the FEAR effect to occur when parental anxiety levels are high, suggesting that the parents may be vulnerable to misinterpreting the situation and then influencing the child's response to change to an avoidant solution (Logsdon-Conradsen, 1998). Also, it has been suggested that the different experimental tasks used in these studies tend to produce different results (Shortt et al., 2001).

In terms of utility in clinical practice, while assessment through behavioral observation during office-based interviews is basically universal in clinical practice, behavioral observation outside of the office has several features that make it more difficult and thus less popular, despite its potential utility (as described earlier). Observation of an anxious child is best done when the child is unaware that he or she is the object of scrutiny. This is not only because people, in general, tend to change their behavior when being observed (Barrios & Hartmann, 1997), but also because anxious children (especially those who are socially anxious) typically become more anxious in such situations. Thus, it is ideal for the child to be unobtrusively observed by a clinician who is unknown to him or her. For a clinician in a nongroup private practice setting, this would mean that the clinician would need to have incredible foresight and, before ever meeting the child face to face in the office, know that such an observation would be particularly useful. An alternative means by which observation can be accomplished is through videotaping, which is less costly to the family (especially if they already own a video camera) than paying for the travel and observation time of a clinician but also complicated in terms of arranging the taping so that it is unobtrusive.

Similar complications are involved in the use of the BAT and FAM-BAT techniques, in that the child and/or family know that they are being observed and may modify their behaviors to present themselves in a more favorable light. However, it is our experience that when presented with a stimulus that is truly feared, children may verbally report lower than actual levels of anxiety, but their physiological and behavioral responses accurately reflect their levels of distress. Other practical issues may impede the use of behavioral tests in clinical practice. For example, BATs typically require the involvement of other people, objects, places, and so forth, necessitating planning in advance of the session. In addition, many parents (and sometimes children themselves) are anxious to begin the treatment and resist extending the evaluation to the additional sessions required by a BAT or FAM-BAT. However, the clinician should thoroughly explain to the family the benefits of conducting behavioral tests (i.e., obtaining a true baseline from which to measure improvement and identifying key familial inter-

action patterns that affect the child's anxious responses), which can translate into a more focused and effective treatment.

Psychosocial Treatment of Anxiety Disorders in Children

Once the clinician has conducted a thorough assessment of the child's anxiety and other psychological problems, the treatment plan can be developed. Data from the assessment will help prioritize the child's problems and help the clinician decide on the first area to be addressed in treatment. Although the field is sorely lacking official guidelines for the treatment of anxiety in children, research is flourishing regarding the efficacy of specific psychotherapy protocols for anxious youth. Treatment with cognitive–behavioral therapy (CBT) is the common thread underscoring all effective treatments for anxiety disorders; that is, there are no well-controlled, systematic studies attesting to the acute and long-term efficacy of any other psychosocial treatment modality for anxiety disorders in youth. In contrast, according to Kazdin and Weisz (1998), the extant research on CBT is exemplary. Full reviews of the research literature supporting the efficacy of CBT for youth with anxiety disorders can be found in Kazdin and Weisz (1998), Ollendick and King (1998), and Turner and Heiser (1999).

The most widely disseminated CBT protocol for childhood anxiety is Philip Kendall's Coping Cat program (Kendall, Kane, Howard, & Siqueland, 1990). This protocol is appropriate for 7–16-year-old youth with GAD, SAD, or SoP. Individual and group treatment manuals are available, with adaptations for greater involvement of family members having demonstrated good efficacy in the short term but no differences over the long term from individual CBT (e.g., Barrett, Dadds, & Rapee, 1996; Barrett, Duffy, Dadds, & Rapee, 2001; Spence, Donovan, & Brechman-Toussaint, 2000). Research is ongoing in the area, given that factors such as degree of impairment experienced by the child, developmental level, and degree of parental anxiety or psychopathology all warrant consideration and may affect the outcome of the child's treatment (Barrett, Dadds, & Rapee, 1996; Howard & Kendall, 1996). At this time, there are no clear data-based guidelines to determine whether or how parents should be involved in their child's treatment. Nevertheless, involvement of parents in the child's CBT program is recommended by most clinical scientists, and decisions are typically made for the involvement of parents using the following questions as a rough guide:

