

Developmentally Sensitive Assessment of Social Anxiety

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Social anxiety affects children across the developmental spectrum. Early-onset social phobia may be particularly impairing because of its disruptive effects on social and academic functioning during a child's formative years and because of the elevated risks of childhood adversity in anxious individuals. Unfortunately, little attention has been paid to the early identification and assessment of social anxiety in young children. The ability to recognize and monitor or remediate social anxiety early in development would be of great advantage in reversing this potentially debilitating course. This article reviews various methods available to assess social anxiety and associated conditions. Particular emphasis is placed on the description and assessment of behavioral inhibition in infants and very young children as an early marker or precursor to the development of social anxiety. For school-aged children and adolescents, a greater range of assessment options is available including behavioral observation, clinician ratings, child self-report questionnaires, and parent and peer reports. In an effort to advance our understanding of the developmental psychopathology of social anxiety, further research is necessary to determine the equivalency of various assessment strategies across developmental periods.

SOcial PHOBIA (social anxiety disorder) is characterized as a persistent fear and/or avoidance of social situations in which the person is exposed to unfamiliar persons or to potential social evaluation and scrutiny (American Psychiatric Association, 1994). Social anxiety can affect individuals across the developmental spectrum. Despite the common childhood onset of social phobia, with the mean onset for generalized social phobia estimated at 10.9 (*SD* 5.8) years in one sample (Manuzza et al., 1995), little attention has been paid to the early identification and assessment of social anxiety in young children. However, this omission may have serious consequences. Early-onset social phobia may be particularly impairing because of its disruptive effects on social and academic functioning during a child's formative years and because of the elevated risks of childhood adversity in anxious individuals (Panella & Henggeler, 1986). The ability to recognize and monitor or remediate social anxiety early in development would be of great advantage in reversing this potentially debilitating course.

This article reviews the literature relevant to the assessment of social anxiety in children and adolescents. The first section of the article entails an overview of current knowledge regarding the developmental progression of social anxiety. Next, the association of behavioral inhibition and social anxiety is discussed, followed by description

of various approaches to the assessment of behavioral inhibition. The third section of the article focuses on the assessment of social anxiety. Specific assessment strategies reviewed include behavioral observation, clinician ratings, parent reports, child self-reports, and peer reports. The article concludes with suggestions for future research.

Developmental Progression of Social Anxiety

A consideration of the developmental progression of social anxiety can aid in distinguishing normative from maladaptive presentations. Infants typically manifest a normal stage of stranger anxiety beginning at about age 7 to 8 months and peaking at 12 to 15 months. However, the expressions of this anxiety can range from initial wariness and hesitancy to approach a stranger, with quick warming up over a period of minutes, to clear and persistent distress and refusal to engage. Whereas toddlers who have significant difficulty interacting with unfamiliar adults or peers cannot be said to have social anxiety disorder, they may be classified along a spectrum with regard to the intensity of their anxiety toward unfamiliar people. This anxiety can be measured with parent-completed social-fearfulness or shyness scales (Buss & Plomin, 1984) or through observational measures of "behavioral inhibition to the unfamiliar" (Kagan, Reznick, & Snidman, 1988).

Behavioral inhibition represents a temperamental tendency to show fear, restraint, and withdrawal from novelty, including novel settings, objects, peers, and adults (Kagan, Reznick, & Snidman, 1988). About 15% of children are estimated to exhibit these reactions. Although some investigators (Kochanska, 1991; Rubin, Hastings, Stewart, Henderson, & Chen, 1997) have made distinctions among

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 **Continuing Education Quiz located on p. 127.**

inhibition to objects, peers, and adults and have found that children who are inhibited in three contexts show the most impairing anxiety (Rubin et al., 1997), in practice, most research assessments of behavioral inhibition assess inhibition to both unfamiliar objects and people. Because of developmental changes, the specific markers of inhibition vary with age. Inhibited infants and toddlers tend to respond to novel objects, settings, peers, and adults with fear (fearful facial expression, shrinking away), distress (crying, fretting), or avoidance (refusal to approach) (Garcia-Coll, Kagan, & Reznick, 1984; Kagan, 1994). They tend to limit exploration of new toys or approach of new peers, remain close to or cling to their mothers, and remain quiet and serious (unsmiling). These reactions can persist over 60-to-90-minute laboratory observation periods. Inhibited preschoolers, while no longer manifesting overt fear or distress, tend to remain quiet and subdued, to avoid approaching new peers, to stay close to their mothers, and, while responding to direct questions from an adult, to make few if any spontaneous comments or smiles (Kagan, Reznick, Clarke, Snidman, & Garcia-Coll, 1984). Early school-age children with behavioral inhibition manifest reserve, reticence, and quiet watchfulness, particularly with groups of unfamiliar peers (Kagan, Reznick, & Gibbons, 1989; Reznick et al., 1986). They may exhibit persistent restraint and solitary watchful behavior in their kindergarten classrooms (Gersten, 1989). Selective mutism also may be exhibited during this stage. Selective mutism has been suggested to be an extreme (and often early onset) variant of social phobia (Schneider, Blanco, Antia, & Liebowitz, 2002). Additionally, a precursor to behavioral inhibition, "high reactivity," a tendency to fret and showing motor activity in response to surprising stimuli, has been observed as early as 4 months of age (Mullen, Snidman, & Kagan, 1993).

Behavioral inhibition appears to be moderately stable across early childhood (Asendorpf, 1990; Asendorpf, 1994; Broberg, Lamb, & Hwang, 1990; Fordham & Stevenson-Hinde, 1999; Scarpa, Raine, Venables, & Mednick, 1995; Stevenson-Hinde & Shouldice, 1995), with children extreme in inhibition most likely to maintain this tendency (Kagan, Reznick, Snidman, Gibbons, & Johnson, 1988; Kerr, Lambert, Stattin, & Klackenberg-Larsson, 1994). It is hypothesized to reflect a lower threshold to limbic excitability and sympathetic activation, as reflected in higher and more stable heart rates during exposure to unfamiliar settings among children who remain persistently inhibited across early childhood (Kagan, Reznick, & Snidman, 1988). It has been estimated to have at least moderate heritability (.4 to .5; DiLalla, Kagan, & Reznick, 1994; Emde et al., 1992; Matheny, 1989; Plomin, 1986; Plomin et al., 1993; Robinson, Kagan, Reznick, & Corley, 1992).

