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## Assessment of Childhood Depression

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Childhood depression has been an area of controversy in the past. Previously many clinicians concluded that depression could not exist in children because children do not have the cognitive structures in place to appreciate challenges to their self-concepts. Children's self-concepts were felt to be unstable and it was assumed that they had not formed sufficient ego structures to characterize a diagnosis of depression. Moreover, many psychodynamic theorists hypothesized that children feel sad only for short periods (Lyman & Hembree-Kigin, 1994). Newman and Garfinkel (1992) suggested that this conclusion is not based on clinical or empirical evidence but on the difficulty in fitting children into a theory of psychopathology. Lefkowitz and Burton (1978) further suggested that the sadness children feel is not suggestive of psychopathology but, rather, of normal developmental changes which resolve given sufficient time.

Childhood depression is generally diagnosed using the same symptoms as those for adults. The fourth edition of *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV; American Psychiatric Association, 1994) requires a relatively persistent and "depressed mood or loss of interest or plea-

sure in nearly all activities" must be present every day for at least two weeks in the past year (p. 320). Moreover, the child must show at least three to four additional symptoms, including appetite changes, sleeping problems, restlessness, agitation or lethargy, feelings of worthlessness or excessive guilt, problems with concentration, or frequent thoughts of death.

In examining the empirical literature, Cantwell (1983) suggested four hypotheses concerning childhood depression: (1) childhood depression does not exist, (2) children show a unique presentation for depression, (3) depression in children may be masked by other symptoms such as attention-deficit/hyperactivity disorder (ADHD), and (4) children and adults do not differ in symptoms. Of these hypotheses, the second and fourth have some empirical support (Newman & Garfinkel, 1992). The first hypothesis stems from the psychoanalytic theory that children do not have the superego development required to manifest depressive symptoms, including guilt and feelings of hopelessness (Rochlin, 1959). However, further discussion of this issue in the psychoanalytic literature suggested that children manifest symptoms that are equivalent

to depressive symptoms. These symptoms included oppositional defiant behavior, conduct problems, school performance difficulties, and somatic complaints (Nurcombe, 1994).

Carlson and Cantwell (1980) used clinical interviews and found that depressed mood and problems with sleeping, eating, and low activity level were present in children with depression but were frequently expressed as irritable symptoms rather than sadness. This landmark study disputes the second hypothesis that Cantwell (1983) presented and provides some confirmation for the fourth hypothesis. DSM-IV (American Psychiatric Association, 1994) now allows irritable mood to be substituted for depression as a diagnostic criteria for depression.

The hypothesis that children showed "masked depression" has not been supported in the literature. Hammen and Compas (1994) suggest that the basis for this hypothesis is that childhood depression is rarely seen by itself in children; rather, comorbidity of other disorders (i.e., anxiety and conduct problems) is frequently present and requires the practitioner to more fully evaluate the child's symptoms and behaviors. Several studies have also found concordance between depression and anxiety, especially school refusal and separation anxiety, substance abuse, uncomplicated bereavement, and conduct disorder (Bernstein, 1991; deMesquita, & Gilliam, 1994; Gittelman-Klein & Klein, 1973; Kovacs, Feinberg, Crouse-Novack, Paulauskas, & Finkelstein, 1984; Puig-Antich & Rabinovich, 1986). Similarly, Nurcombe (1994) suggests that many emotionally disturbed children are polysymptomatic and frequently are in less than optimal living arrangements. Thus, the rating scale or interview used or the bias that is brought to the assessment may determine the resulting diagnosis.

A 30-year study of childhood depression found that depressive symptoms are quite common in children and appear to be a good but nonspecific indicator of psychological distress and disturbance (Harrington, Rutter, & Fombonne, 1996). Moreover, this wide-ranging epidemiological study found that depression is quite heterogeneous in children and varies depending on the age of the child and severity of its ex-

pression. These authors concluded that some types of depression continue throughout life while others resolve with the developmental crisis passing.