1. Is the child or adolescent seriously compromised by impairing anxiety and/or comorbidity? If yes, then consider more active parental involvement.
2. Is the child young in age and/or developmental level? If yes, consider more active parental involvement.
3. Are the parents or other family members engaging in behavior that accommodates the anxiety? If yes, consider parental or family involvement including psychoeducation and perhaps family therapy.
4. Are the parents (or one of the parents) compromised by anxiety and/or other comorbid conditions? If yes, then less parental involvement may be best for the child, and concurrent individual therapy for the parent(s) should be recommended.
5. Is the candidate for treatment a teenager? If yes and there is relatively little comorbidity and generally good functioning, then consider less parental involvement so that the teen may address the developmental task of assuming self-responsibility (Albano, 1995, 2003).

Manuals targeting specific disorders not covered in this review have been developed for school refusal behavior (Kearney & Albano, 2000a, 2000b), OCD (March & Mulle, 1998), phobias (Silverman & Kurtines, 1996; also covers SAD, GAD, and SoP), SoP in children (Beidel & Turner, 1998) and adolescents (Albano, 1995; Hayward et al., 2000), and posttraumatic stress disorder (March, Amaya-Jackson, Murray, & Schulte, 1998). Next we describe the key elements common to the aforementioned CBT protocols in the context of treating an "average" 7–14-year-old child with GAD, SAD, and/or SoP. In reading the following section it should be kept in mind that, to make the treatment techniques appropriate for specific populations (e.g., very young children, adolescents, children with learning or developmental disabilities, and culturally diverse children), special accommodations may be needed (e.g., when working with very young children, using simpler language and less written material and increasing parental involvement). Detailing the exact accommodations is beyond the scope of this article. Clinical examples are provided for guiding clinicians in adapting the procedures for use in general practice settings.

CBT for anxiety disorders consists of six essential components: psychoeducation, somatic management, cognitive restructuring, problem solving, exposure, and relapse prevention (see Table 3). *Psychoeducation* provides the family with an understanding of the nature of anxiety, the manner in which excessive levels of anxiety are learned and maintained, and the rationale for various treatment techniques. Therapists who approach anxiety from the cognitive–behavioral perspective assume that anxiety is a natural, normal emotion that serves to both protect the individual from harm and motivate the individual to achieve certain goals. For example, anxiety tells us to "look both ways" when crossing a street to avoid being hit by a car. Normal levels of anxiety serve to motivate a child to study for exams rather than enter a planned testing situation unprepared. It is typically explained that, for whatever reasons or groups of reasons (e.g., "an overactive nervous system," family history of anxiety, observation of others in anxiety-provoking situations, or experience with scary/threatening situations), some individuals learn to respond with fear and anxiety more readily than others, at times when higher levels of anxiety are not necessary.

Therefore, because much of anxiety is maintained by avoidance/escape and unhelpful thinking, CBT will assist the child with learning new ways to approach feared situations with greater ease and confidence. It is important to convey that anxiety will never be "wiped out" completely, because it is a necessary and useful emotion. In addition, youth are taught that, through the course of everyday life and life events, negative things will happen. Thus, CBT does not teach "happy thoughts" and promise a carefree life; rather, it is focused on assisting the youth with being proactive in coping with everyday hassles and negative life events (see Kendall, 1992). Therapists teach the child and parents to view anxiety as a tripartite construct consisting of physiological components (physical sensations and autonomic nervous system functions), cognitive elements (beliefs, assumptions, thoughts, and images), and behavioral reactions (typically in the form of escape or avoidance of feared situations or stimuli). Children are instructed to "become detectives" and uncover the triggers (cues or stimuli) to