Beyond its apparent phenomenologic resemblance to social anxiety, behavioral inhibition has been linked to

social anxiety disorder through family-genetic and prospective longitudinal studies, suggesting that it may represent a risk factor or precursor to impairing social anxiety later in development. Behavioral inhibition is prevalent in offspring of parents with anxiety disorders, in particular panic and agoraphobia (Battaglia et al., 1997; Manassis, Bradley, Goldberg, Hood, & Swinson, 1995; Rosenbaum et al., 1988; Rosenbaum et al., 2000), and also, in some studies, with depression (Kochanska, 1991; Rosenbaum et al., 2000). More telling, children selected for their temperamental inhibition or shyness were found to have parents with elevated rates of social phobia (Cooper & Eke, 1999; Rosenbaum et al., 1991). Prospective studies of inhibited toddlers and cross-sectional studies of inhibited preschoolers have found that these children have increased risk for social anxiety disorder: avoidant disorder or social phobia at mean age 6 years (Biederman et al., 2001), phobias of social situations at ages 7 to 8 years (Hirshfeld et al., 1992), and generalized social anxiety with impairment at age 13 years (Schwartz, Snidman, & Kagan, 1999). It should be noted, however, that not all children who display inhibition in laboratory settings develop impairing social anxiety. Therefore, behavioral inhibition itself, while indicating elevated risk for later social anxiety disorder, particularly among children with family history of anxiety (Biederman et al., 2001; Rosenbaum et al., 1992), does not necessarily mean that a child will show future social anxiety. Similarly, behavioral inhibition does not itself present a problem for the child unless it interferes with the child's social or academic functioning.

In contrast to behavioral inhibition, momentary wariness of unfamiliar children and adults is not unusual among preschoolers, and initial shyness, marked by averting gaze or shying away in the first minutes of an interaction, followed by relatively quick warming up and interacting, may be common. However, preschoolers and young children whose social anxiety is impairing often present with intense fear, shrinking from, and attempts to avoid unfamiliar peers and often adults. This behavior manifests despite affectionate interactions with close family members and familiar peers, and often despite a wish for "new friends." Although children this young are not typically able to think about or articulate social evaluative concerns, they may nonetheless show phobic anxiety of unfamiliar children or adults. These fears can be debilitating, since children may refuse to talk to new children or adults, play with unfamiliar peers, or even go to places where they may encounter new children (e.g., playgrounds, birthday parties). At extremes, children may completely refuse to talk to people who are not entirely familiar to them.

By the early elementary school years, anticipatory anxiety about social situations and increases in social evaluative fears begin to contribute to the symptomatology of social anxiety. Young elementary school children may

articulate worries about concrete social situations (e.g., “They’ll be mean to me,” “They won’t play with me”). As they become increasingly able to recognize that their peers have viewpoints different from their own, children place growing importance on the way others perceive them (Ollendick & Hirshfeld-Becker, 2002; Ollendick & Ingman, 2001; Ollendick, King, & Frary, 1989). Usually, episodes of social anxiety in early or middle childhood are short-lived. However, social anxiety disorder may be said to develop when the anxiety about social or performance situations in which embarrassment or humiliation might occur persists for 6 months or longer and causes marked distress and impairment in functioning. Immediate responses to social situations may range from crying and attempting to avoid the situation to wariness and clinging to a parent. Since young children usually are not allowed to avoid their feared situations, they may instead withdraw when in the situations, refuse school, or show oppositional behavior in response to parental inducements to attend social events (Ollendick & Hirshfeld-Becker, 2002; Ollendick & Ingman, 2001). Social anxiety that interferes with peer interactions can be impairing in the early elementary school years, since during this period children develop social competencies that influence later social outcomes (Morris, 2001; Taylor, 1989). Establishing positive peer relationships and gaining acceptance into the peer group are crucial to the development of social feelings and understanding of social events (Taylor, 1989). Moreover, social anxiety that interferes with classroom participation may increasingly impair academic performance and learning, as children are held increasingly accountable both for oral participation and for asking teachers for help and clarification.

During middle childhood, children develop growing self-awareness (Damon & Hart, 1982) and self-consciousness, and begin to attribute behavior (their own and others’) to internal traits. In this developmental period, shyness and withdrawal come to be considered problems by peers (Hymel, Rubin, Rowden, & LeMare, 1990), and peer teasing and stigmatization in general increase (Younger & Piccinin, 1989). In addition, as children develop the ability to anticipate future outcomes (Piaget & Inhelder, 1966), they become increasingly able to formulate sophisticated schemas concerning harm. Thus, children’s worries normally increase at age 8 years and older, resulting in growing concerns about behavioral competence, social acceptance, and psychological well-being. During middle childhood, children also begin to think in a more organized way, to display increased ability to take others’ perspectives and to compare themselves with others, and to show more concern about social evaluation (Flavell, 1977). Because children are now increasingly able to consider multiple outcomes and to elaborate potential catastrophic outcomes (Magnusson, 1985; Vasey & Borkovec, 1992; Vasey,

Crnic, & Carter, 1994), symptoms of social anxiety at this period are much more likely to include worries and social evaluative concerns. Thus, middle childhood may represent a period in which distorted schemas of social threat and efficacy become more salient, automatic, and stable (Hirshfeld-Becker, Henin, Racette, Dufton, & Smoller, in press). Studies of the cognitions of socially phobic or anxious youth in the 7-to-14 age range suggest that the youngsters display a pattern of negative cognition in social evaluative situations, tending to anticipate negative outcomes and to evaluate their own performance more negatively than nonanxious children, even in situations where they show no observable performance deficits (Chansky & Kendall, 1997; Spence, Donovan, & Brechman-Toussaint, 1999).

As youngsters reach adolescence, they place growing importance on peer-group acceptance and tend to interact in ways marked by conformity to peers, high positive affect, and verbal reciprocity (Panella & Henggeler, 1986). During this period, peer relationships play an increasingly important role in influencing social skills, emotional functioning, and social understanding, and are robustly related to concurrent and subsequent psychological functioning (Panella & Henggeler, 1986). At this age, the combination of the increased importance of peer acceptance, the tendency for groups of adolescents to join through excluding others, the increasing vulnerability to embarrassment, and the youngster’s increased ability to actively anticipate and elaborate hypothetical negative outcomes (with the capacity for formal operations and abstract thought) may bring about an increased likelihood of onset or exacerbation of social anxiety disorder (Vasey & Borkovec, 1992; Vasey et al., 1994; Vasey, El-Hag, & Daleiden, 1996; Vasey & MacLeod, 2001), corresponding to the peak in first onset observed during this period. Symptomatically, socially anxious adolescents may experience panic in anxiety-provoking social situations or may display signs such as poor eye contact, mumbling, trembling voice, or shaking hands (Albano & Chorpita, 1995; Beidel & Turner, 1998). In addition, they may experience anxious cognitions concerning negative performance, negative evaluation, the exaggerated likelihood and consequences of failure, humiliation, embarrassment, inadequacy, and self-criticism, as well as biased attention to threat and to physical symptoms of anxiety (Hirshfeld-Becker et al., in press; Ollendick & Hirshfeld-Becker, 2002).