## PSYCHOSOCIAL ISSUES

A number of investigators have suggested that in order to understand and appropriately diagnose depression, one must examine the psychosocial and developmental context in which it occurs (Cicchetti, Gaiban, & Barnett, 1991; Cicchetti & Schneider-Rosen, 1978; Sroufe & Rutter, 1984). In this view, experiences are a sum total of the child's temperament, learned coping skills, biological heritage, and environmental experiences. Children who are unable to assimilate new experiences into their existing cognitive structures, or those who are inflexible in their ability to change with environmental demands, may well show depressive symptomatology. Others suggest that attachment is an important issue to understand in regard to depression (Cicchetti & Schneider-Rosen, 1978; Cummings & Cicchetti, 1990). A disruption in early attachment may well be linked to later depressive symptoms due to difficulty with interpersonal relationships (Kobak, Sudler, & Gamble, 1991; Kopp, 1989; Nurcombe, 1994).

## DEVELOPMENTAL ISSUES IN THE ASSESSMENT OF CHILDHOOD DEPRESSION

A study which compiled data from adult and child samples found that the symptoms of depressed mood, decreased concentration, sleep disturbance, and suicidal ideation were seen across the preschool to adult samples (Carlson & Kashani, 1988). There were changes however, in the presentation of depressive symptoms dependent on age. For example, a sad appearance, low self-esteem, somatization, and hallucinations decreased in frequency with age while sadness, hopelessness, lethargy, and delusions appeared to increase with age. The conclusion from this study was that the presentation of childhood depression appears to change with age. A developmental

framework would appear to be most helpful for clinicians assessing depression at various ages. A full exposition of depressive symptoms at various ages is beyond the scope of this chapter. A brief description of current empirical knowledge is presented next.

### Infancy and Early Childhood

Documentation of affective disorders in early childhood is rare in the literature. Bemporad (1994) concluded from a review of studies of early childhood depression that it is a situation-bound reaction rather than a fixed, negative evaluation of the self and others. Few data exist on the occurrence of depression in early childhood because children younger than 7 are not typically included in large-scale community surveys of mental health (Hammen & Rudolph, 1996).

Sadness in early childhood, and particularly infancy, is often associated with disruptions in the infant-caregiver bond (Trad, 1994; Zero to Three/National Center for Infants, Toddlers, and Families, 1994). If a particularly threatening event occurs, the infant's fragile regulatory capacity may be disrupted. Because an infant's experiences are limited, great significance may be placed on single events, causing a global interpretation of events, and negative events may be attributed to global loss of control. Repeated experiences of loss of control may result in disengagement from the environment as a type of coping strategy and may present as a state of withdrawal indicative of a depressive state (Trad, 1994).

Dawson (1994) and colleagues (Dawson et al., 1999) studied depressed teenage mothers with 11- to 17-month-old infants. Slowing of brain waves, particularly in the left frontal region, was found in both mothers and infants. No such slowing was found in teenage mothers who were not depressed or in their babies. Dawson and colleagues found that infants of depressed mothers exhibited less brain activity in the left frontal region, a region associated with approach-related emotions such as happiness, interest, and anger, relative to levels of brain activity in the right frontal region, an area associated with withdrawal-related emotions such as sadness and disgust. This pattern was demonstrated during interactions

with the mother, as well as with a familiar experimenter, suggesting that these responses may generalize to a variety of situations rather than being limited to interactions with a depressed mother. It could be hypothesized that the attachment in the infants with depressed mothers was less than optimal and that the situation resulted in brain activity changes consistent between mother and infant. Such changes at an early stage of development may well set the child up for later adjustment difficulties. In this manner, consistent with theories of Sroufe and Rutter (1984), early experiences interacting with biology may predispose a child to later psychological difficulties. In an assessment of childhood depression, an examination of the child's living circumstances as well as an in-depth interview can shed light as to the underpinnings of the child's distress as well as provide direction for intervention.