Table 3
Main Components of Cognitive–Behavioral Therapy for Anxiety in Children and Adolescents

Component	Focus/goals	Associated techniques
Psychoeducation	Provide corrective information about the nature of anxiety and feared stimuli	Didactic instruction; self-monitoring (diaries); assigned reading
Somatic management	Target autonomic arousal and related physiological symptoms; focus attention away from anxiety-arousing physical sensations; break the association between physiological arousal and anxiety	Breathing retraining (deep and slow diaphragmatic breathing); relaxation training (progressive muscle/cue controlled/applied relaxation); meditation; exercise
Cognitive restructuring	Identify maladaptive (unhelpful) thoughts, beliefs, and images and teach realistic, coping-focused thinking	Monitoring of thought processes (diaries); identification of automatic thoughts (ATs); teaching rational disputation of ATs; use of behavioral experiments to gather evidence to refute ATs; age-appropriate methods for younger children (e.g., Kendall's FEAR steps)
Problem solving	Develop a variety of active methods for coping with specific problem situations and a system for testing the potential solutions	Identify the specific problem; generate multiple alternative actions for improving the situation; explore costs and benefits of each potential solution; determine and implement the preferred or most feasible alternative; evaluate outcomes
Exposure	Graduated, systematic, and controlled exposure to feared situation(s) to provide experience with using anxiety management skills and consolidation of psychoeducation material	Behavioral exposure to feared situations; interoceptive exposure to feared bodily sensations (such as in panic disorder); exposure should be direct (in vivo) but may begin with imaginal or symbolic exposure (e.g., use of photos of feared object instead of actual stimulus)
Relapse prevention	Focus on consolidating anxiety management skills and generalizing treatment gains over time; decrease reliance on therapist and others (e.g., parents) for managing anxiety	Fading of sessions (from weekly to biweekly); role reversal (child acts as therapist for a session); videotape commercial of therapy program; planned booster sessions

Note. FEAR = family enhancement of avoidant responding.

their anxiety, along with identifying their unique reactions within the physiological, cognitive, and behavioral realms. This is accomplished through the use of structured diary forms. Specific skills are taught to address the unique reactions within the three components of anxiety along with their interactions in spurring the cycle of anxiety. Youth are often given the analogy of building a "toolbox" of anxiety management skills.

Somatic management techniques may involve teaching deep, diaphragmatic breathing and/or some form of relaxation training. The procedures are applied differentially across the anxiety disorders and depend on the severity of the child's impairment and comorbidity patterns. In general, diaphragmatic breathing is the easiest and most portable method for calming the anxiety response. Scripts for progressive muscle relaxation tailored to young children and adolescents are available and can serve as useful models for clinicians (e.g., Koeppen, 1974; Ollendick & Cerny, 1981). Progressive muscle relaxation and related techniques are not typically applied in SoP, because the focus of treatment is on developing a tolerance for the natural rise in anxiety that occurs in challenging situations (e.g., giving an oral report, asking someone for a date, or approaching a group of unfamiliar kids). In practice, clinicians often provide children with a personalized tape-recorded relaxation procedure when they have difficulty falling asleep or staying in their own room at night. Playing and listening through the 20–30-min relaxation procedure becomes a part of the evening routine in preparing for bed, in addition to being the assignment for those youth who wake up and seek their parents during the night.

Cognitive restructuring involves the identification of unhelpful, anxiety-provoking thoughts and the subsequent challenging of these thoughts with proactive, coping-focused thinking and action

plans based in reality. Children are taught to treat their thoughts as "guesses" to be tested and challenged. For example, in response to the thought "What if Mom is late picking me up at school? She may be in a car accident," the child is asked to generate alternative reasons for her or his mother being late. For example, she may be stuck in traffic, or she may be running late because of an errand. These alternatives are innocuous and do not increase anxiety. The child is encouraged to focus on these realistic alternatives and to practice coping with anxiety through somatic management while waiting for her or his mother. Parents are often taught to serve as "sideline coaches" for their children. Rather than provide excessive reassurance and answers to their children's anxious thoughts, parents are taught to coach their children in questioning the evidence for their thoughts and arriving at coping solutions. Several models for conducting cognitive restructuring with youth of various ages have been developed (see Kearney & Albano, 2000a, 2000b; Kendall, 1990; Silverman & Kurtines, 1996).