In the sections that follow, we will discuss methods for assessing social anxiety in children, with attention to the need for developmentally sensitive assessments across childhood and adolescence.

Assessment of Behavioral Inhibition

As discussed above, the earliest measurable manifestations of the propensity for social anxiety may well be the

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temperamental features reflected in behavioral inhibition to the unfamiliar. Although toddlers and preschoolers are too young to be validly diagnosed with social anxiety disorder, they may display characteristic responses to situations of novelty (including social novelty) that can be measured through standard observations using age-specific protocols. Thus, laboratory observation batteries assessing behavioral inhibition offer developmentally sensitive ways to measure rudimentary social anxiety in this age range. Such batteries have the advantage of not relying solely on parental reports, which may be biased due to limited knowledge of norms for a given age, personal characteristics, and parental expectations. (However, the batteries may be helpfully supplemented with parent or teacher reports, particularly where the aim is to determine how impairing the inhibited behavior is to the child's daily functioning). Although observational batteries capture limited samples of behavior, they focus on the particular stimuli (novel events and people) that give rise to a consistent response in inhibited children. By repeating such observations at intervals in varied laboratory contexts, it is possible to expand the behaviors sampled and to differentiate persistent features from transient or acute symptoms.

As summarized earlier, behavioral inhibition represents a consistent tendency, evident in toddlerhood or earlier, to show marked restraint or fearfulness with unfamiliar people, situations, or events. It is measured using age-specific laboratory protocols, in which the child, accompanied by his or her mother, is presented with unfamiliar rooms, objects, adults, and peers. The child's behaviors in these situations are quantified, usually through a combination of global ratings and of durations, latencies, or counts of specific behaviors, and the child is classified as behaviorally inhibited or not. In practice, assessment protocols vary between research groups, and even from study to study within research groups. One approach is to assess large samples of children, and then classify as inhibited the youngsters in the sample whose behaviors are most extreme (e.g., in the upper 10th to 20th percentile on inhibition; Garcia-Coll et al., 1984; Rosenbaum et al., 2000). Table 1 provides examples of some of the types of tasks included in assessment batteries for children in the age ranges of 2 to 6 years, and of the types of variables rated, drawn from the work of Kagan and colleagues (Garcia-Coll et al., 1984; Kagan et al., 1984; Kagan, Reznick, & Snidman, 1987; Reznick et al., 1986) and of Rosenbaum and colleagues (2000).

Since investigators tend to operationalize measures of inhibition differently (e.g., using different variables, incorporating parent reports, etc.), a promising direction in the assessment of social anxiety or its precursors in young children may be to better standardize and norm measures of behavioral inhibition for use in clinical set-

tings (Hirshfeld-Becker, Biederman, & Rosenbaum, in press). It would be useful to develop a maximally inclusive battery and examine which variables best reflect behavioral inhibition and best index its stability from age to age (Turner & Beidel, 1996). Whereas researchers with large samples can compare children within the sample in order to derive cutoffs for classification as inhibited, clinicians attempting to assess children in the office would require normed assessment measures. In addition, investigators have differentiated between inhibition to different novel stimuli, such as nonsocial novelty (objects or settings), novel adults, or novel peers (Kochanska, 1991; Rubin et al., 1997). Rubin and colleagues found that there was only a moderate cross-situational consistency to these three types of novelty among unselected 2-year-olds. Although one might hypothesize that social inhibition may be most related to risk for social anxiety disorder, this hypothesis needs to be tested empirically.

Until guidelines are developed for assessing behavioral intervention in clinic settings, the front-line clinician may draw inferences through observation of the toddler or young child's behavior in the waiting room, including interactions with clerical staff and therapists. Further, it is advantageous to incorporate relevant questions in interviews with the parent(s) and other child-care providers (e.g., "How does Juliana act when she meets someone new?" "How did Todd adjust to day care?" "When other children are playing, how readily will David join in?"). Preschool settings provide ample opportunity to observe social behavior with adults and same-age peers. Social inhibition and selective mutism are common presenting conditions among referrals to psychological consultants within the Head Start system (in contrast, parents rarely initiate calls to mental health clinics on their own to address issues of shyness inhibition in their young children). As such, preschool may be an ideal time for screening efforts to identify children displaying extreme levels of behavioral inhibition and for the implementation of anxiety prevention and early intervention programs.

As children mature, their temperamental qualities become difficult to differentiate from other characteristics that may overlay them, including personality characteristics, learned habits, and emergent psychopathology. Thus, it becomes challenging to assess behavioral inhibition much beyond the preschool or early elementary school years. In order to work around this difficulty, Reznick, Hegeman, Kaufman, Woods, and Jacobs (1992) developed a self-report measure (the Retrospective Self-Report of Inhibition, or RSRI) that attempts to assess behavioral inhibition retrospectively, by asking older subjects to reflect on their characteristics during elementary school. This 30-item Likert scale questionnaire typically breaks down into two or more factors, indicating social inhibition (fears of social or performance situations) and fearfulness/illness

Table 1
Examples of Protocols for Assessing Behavioral Inhibition

Age	Assessment Protocol	Behavioral Variables Coded
21 months (Garcia-Coll et al., 1984)	A series of interactions with unfamiliar adults and objects including free play, reaction to modeling toy-play by unfamiliar adult, reaction to another unfamiliar adult, reaction to an unusual object (60-cm-tall robot), and reaction to separation from mother	Signs of inhibition or apprehension across episodes (crying, fretting, distress vocalizations, withdrawals, absence of spontaneous interactions with examiner), latencies to interact with toys or with the adult, inhibition of play, displays of distress to the model
4 years (Kagan et al., 1984)	Two 40-minute play situations with an unfamiliar child of same age and sex with age-appropriate toys and mothers present (one with a child of similar temperament and one with opposite temperament)	Latencies to approach the other child (in first session) and to enter a 6-foot plastic tunnel, duration proximal to mother while not playing (in both sessions), and frequency of staring at the other child (in the second session)
5.5 years (Reznick et al., 1986)	Laboratory visit with an unfamiliar female examiner involving cognitive tasks: recognition memory, recall of words, embedded figures test, matching familiar figures, haptic procedure Risk room: 5-minute period in a room with novel objects inviting exploration (e.g., black box, lever, slanted beam, bars over child's head); and 5 minutes during which an unfamiliar examiner models and invites the child to initiate actions with the objects Peer play: 30-minute peer play with an unfamiliar child of opposite temperament with mothers present	Number of glances at examiner, number of spontaneous comments to examiner, number of gross motor movements, accuracy of performance, latency to first solution, heart rate, heart rate variability Latency to initiate play, number of novel acts not imitated, total time proximal to mother, and total time not playing Latency to play with first toy, latency to approach other child, time proximal to mother, time staring at other child
2-year-olds (Rosenbaum et al., 2000)	A series of interactions with an unfamiliar female examiner including free play, reaction to modeling toy-play by an unfamiliar adult, reaction to a stranger playing with a toy, reaction to a stranger dressed as a clown, reaction to a mechanical dinosaur	Number of shows of fear (distress or avoidance) to episodes in the battery, 3-point ratings of the child's resistance, distractibility, frequency of vocalizations, frequency of smiling, and a 4-point rating of the child's response to a clown
4-year-olds (Rosenbaum et al., 2000)	Risk room: 5-minute play period in a room with novel objects inviting exploration (e.g., balance beam, mask, mattress, ladder on floor); and 5 minutes during which unfamiliar examiner invites child to play with objects Laboratory visit with an unfamiliar female examiner involving cognitive tasks (word recall, number recall, story picture arrangement tasks, pictorial Stroop task) and following directions for unusual requests, measurement of heart rate and blood pressure	3-point ratings of degree to which child played with toys when with mother and when invited by the examiner Number of smiles and spontaneous comments, 3-point ratings of the child's resistance to application of EKG electrodes and blood pressure cuff, number of delays in completing unusual requests, and 4-point ratings of the child's level of fear, shyness, resistance, loudness of voice, and overall inhibition across the entire battery
6-year-olds (Rosenbaum et al., 2000)	Laboratory visit as above but including matching familiar figures and excluding unusual requests	Same as above except for delays in completing requests and loudness of voice