It has been noted that infants of depressed mothers often "mirror" the behaviors of their depressed mothers (Field, 1984). Radke-Yarrow, Cummings, Kuczynski, and Chapman (1985) found that twice as many children of parents with major depression had insecure attachments as compared to those with clinically normal parents. It remains to be seen, however, how physiological and behavioral contributions influence each other in determining how infant depression is transmitted from parent to child (Dawson, 1994). Depressive symptoms in infants have also been attributed to early and extended stressful events, such as hospitalizations (Trad, 1994), abuse and neglect (Barnett, Manly, & Cicchetti, 1991), and grief from loss of parents through divorce or death (Zero to Three/National Center for Infants, Toddlers, and Families, 1994).

The Zero to Three/National Center for Infants, Toddlers, and Families (1994) diagnostic manual is designed to provide classifications specifically for infants and toddlers, although there are few data on the reliability and validity of the instrument (Lyons-Ruth, Zeanah, & Benoit, 1996). The Zero to Three assessment tool for depression in infancy and early childhood requires the presence of patterns such as depressed or irritable mood, less interest and/or pleasure in developmentally appropriate activi-

ties, and withdrawal from social interactions or an increase in whining.

### Preschoolers and Early-Elementary-Age Children

The examination of depression in this population has lagged far behind studies of adolescent depression (Kashani, Allan, Beck, Bledsoe, & Reid, 1997). The lack of studies for this age group is understandable as children this age are limited in their ability to conceptualize and verbally express their feelings of distress (Kashani & Carlson, 1987). Studies of depression in preschoolers indicate that the incidence rate is rare (Stark, Sander, Yancy, Bronik, & Hoke, 2000). Kashani and Ray (1983) proposed that a disorder with such a low incidence rate in this age group would require extremely large samples to detect its presence. The existence of depression was found to be approximately 1% of children in regular preschools using teacher and parent measures, as well as child interviews (Kashani, Holcomb, & Orvaschel, 1986; Kashani et al., 1997).

Notable contributions to preschool depressive symptoms include experiencing significantly stressful events (Kashani et al., 1986), being subjected to abuse and/or neglect (Kashani & Carlson, 1987), and having parents who are themselves depressed (Lyman & Hembree-Kigin, 1994). Due to the immaturity of cognitive and social development in young children, the expression of depression may be qualitatively different from that exhibited in older children (Bemporad, 1994). Preschoolers and early-elementary-age children with major depression often express somatic complaints and exhibit aggressive behaviors (Kashani et al., 1986, 1997; Kashani & Carlson, 1987) that decrease with age (Carlson & Kashani, 1988). Depressed children in this age range are unlikely to report their sadness and hopelessness but are likely to exhibit a depressed appearance (Hammen & Rudolph, 1996).

Carlson and Kashani (1988) suggested that different symptoms have different meaning, depending on developmental stage, but that the basic phenomenology of depression is shared across age groups. Early-onset depression may represent the most

serious and chronic form of depression (Kovacs, 1996). Depression in early childhood can be particularly threatening due to the potentially damaging impairment that may occur during critical development periods (Hammen & Rudolph, 1996).

There is a dearth of reliable and valid instruments available for assessing depression in preschool and early-elementary-age children (Kashani & Carlson, 1987; Lyman & Hembree-Kigin, 1994). Behavior rating scales from parents and teachers are often used in addition to or in lieu of child interviews (Lyman & Hembree-Kigin, 1994). Parents sometimes underreport their preschoolers' depressive symptoms, possibly due to their fears that it might reflect poorly on their parenting skills (Kashani et al., 1986), or possibly because they do not fully understand the link between the behaviors they have observed and the diagnosis of depression in this age group.