Problem solving is a step-by-step process in which the child generates and tests a variety of active methods for coping with specific problem situations. First, the child is taught to identify the specific problem. Second, emphasis is placed on the child's generating as many alternative actions for improving the situation as possible, without allowing judgments to be prematurely made regarding the ideas. Then the child explores the costs and benefits of each potential solution and, thus, determines and implements the preferred or most feasible alternative. Finally, the child evaluates the outcome and tries a different solution if the desired effect was not achieved. Problem-solving skills are usually most effectively taught by first working through a problem that is concrete, real, and completely unrelated to the child's anxiety (e.g., "You've lost your shoes somewhere in your house. How should you go about trying to find them?"; Kendall et al., 1990). If the child experiences levels of anxiety that interfere with his or her effectively engaging in the step-by-step process, he or she is encouraged to use somatic management techniques before implementing problem solving.

Exposure, which is considered the key element in the treatment of any anxiety-based disorder (Albano et al., 2001; Barrios & O'Dell, 1998), involves the systematic, graduated, and controlled exposure of the child to his or her feared situation or stimulus. Exposure takes many forms, such as imaginal (e.g., through guided imagery), symbolic (e.g., through the use of pictures or props), simulated (e.g., through role-playing), and in vivo (e.g., contact with the real situation/stimulus). The in vivo method is preferred and is the ultimate goal of any exposure program. Exposures can involve anxiety-provoking situations or stimuli (see Table 4 for examples). The pace of exposure is dependent on a number of factors, including the level of fear and distress experienced by the child or adolescent, age or cognitive issues, time constraints of therapy, and the motivational level of the child and parents. Thus, graduated exposure may occur during a period of sessions spaced over several weeks, or it may proceed rapidly over the course of an extended 1- to 2-hr session. Decisions on the pace of exposure and its intensity need to be carefully considered and made by a well-trained and experienced cognitive–behavioral therapist. Inappropriate or incomplete exposure can result in premature dropout from treatment, demoralization, incomplete recovery, and other negative attitudes toward an otherwise beneficial form of therapy. In general, youth are encouraged to engage in exposure situations in a graduated manner both within sessions and as between-sessions homework assignments. Cognitive restructuring, problem-solving, and somatic management skills are practiced and applied during exposures. The process of exposure provides the child with new information about the feared situation and his or her ability to cope with the associated anxiety.

Table 4
Example Exposure Exercises

Diagnosis	Exposure situation
Separation anxiety disorder	Staying alone in the therapy room
	Going on a play date without Mom or Dad
	Attending a sleepover party
	Sleeping in my own bed
	Waiting for Mom or Dad to arrive, but not knowing when this will happen (how "late" he or she will be)
	Sitting alone in a room with dim light for 20 min
Social phobia	Calling a classmate on the telephone
	Inviting a friend to get together
	Giving an oral report
	Ordering food in a restaurant
	Starting a conversation with someone I don't know well
	Sitting at a table in the school cafeteria with kids you don't know well
	Raising your hand to volunteer an answer in class
Generalized anxiety disorder	Listening to news reports (to be exposed to "what if" questions, such as "What if there is crime in our city?")
	Asking Mom or Dad a "what if" question, but they do not respond
	Completing homework by yourself, without Mom or Dad checking it over
	Leaving a school book at home rather than taking it to class
	Arriving at a party or friend's house later than expected

Finally, all CBT programs involve a *relapse prevention* component geared toward consolidating the child's anxiety management skills and promoting generalization and maintenance of treatment gains. Some methods of relapse prevention involve having the child keep a notebook or diary of ongoing progress, spacing the final sessions out to biweekly or monthly visits, videotaping a therapy "commercial" in which the child illustrates the techniques he or she learned to overcome the anxiety, and "trading places" with the therapist in a role-reversal exercise.