symptoms (other more general fears and tendencies). Although correlations with prospectively obtained observational assessments in longitudinal samples have not been reported to our knowledge, one interesting study of over 2,000 high school students found that RSRI scores from ninth graders predicted new onset of social phobia over the ensuing 3 years (Hayward, Killen, Kraemer, & Taylor, 1998). This study suggests that RSRI scores may index risk for social anxiety in young adolescents.

The Behavioral Inhibition Instrument (BII; Gest, 1997) consists of three descriptive statements reflective of high, moderate, or low levels of inhibition. Children are asked to select the statement that is most descriptive of their own behavior. Children who describe themselves as high in behavioral inhibition demonstrate higher levels of anxiety than children rating themselves as low or moderate on this trait (Muris, Merckelbach, Wessel, & Van de Ven, 1999; Muris, Merckelbach, Schmidt, Gadet, & Bogie,

2001). Muris and Meesters (2002) found modest agreement for child self-report and parent-report versions of the BII among a community sample of 280 11- to 15-year-old children and their parents.

Related to behavioral inhibition is the temperamental construct of sociability. The Emotionality, Activity, and Sociability Temperament Survey (EAS; Buss & Plomin, 1984) has been widely used in the child development literature. On the EAS, Emotionality represents the quality of negative affect, Activity relates to expenditure of physical energy, and Sociability essentially corresponds to the concept of extroversion. Self- and parent-report versions are available. Rende (1993) found that preschoolers' EAS scores predicted symptoms of anxiety and depression in middle childhood. Further research is needed to explore associations among behavioral inhibition and sociability in infancy and early childhood with the expression of social anxiety in later childhood and adolescence.

Assessment of Social Anxiety

Comprehensive assessment of social anxiety requires careful evaluation of children's cognitive, behavioral, and somatic responses in a variety of social contexts, including home and school. A multimethod, multimodal assessment approach provides for thorough description of the presenting problem and can greatly assist in case conceptualization and treatment planning. Below we highlight strategies and measures developed (in whole or in part) to assess social anxiety in children.

Behavioral Observation

Behavioral observation should be considered an important component of any comprehensive assessment of social anxiety. Ideally, the child will be observed in the natural setting in which the anxiety manifests (e.g., on the playground during school recess). However, with consideration and preparation, analog situations may be arranged that provide the proper setting events in which relevant behaviors may be displayed (e.g., reading aloud, delivering a speech, initiating conversation). Behavioral assessments tasks have been used productively in clinical settings and have been described in recent clinical trials of cognitive-behavioral therapy for social phobia or other anxiety disorders (Beidel, Turner, & Morris, 2000; Kendall et al., 1997).

Clinician-Rated Measures

Despite the availability of clinician-rated measures for social phobia in adults, there are far fewer measures available for use with youth. Clinician-rated measures primarily consist of structured or semistructured diagnostic interviews, general ratings of overall functioning (e.g., Clinician Global Improvement [CGI]), and ratings of general

childhood anxiety. Only one clinician-rated measure, the Liebowitz Social Anxiety Scale, has been adapted specifically for use with socially anxious youth.

Structured diagnostic interviews, perhaps the best studied clinician-rated assessments, are widely used in both research and clinical practice. Diagnostic interviews have the advantage of being comprehensive, highly reliable, and open to direct observation of their psychometric properties. Interviews can obtain more detailed information, or information of greater depth, via complex question sequences (Boyle et al., 1997). The structure of these interviews also decreases the variability inherent in clinical judgment, increases the comparability of diagnostic classification systems, and permits the clarification of ambiguous or unclear responses (McClellan & Werry, 2000; Ollendick & Hersen, 1993; Silverman, 1991, 1994). Despite these significant advantages, structured interviews may be limited by several factors. For example, they often require significant training to administer reliably, and may be lengthy and difficult to administer and score.

There are several well-established diagnostic interviews based on *DSM* criteria, including the Diagnostic Interview for Children and Adolescents—Revised (DICA-R; Herjanic, 1982; Reich & Welner, 1988), Schedule for Affective Disorders and Schizophrenia for School-Aged Children (KSADS; Ambrosini, 2000), and Diagnostic Interview Schedule for Children (DISC; Shaffer, Fisher, Lucas, Dulcan, & Schwab-Stone, 2000). These interviews usually consist of parallel parent and child versions and include modules covering most *DSM-III-R* and/or *DSM-IV* diagnoses. They are composed of a series of standardized questions that permit not only the categorical assessment of diagnoses, but also the evaluation of the severity, impairment, and course of disorder, as well as the child's functioning across multiple contexts. Although overall these interviews have demonstrated acceptable psychometric properties (e.g., DISC; Jensen et al., 1995; Schwab-Stone et al., 1996), they have tended to be weaker in the assessment of childhood anxiety disorders, including social phobia. For example, retest reliabilities for anxiety disorders have been consistently low (e.g., Chambers et al., 1985; Costello et al., 1984; Shaffer et al., 1996).