Researchers studying depression in preschool and early-elementary-age children have cited the limitations of not having reliable assessment tools (Kashani & Carlson, 1987) and have noted that questions remain as to whether accurate assessment of depressive disorders for this age group exist (Kashani et al., 1997; Puura, Tamminen, Almqvist, & Kresanov, 1997). Difficulties remain in deciding how to weigh different sources of information (Kashani et al., 1997). A few instruments have been standardized for this age group. The Children's Affective Rating Scale (CARS; McKnew, Cytryn, Efron, Gershon, & Bunney, 1979) is based on interviews with children and has been standardized for use with children as young as age 5. Other parent-report measures of psychopathology that index depression include the Personality Inventory for Children-2 (Wirt, Lachar, Seat, & Broen, 2001), which is standardized for use with children as young as 3, and the Child Behavior Checklist (CBCL; Achenbach & Edelbrock, 1983), which has been standardized for children as young as 2.

### Late Elementary Age and Adolescence

The bulk of the assessment tools for diagnosis of depression are meant for this age group and are described in the following sections of this chapter. Emerging evidence

indicates that early expression of childhood depression is likely a more severe form of depression and extends into adolescence and adulthood (Garland & Weiss, 1995). Depression in adolescence may vary depending on the situation and severity. Lewinsohn, Roberts, Seeley, and Rogde (1994) found that approximately 50% of adolescents diagnosed with depression had recovered following 8 weeks of treatment with another 25% responding with additional treatment. The remaining 25% had a more severe form of the disorder and a history of childhood depression. Garland and Weiss (1995) suggest that the expression of depression may be bimodal; that is, adolescent onset may be milder and quicker to recover whereas childhood onset is more severe and has a poorer treatment outcome.

Depression is more common in adolescence and late childhood and somewhat easier to assess than at early ages. Findings of more externalizing behaviors and guilt in children compared to adolescents are an important developmental marker (Weiss, Weisz, Politano, & Carey, 1992). Furthermore, the recognition that adolescents are more likely to show affective symptoms and a concern about the future is important not only for assessment but also for appropriate treatment.

Depressed mood has been found to be more predictive of later difficulties for females than for males (Kandel & Davies, 1986). Moreover, daughters of mothers who are depressed appear to have lower self-esteem at middle school and are diagnosed themselves as depressed by late adolescence (Miller, Warner, Wickramaratne, & Weissman, 1999). An increase in maternal criticism and less encouragement appears to be related to later expression of depression in these daughters (Garber, Braafladt, & Zeman, 1991).

Symptoms shown by middle school children and adolescents include restlessness, flight to or from people, and problem behaviors, whereas those shown by children ages 6 to 12 include headache, abdominal pain and enuresis with sad affect, sleep problems, and irritability emerging over time (Kovacs & Paulausakas, 1984; Mullins, Siegel, & Hodges, 1985). Moreover, for both age ranges difficulty is present in tolerating routine and there is a need for

constant stimulation, possibly as an attempt to ward off unpleasant thoughts. Children in these age ranges have also been found to become overly involved with their pets and in turn to become increasingly isolated. Temper tantrums, running away, stealing, truancy, rebelliousness, and antisocial acts are frequently found in the histories of many in this age bracket. Adolescents ages 15–20 frequently engage in substance abuse, promiscuity, suicidal ideation, and alienation in conjunction with a diagnosis of depression.

To put the construct of depression into a theoretical framework, a discussion of the foremost models for our understanding of depression is appropriate. It is important to note that many of these models have been adapted from adult data and their application to childhood depression is unknown at this time. The main models to be discussed are cognitive-behavioral, attributional style, and family.

## PSYCHOLOGICAL MODELS OF DEPRESSION

### Cognitive and Behavioral Models

The cognitive-behavioral model of depression attempts to combine the demonstrated effectiveness of behavior modification with the theories regarding the cognitive processes of the individual. It acknowledges the individual as playing an integral part in the determination of behavior, as well as the part that the environment plays in shaping that behavior. As a result, both cognitive and behavioral variables are seen as important to assess. Kendall and Braswell (1982) suggest that it is important not only to assess the child's observed behavior but also to assess cognitive processes and their effect on behavior in both its maintenance and its occurrence. It would appear that this suggestion is particularly important in the assessment of depression in children, because much of depression is subjective and may not be readily observable.