Concluding Comments

Anxiety disorders are common and significantly impairing conditions affecting a significant proportion of children. If left untreated, these conditions render the individual vulnerable to the development of additional anxiety diagnoses, in addition to mood disorders and substance abuse. Fortunately, significant progress has been made over the past 20 years in developing reliable and accurate methods for identifying what were once the "silent disorders" of childhood. Accurate assessment and diagnosis is the first step in assisting an affected youth and his or her parents in understanding the nature of the anxiety disorder and its resultant impairment in functioning. Moreover, the results of the assessment assist the clinician in formulating a targeted treatment plan. Significant progress has occurred within the realm of CBT for anxiety in youth. The Coping Cat program was perhaps the first system-

atic, manualized, and empirically supported treatment approach to providing youth with skills for managing the somatic, cognitive, and behavioral components of anxiety and the resulting impairment. CBT manuals have since been developed for the range of anxiety disorders and for treatment of these conditions in a variety of modalities (individual, group, or family contexts). The Society for Clinical Child and Adolescent Psychology, Division 53 of the American Psychological Association, maintains a Web site that provides information on the state of empirically supported treatments for the range of disorders in youth, including anxiety. Clinicians and consumers can access this site (www.clinicalchildpsychology.org) for up-to-date information on treatments and other issues affecting youth.

There currently exist several pressing issues for the field to struggle with in advancing our understanding and treatment of these disorders. First, recent evidence suggests that medications are also effective in treating anxiety in children (Compton et al., 2001; RUPP Anxiety Study Group, 2001; Rynn, Siqueland, & Rickels, 2001). Studies examining the relative efficacy of CBT, medication, and their combination are necessary to advance the field to an understanding of which modality should be initiated first for any given child and to address questions regarding sequencing and length of treatments. Second, and perhaps of greater relevance, is the evaluation of whether CBT protocols can be delivered by clinicians of varying theoretical and professional backgrounds with the same level of efficacy as that found in controlled research trials. It is critical that therapists receive adequate training in the theoretical and practical application of these clinical protocols. A related question is "How much training is good enough?" And, finally, the transportability of these programs to nonclinic settings, such as schools, primary care settings, and community centers, is necessary to evaluate whether youth who are at risk for developing anxiety or who are in the early stages of a disorder may benefit from early preventive interventions. In short, there has been incredible progress in the field in advancing the treatment of these disorders, yet much work remains to be done to ensure the optimal delivery of these protocols to youth in need.

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(*Appendix follows*)

Appendix

Sample Fear and Avoidance Hierarchy for Separation Anxiety Disorder

My Top 10 Trouble Situations Rate each item for how much fear it causes you (0 = *not at all;* 8 = *the worst*) and how hard you try to avoid the situation (0 = *not at all;* 8 = *all the time*):	Fear rating (0–8)	Avoidance rating (0–8)
10. Spending the night at a friend's house	____	____
9. Mom and Dad go out for the evening, leave me with a babysitter, and I don't know where they are or when they are coming back	____	____
8. Staying with a babysitter for 3 hours at night and Mom only calls home once during the evening	____	____
7. Going to sleep in my room by myself with no lights on	____	____
6. Mom is picking me up from school and will be late, but I don't know how late she will be	____	____
5. Staying alone in my room for 1 hour while Mom and Dad are in another part of the house	____	____
4. Staying overnight at Grandma's and calling Mom every hour until I fall asleep	____	____
3. Going to sleep in my room by myself with a nightlight on	____	____
2. Mom and Dad drop me off at my therapist's office and don't stay in the waiting room	____	____
1. Going to ballet lessons and Mom doesn't stay in the practice room with me	____	____

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