To address these difficulties, the Anxiety Disorders Interview Schedule for Children (ADIS-C; Albano & Silverman, 1996; Silverman & Albano, 1996) was designed specifically to diagnose anxiety disorders in children and differentiate anxiety from other internalizing and disruptive behavior disorders. This widely used structured interview consists of comparable but separate parent and child interviews, organized around *DSM-IV* criteria that enable the interviewer to obtain information about the symptomatology, course, etiology, and interference of problem behaviors. In addition to symptom ratings, impairment across major areas of functioning (e.g., peers;

school) is queried using a 9-point Likert-type scale. To be coded as a final diagnosis, a rating of at least moderate impairment must be given by the child or parent. To derive a combined diagnosis, child and parent reports are considered, and a diagnosis is assigned if either the parent or the child reports indicate the presence of the disorder.

In the social phobia module, the ADIS-C examines both the presence of the disorder and the range of situations in which social anxiety may be expressed (e.g., dating; speaking in front of the class; eating in the school cafeteria). In accord with epidemiological studies that have found anxiety about public speaking to be the most prevalent social concern (Stein, Walker, & Forde, 1994), Beidel, Turner, and Morris (1999) reported that the most commonly reported phobic situations on the ADIS-C included performing in front of others and general conversational interactions with peers or adults. Seventy-five percent of youth meeting diagnostic criteria for social phobia reported having no or few friends, and 35% used avoidance to manage their anxiety.

Although initially designed for children ages 6 to 18, The ADIS-C has been applied to children as young as 4 years (Mancini, Van Ameringen, Szatmari, Fugere, & Boyle, 1996). The *DSM-III-R* version of the ADIS-C has demonstrated good interrater and retest reliability (Rapee, Barrett, Dadds, & Evans, 1994; Silverman & Nelles, 1988; Silverman & Rabian, 1995). Overall correlations for child and parent interviews were .98 and .93, respectively. Kappa coefficients for the classification of children as either "anxiety-disordered" or "other" were .85 for child reports, 1.0 for parent reports, and .46 for the composite report. Kappa coefficients for social phobia were 1.0 (Silverman & Nelles, 1988). Test-retest reliabilities, calculated over a 10-to-14-day period, were .76, .67, and .75 for the child, parent, and composite scores. Retest reliabilities tended to be higher for older versus younger children (Silverman & Eisen, 1992). Interrater reliability coefficients for the ADIS-C anxiety diagnoses were found to range from .85 to 1.0 (Kendall & Southam-Gerow, 1996). A recent evaluation of the *DSM-IV* version of the ADIS-C yielded excellent retest reliability for combined, parent, and child ratings of anxiety disorders, including social phobia (Silverman, Saavedra, & Pina, 2001). Supporting the interview's validity, youth identified as socially anxious on the ADIS-C were rated as having poorer social skills and higher levels of anxiety on a behavioral avoidance test (Beidel et al., 1999). The ADIS-C has been used in the majority of psychosocial treatment outcome studies for anxiety-disordered youth and has shown good sensitivity to treatment effects (Beidel, Turner, & Morris, 2000; Hayward et al., 2000; Kendall, 1994; Kendall et al., 1997; Spence, Donovan, & Brechman-Toussaint, 2000).

In addition to structured interviews, global clinician ratings provide a rapid, easy-to-use assessment of the

child's overall level of functioning or progress in treatment. The two most commonly used ratings are the Children's Global Assessment Scale (CGAS; Shaffer et al., 1983) and the Clinical Global Impressions Scale (CGI; Guy, 1976). The CGAS assesses overall functioning during the previous month, using a scale ranging from 1 (*most impaired*) to 100 (*least impaired*). The CGAS has been widely used in treatment outcome studies childhood psychopathology, including anxiety disorders (Crawford & Manassis, 2001). Similarly, the CGI consists of two subscales, Severity of Illness (CGI-S), which assesses the clinician's overall judgment of illness severity, and Global Improvement (CGI-I), which assesses improvement relative to baseline. Both subscales are rated on a 7-point scale. The CGI has demonstrated sensitivity to treatment effects following successful psychopharmacologic treatment of social phobia (Compton et al., 2001).

Clinician rating scales that have been used to assess childhood anxiety include the Hamilton Anxiety Rating Scale (HARS; Hamilton 1959), which has been validated for use with adolescents as well as adults (Clark & Donovan, 1994) and assesses both psychological and physiological anxiety. The Anxiety Rating for Children-Revised (Bernstein, Borchardt, & Perwien, 1996) has adapted questions from the Hamilton scale for use with children and adolescents. It has demonstrated good psychometric properties, including retest reliability and discriminatory validity.

Recently, the Research Units on Pediatric Psychopharmacology Anxiety Study Group (2002) developed the Pediatric Anxiety Rating Scale (PARS). This clinician-administered measure was designed to assess the frequency, severity, and associated impairment of separation anxiety, social anxiety, and generalized anxiety in children. Modeled after the Child Yale-Brown Obsessive-Compulsive Scale, the measure consists of a 50-item checklist covering social, separation, and generalized anxiety symptoms, specific phobias, and somatic anxiety symptoms. Symptoms are assessed during interviews with the parents and child (either together or separately). Symptoms from both the parent and child interviews are then collectively rated by the clinician on seven dimensions of severity using 6-point scales (e.g., frequency, avoidance; severity of distress). The PARS demonstrated high internal consistency ($\alpha = .64$), adequate interrater reliability ($ICC = .97$), and fair retest reliability ($ICC = .55$). The PARS total score was moderately correlated with other clinician and parent ratings of anxiety, but weakly correlated with child reports. Supporting sensitivity to treatment effects, the PARS total score was significantly correlated with treatment changes on clinician rated measures (e.g., CGAS; CGI-S; Research Units on Pediatric Psychopharmacology Anxiety Study Group, 2002). The PARS appears to be a promising measure in assessing the impact of a broad spectrum of anxiety disorders.

Finally, the Liebowitz Social Anxiety Scale for Children and Adolescents (LSAS-CA; Masia, Hofmann, Klein, & Liebowitz, 1999) is a 24-item clinician-rated measure that is based on the adult version of the Liebowitz Social Anxiety Scale (Liebowitz, 1987). The LSAS-CA is comprised of two scales assessing social interactions (e.g., "talking with kids you don't know well") and performance situations (e.g., "answering questions in class"). For each situation the clinician asks the child to provide separate ratings for anxiety and avoidance on a 0-to-3 Likert-type scale, but may question responses and adjust ratings accordingly based on clinical judgment and direct behavioral observations of the patient. Items are summed to arrive at scale scores for anxiety and avoidance for both social and performance situations. In addition, composite scores also are computed for the entire measure, total anxiety, and total avoidance. Preliminary evidence supports the psychometric properties of the LSAS-CA (Storch, Masia, Pincus, Klein, & Liebowitz, 2001) finding good reliability, convergent validity with self-report measures of social anxiety, and the ability to discriminate between children with an anxiety disorder diagnosis and those without. Further, the LSAS-CA has demonstrated sensitivity to treatment effects (Masia, Klein, Storch, & Corda, 2001).

Parent-Report Measures

Parent-report questionnaires have several advantages over diagnostic interviews in that they are less time consuming to administer, require far less training, and have greater flexibility in administration (e.g., in person, by phone, by mail). As with diagnostic interviews, parent checklists have demonstrated good reliability and validity. For example, Boyle et al. (1997) examined the relative utility of checklists and interviews with 2,317 children (ages 6 to 16 years). Results suggested that there were few differences between checklists and structured interviews in the identification of childhood disorders. The most widely used measures include the Child Behavior Checklist and the Conners' Parent Rating Scales.

Child Behavior Checklist (CBCL; Achenbach, 1991, 1992).

There are two versions of the CBCL, one for children ages 4 to 16, and one for children ages 2 to 3 years. Both checklists measure a broad range of problem behaviors and consist of 100 items scored on a 0-to-2 scale. The CBCL is composed of nine "narrow" (e.g., Anxious/Depressed; Social Problems; Withdrawn scales) and two "broad-band" scales (Internalizing and Externalizing scales). The CBCL also permits the evaluation of competence in the areas of age-appropriate activities, social functioning, and school functioning—areas that may be of particular relevance in assessment of social anxiety. Raw scores are converted into T-scores based on age and sex defined percentiles derived from normative samples. The CBCL has high

short-term ($r = .88$) and long-term ($r = .73$) retest reliability, good predictive validity, and moderate ability to discriminate referred and nonreferred children (Achenbach, 1992; Koot, Van Den Oord, Verhulst, & Boomsma, 1997). As expected, children with social phobia have been found to have significantly elevated T-scores on the Internalizing scale, and to fall below clinical threshold on the Externalizing scale (Beidel et al., 1999).

The Conners Parent Rating Scale—Revised (CPRS-R; Conners, 1997). The CPRS-R consists of 80 items assessing ADHD and a wide range of other behavioral difficulties in children (including Anxious/Shy and Social Problems subscales). Especially relevant to social anxiety disorder, higher scores on the Anxious/Shy subscale suggest more anxiety and withdrawal in new or unfamiliar situations. The Social Problems scale assesses parents' perceptions of their child's friendships and social confidence. The psychometric properties of the CPRS-R have been widely established (Conners, Sitarenios, Parker, & Epstein, 1998). In one treatment outcome study for social anxiety, scores on the Anxious-Shy, Social Problems, and Global Index demonstrated significant posttreatment decreases, suggesting that this measure is sensitive to treatment effects in this population (Compton et al., 2001).

Aside from the CBCL, very few parent measures of emotional problems in preschoolers are available. This is especially troubling given that preschoolers are developmentally unable to report on their own symptoms. Rates of emotional and behavioral problems among very young children have been reported to range from 7% to 24% (Briggs-Gowan, Carter, Skuban, & Horwitz, 2001; Cornely & Bromet, 1986). Although many toddlers and infants experience only transient difficulties, approximately one-third to one-half of 2- to 3-year olds with emotional or behavioral problems continue to have difficulties 1 to 2 years later (Lavigne et al., 1998; Mathiesen & Sanson, 2000). The Infant-Toddler Social and Emotional Assessment (Carter & Briggs-Gowan, 1999) was developed to evaluate toddlers' functioning across multiple areas, including compliance, empathy, imitation/play, and pro-social peer interactions. This new measure has shown good internal consistent ($\alpha = .90$) and retest reliability ($r = .91$). More specific to social anxiety, the Shyness Scale (Stevenson-Hinde & Glover, 1996) is a 6-item questionnaire assessing the child's approach or withdrawal toward unfamiliar individuals, and may complement more direct behavioral observations of behavioral inhibition. Although there are as yet no published parent-report measures designed specifically to assess child social anxiety, researchers have adapted child self-report measures to allow comparison between reporters. For example, Beidel, Turner, Hamlin, and Morris (2000) report a modest correlation between child and parent versions of the Social Phobia and Anxiety Inventory for Children (SPAI-C; see

below). Further examination of the psychometric properties of the parent-report version of the SPAI-C is in progress.

Child Self-Report

The importance of obtaining self-report data may seem obvious given the largely subjective nature of the cognitive and physiological components of social anxiety. Global self-report measures generally provide an overall index of anxiety (often including subscale scores for specific forms of anxiety), whereas syndrome-specific instruments assess anxiety symptoms experienced in certain contexts.

Global self-report measures. The Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1978), Fear Survey Scale for Children—Revised (FSSC-R; Ollendick, 1983), and State-Trait Anxiety Inventory for Children (STAI-C; Spielberger, 1973) were among the first generation of global self-report measures of anxiety in children. While advancing the study of anxiety at the time they were developed, these measures—downward extensions of adult instruments—do not reflect current diagnostic taxonomy and generally lack adequate discrimination between anxiety and related conditions such as depression, attention deficits, and hyperactivity (Hodges, 1990; Perrin & Last, 1992; Stark, Kaslow, & Laurent, 1993). The next generation of self-report measures was developed to better address issues of discriminative validity and clinical utility.

The Multidimensional Anxiety Scale for Children (MASC; March 1998), is a 45-item self-report instrument that screens for anxiety symptoms experienced by children and adolescents. The MASC yields a Total Anxiety Disorder Index and four main factor scores: Social Anxiety, Physical Symptoms, Harm/Avoidance, and Separation/Panic. The MASC is rapidly becoming one of the most widely used measures of child and adolescent anxiety, with a growing empirical base supporting its psychometric properties (e.g., Greenhill, Pine, March, Birmaher, & Riddle, 1998; Langley, Bergman, & Piacentini, 2002; March, Parker, Sullivan, Stallings, & Conners, 1997).

The Screen for Child Anxiety Related Emotional Disorders—Revised (SCARED-R; Birmaher et al., 1997; Muris, Merckelbach, Schmidt & Mayer, 1999) is a 66-item self-report instrument with subscales corresponding to the following *DSM-IV* categories: generalized anxiety, social phobia, separation anxiety, panic, OCD, PTSD, and three types of specific phobias (blood-injection-injury, animal, environmental). There are parallel parent and child versions of the SCARED-R, each of which has shown excellent internal consistency, good test-retest reliability, and moderate levels of parent-child agreement. Further, the treatment sensitivity of the measure has been demonstrated in clinical outcome research (Muris, Mayer, Bartelds, Tierney, & Bogie, 2001).

The Spence Children's Anxiety Scale (SCAS; Spence, 1997, 1998) consists of 45 items assessing social desirability and the following *DSM-IV* categories: generalized anxiety, social anxiety, separation anxiety, panic/agoraphobia, obsessions/compulsions, and fear of physical injury. The SCAS total score has demonstrated good internal consistency and test-retest reliability. Scores on the SCAS and the SCARED-R have been found to be strongly correlated (Essau, Muris, & Ederer, 2002; Muris, Schmidt, & Merckelbach, 2000). Muris et al. suggests that as the SCAS is shorter than the SCARED-R and has a more clearly defined factor structure, the SCAS may be more advantageous in research settings. However, as the SCARED-R assesses a broader range of the anxiety spectrum it has the potential to provide more detailed information that may be of benefit in clinical settings.

Syndrome-specific self-report measures. Two self-report questionnaires have been designed specifically to assess social anxiety in children. The Social Anxiety Scale for Children—Revised (SASC-R; LaGreca & Stone, 1993) is comprised of 22 items on a 5-point Likert-type scale covering various subjective experiences and behavioral consequences (e.g., inhibition, avoidance) associated with social anxiety. The SASC-R is comprised of three factors: Fear of Negative Evaluation (FNE), Social Avoidance and Distress with new or unfamiliar peers (SAD-New) and generalized social avoidance and distress (SAD-G). The SASC-R, as well as its companion version for adolescents (SASC-A), has been shown to have good reliability and validity. Scores on the SASC-R and SASC-A have been associated with low self-esteem and peer relationship difficulties.

The Social Phobia and Anxiety Inventory for Children (SPAI-C; Beidel, Turner, & Morris, 1995, 1998) assesses a range of social fears experienced by children and adolescents (8 to 14 years) in multiple social settings (e.g., home and school). The measure is comprised of 26 items evaluating anxious cognition (e.g., "What if I make a mistake and look stupid"), behavior (e.g., social avoidance), and physiologic responses (e.g., increased heart rate, sweating) across a range of potentially fear-inducing situations (e.g., school, parties). Many of the items ask the child to indicate level of fear or distress experienced in three different contexts: (with boys or girls I know; boys or girls I don't know; adults). Examination of the pattern of responses may be particularly useful in that the *DSM-IV* criteria for childhood social anxiety disorder stipulates that social distress must occur with peers, not just adult authority figures. Further, children who experience social anxiety even in the presence of familiar peers may require more intensive intervention than those who are merely slow to warm in the face of novelty. The SPAI-C has been found to have excellent psychometric properties. Beidel, Turner, Hamlin, et al. (2000) provide data on the external and discriminative validity of the SPAI-C among

254 children aged 8 to 14 years. Behavioral validation was examined through read-aloud and role-play tasks. Independent observers' ratings of the children's anxiety and effectiveness in the behavioral tasks and the children's ratings of their own distress were significantly associated with SPAI-C scores. More importantly, the measure successfully discriminated not only between children with social phobia and normal controls, but also between children with social phobia and children with other anxiety disorders. This is quite notable given that other anxiety assessment instruments generally have failed to differentiate among children of varying diagnostic groups. Moderate associations have been demonstrated between the SPAI-C and SASC-R, suggesting that the measures assess overlapping, but not identical, constructs (Epkins, 2002; Morris & Masia, 1998).

Parent-Child Agreement

Perhaps one of the most difficult issues in evaluating childhood anxiety is that of cross-informant discordance. It is widely accepted that in addition to child self-reports, reports from other informants such as parents or teachers should be incorporated into a diagnostic assessment. Multiple informants are key as children may be unable to provide accurate information about aspects of their psychological functioning. Conversely, parents may not be able to report on intrapsychic symptoms, or those occurring in contexts outside of the home (Achenbach, McConaughty, & Howell, 1987; Cantwell, Lewinsohn, Rohde, & Seeley, 1997). In fact, studies of parent-child concordance have yielded consistently low agreement (e.g., Achenbach et al., 1987; Edelbrock, Costello, Dulcan, Conover, & Kala, 1986). Similarly, maternal reports of anxiety are often not predictive of clinician-rated impairment scores (Manassis & Hood, 1998; Rapee et al., 1994). Differences in symptom reports between informants occur regardless of whether structured or semistructured diagnostic interviews are used, or whether ratings are made using dimensional symptom or categorical diagnostic ratings (Edelbrock et al., 1986; Jensen et al., 1999; Rubio-Stipec et al., 1994).

Generally, greater parent-child agreement is obtained for externalizing than internalizing problems, perhaps because the former are more observable (Edelbrock et al., 1986; Manassis, Tannock, Mendlowitz, Laslo, & Maselis, 1997). Regardless of child age, parents tend to report greater externalizing symptoms, and children tend to report more internalizing distress (Cantwell et al., 1997; Crawford & Manassis, 2001; Edelbrock et al., 1986; Herjanic & Reich, 1997; Kolko & Kazdin, 1993; Manassis et al., 1997). Although parents and teachers may notice certain aspects of internalizing distress such as social withdrawal or avoidance, the underlying mood state may be more difficult to identify. This, in part, makes children with internalizing difficulties less likely to receive treat-

ment than those with disruptive behavior disorders (Cohen, Kasen, Brooks, & Struening, 1991; Wu et al., 1999). Moreover, for those youth who have comorbid disruptive disorders, the more obvious disruptive disorders may overshadow the identification of anxiety and depression (Mesman & Koot, 2000a, 2000b).

Agreement between children and external reporters tends to increase with age (Achenbach et al., 1987; Jensen et al., 1999). Discrepancies in parental reports may be especially problematic in the assessment of very young children and toddlers because of difficulties defining impairment across multiple contexts and because of the lack of multiple observers (Briggs-Gowan et al., 2001). For example, parents may not be aware that problematic behaviors may be abnormal or developmentally inappropriate. Stallard (1993) observed that 40% of parents whose 3-year-olds displayed clinically significant behavioral/emotional problems indicated only slight concern about these difficulties.

Among the factors associated with poor parent-child agreement, parental psychopathology has been implicated in the overreporting of child symptoms. Maternal depression has been associated with reporting biases (e.g., Fergusson, Horwood, Gretten, & Shannon, 1985; Fergusson, Lynskey, & Horwood, 1993; Richters, 1992; Webster-Stratton, 1988), perhaps because of the cognitive distortions associated with depression (Chilcoat & Breslau, 1997). Chilcoat and Breslau found that mothers who were depressed and anxious reported higher levels of internalizing and externalizing disorders in their children, compared to nondepressed mothers. Mothers with a history of substance use disorders also tended to overstate internalizing distress in their children, even after controlling for maternal anxiety and depression. Overreporting was most significant when mothers had comorbid anxiety and depression, as opposed to depression alone.

A similar finding has been observed for maternal anxiety. Frick and colleagues (1994) compared the agreement on a structured diagnostic interview between mothers and teachers, for younger (6 to 8 years) and older (9 to 13 years) children. Maternal overreporting of anxiety was associated with maternal anxiety, was most prevalent with older children, and was specific to anxiety symptoms in the child. Similarly, Mancini et al. (1996), in a high-risk study of children of socially phobic adults, found that the number of anxiety disorders in the parent significantly correlated with the number of anxiety disorders in the child. Mothers with social phobia may be more likely to perceive social inhibition in their own children as a projection of their own concerns (Cooper & Eke, 1999), and to incorporate their concerns into a working model of their child (Richters, 1992).

Parents and children may each provide unique, meaningful information (Bird, Gould, & Staghezza, 1992).

Difficulties arise when determining how to integrate contradictory information from multiple informants (Klein, 1991; Piacentini, Cohen, & Cohen, 1992). Currently, most information from independent observers are combined using the "OR" rule, whereby a case is identified if any observer reports the presence of a disorder. Although this algorithm seems to perform well in research settings, it may not be as useful clinically (Jensen et al., 1999). A more refined and individualized approach to incorporating information from multiple observers may need to consider the ability of the informant to provide information as a "natural rater" because of the context in which the behavior is expressed (Jensen et al., 1999). In addition, the presence of external validators such as impairment, use of services, and reliability of information, may influence the decision to consider one informant over another. Finally, information about parental psychopathology can be used to determine whether information from multiple informants may be combined (Chilcoat & Breslau, 1997). For certain disorders such as disruptive behavior disorders, parent reports may be sufficient. Conversely, for disorders such as anxiety and depression, both informants may be necessary, valid, and complementary (Cantwell et al., 1997).

Peer Reports

The school setting is the primary social outlet for children over 5 years of age. Children's peer relationships provide important opportunities for gaining social and emotion-regulation skills. Children who experience interpersonal difficulties with their peers are at increased risk for developing various forms of psychopathology, including social anxiety (Morris, 2001). Assessment of children's peer relations may be of value in identifying children who may be in need of intervention and in evaluating generalization of treatment effects. Further, inclusion of peers in the intervention process may augment treatment efficacy (e.g., Beidel et al., 2000; Masia et al., 2001; Morris, Messer, & Gross, 1995).

Peer status typically is obtained through sociometric nomination methods. In the classic sociometric nomination procedure, each child in a classroom names the three children with whom he or she most likes to play, and three with whom he or she least likes to play. Categorization of social status is then based on the degree to which the child is liked or disliked by his or her peers (social preference) and the child's visibility within the peer group (social impact; see Coie, Dodge, & Coppotelli, 1982). Alternatively, sociometric rating procedures require children to rate their classmates on various dimensions of liking and acceptance using a Likert-type scale. The Revised Class Play (Matsen, Morrison, & Pelligrini, 1985) asks children to assign peers to various roles (usually positive and negative roles) in an imaginary play. For example,

children may be asked to name which classmates they consider to be very shy. In addition to peer-report, direct observation of children's interactions with classmates and friends can provide important data regarding social interaction style and friendship quality.

Concluding Comments and Future Directions

Each of the assessment strategies reviewed has relative merits and drawbacks in relation to the nature of information sought and the available resources of the professional(s) conducting the evaluation. The value of conducting behavioral observation in naturalistic settings cannot be overstated. Constraints on time and travel, however, can limit the feasibility of such observation by those working in practice settings. In cases when the professional cannot make routine home or school visits, creativity may be employed to arrange analog situations in the clinic environment. Self-report questionnaires have several advantages, notably that of providing access to private events (e.g., cognitions and physiologic states) that would not be directly observable. Questionnaires allow the gathering of a broad range of information in a time- and cost-efficient manner. Further, highly specific and targeted measures have been developed to assist in the differentiation of social anxiety from other forms of anxiety disorders and emotional disturbance. Unfortunately, self-report methods have inherent limitations. Self-report instruments typically require a second- or third-grade reading ability and thus are not suitable for children much younger than 8 years of age.

An oft-cited advantage of diagnostic interviews is that they do not require the child to be of reading age to participate. However, children much younger than 6 or 7 years of age may not have sufficient verbal comprehension and communication skills to fully understand and respond to the type of questions included in the interview. The issue of comprehension also must be considered when attempting to read questions from self-report measures to very young children—a practice that violates the test standards of the self-report measures and may be of questionable validity.

Limits in acquiring self-report information from very young children pose a significant problem for longitudinal research. At present, few measures demonstrate strong parent-child concordance, precluding sole reliance on parent-report for accurate assessment of social anxiety in young children. Continued work on the development of sound parent-report measures is needed and may go a long way to bridge the gap between measures of behavioral inhibition in infancy and self-report assessment of social anxiety in school-age children. Similarly, parallel observation protocols are needed to assess change across time as children age. Understanding of the developmental

psychopathology of social anxiety will be advanced greatly if researchers are able to conduct large-scale investigations across time that include assessment of proposed risk and protective factors (e.g., behavioral inhibition, parent-child attachment, peer relations). We must better identify behavioral indicators of social distress in infants, toddlers, and preschoolers and determine how these markers relate to self-reported social anxiety in later childhood and adolescence. There is great need to establish equivalency of assessment strategies (observation, interview, parent- and peer-report) across developmental periods. As we advance the state of the art with respect to assessment of social anxiety, inevitably we will acquire information allowing us to make greater strides in the areas of treatment and prevention. Given the prevalence and associated complications of early-onset social anxiety disorder, this would seem a most worthy pursuit.

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Q: Updates? Yes - 2004 PP 27-58
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Q: Transpose these two refs?
O/C

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Anxiety Disorders in Children: Family Matters

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Accumulating evidence indicates that family/parenting behaviors are associated with the etiology of anxiety disorders in children. This article critically reviews what is known about how family/parenting behaviors have been measured in this literature and presents findings from studies examining the relation between family/parenting constructs and anxiety disorders in children. We review the role of family involvement in the treatment of anxiety disorders in children and conclude with avenues of future research.

THE ROLE of parenting and the family environment in the development and maintenance of anxiety disorders is an emerging and exciting field of investigation that holds promise for informing etiological models and interventions. Though the field is still in its infancy, evidence is accumulating to indicate that specific family factors and parenting behaviors influence levels of anxiety

symptoms in children. Existing theoretical models for understanding the development of childhood anxiety disorders stress the reciprocal relation between parent and child factors in the context of environmental stressors (Chorpita & Barlow, 1998; Chorpita, Brown, & Barlow, 1998; Manassis & Bradley, 1994; Rapee, 1997; Rubin & Mills, 1991; Warren, Huston, Egeland, & Sroufe, 1997). One such model (Ginsburg & Schlossberg, 2002), adapted from Manassis and Bradley (1994) and Rubin and Mills (1991), and presented in Figure 1, depicts these relations. Although many elements of this model remain to be empirically evaluated, it serves as a useful springboard for identifying specific child, parent, and environmental factors associated with the development of anxiety in children.

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