### Behavioral Models

Behavioral models of depression suggest that depression is a result of inadequate or

insufficient reinforcers, which can be the result of lack of skill in obtaining reinforcers, lack of reinforcers in the environment for the individual, or inability to use reinforcers (Kovacs & Beck, 1977). Relatively little attention is paid to the cognitions of the depressed person in this model. According to Lewinsohn's (1974) model, depressed persons explain their behavior to themselves following the behavior. The depressed persons are unable to identify or use contingent reinforcement in the environment, and as a result they experience low rates of response-contingent positive reinforcement. Lewinsohn (1975) also hypothesized that social skills deficits may contribute to depression through the loss of social reinforcement, which in turn may disrupt interpersonal relationships. Therefore, depressive behaviors may lead to a greater tendency to avoid or withdraw from unpleasant situations, and when combined with potential rejection due to social difficulties, this may in turn maintain or heighten depressed affect.

### Cognitive Models

Beck's (1967, 1976) theory emphasizes the role of cognitions in depression. He suggests that in depression, individuals structure their experience on the basis of cognitions that are often faulty and distorted. These cognitions in turn predispose the individual to misrepresent external events in such a way that loss and deprivation appear most evident in their interactions with the world. These distorted cognitions continue, despite independent or disconfirming evidence to the contrary.

Beck further postulates the following triad of depressive symptoms based on the following faulty cognitions:

1. *View of self.* In cognitive schemas that relate to self-assessment, the self is pictured as unworthy or inadequate.
2. *View of the world.* The world is seen as making exorbitant demands and as being full of insurmountable obstacles.
3. *View of the future.* The person sees the difficulties continuing with no end in sight, which in turn engenders a hopeless attitude.

These cognitions are validated in the selective attention of the depressed individual.

Hammen and Krantz (1976) found that the degree of improvement in depressive episodes over time was positively correlated with concurrent decreases in depressive distortions and more positive expectations about the future.

Current cognitive theory assumes that maladaptive self-schema promotes errors in information processing, which, in turn, translates to the establishment of a negatively biased distortion in active information processing (Stark et al., 2000). Earlier studies have hypothesized that depressed children may experience a deficit in information processing (Schwartz, Friedman, Lindsay, & Narrol, 1982). More recent findings, however, indicate that depressed children suffer from *distortions* of information processing when evaluating situations related to the self, rather than a *deficit* in information processing (Kendall, Stark, & Adam, 1990). Taking a different perspective, Alloy and Abramson (1979) suggested that negatively biased information processing observed in depressed students could be a true reflection of reality rather than a distortion in processing, and that nondepressed students may be overly optimistic about their abilities and more motivated compared to their depressed peers. Similarly, Garber and colleagues (1991) found that depressed mothers exhibited reduced efficacy expectations compared to their peers when performing a collaborative task with their children, but their negative expectancies were actually found to be accurately representative of their poor strategic skills. Thus, prior expectation of success or failure may well shape the resulting interaction between parent and child.

### Attribution Style and Learned Helplessness

The ways in which individuals interpret causal relationships in evaluating positive and negative events has become an important component in the assessment of depressed individuals. The original learned helplessness model (Seligman, 1975) posited that individuals become helpless when they interpret events in their environment as being out of their control. Thus a helpless stance is developed which leads to a decrease in a person's motivation and persistence. Once they believe they are incapable

of influencing outcomes, they may withdraw or give up. Rehm's (1977) self-control model postulated that the depressed individual shows deficits in self-monitoring, self-evaluation, self-attribution, and self-reinforcement behaviors. Attributions are seen as important motivators of behavior, and depressed individuals are seen as making more internal and stable attributions of failure and attributing their success to more external and unstable forces. Abramson, Seligman, and Teasdale (1978) proposed that there are three dimensions to consider when assessing attributional style:

1. *Internal versus external.* Responsibility for events may be placed on the self or may be externally placed.
2. *Stable versus unstable.* Causes may be seen as long lasting or temporary.
3. *Global versus specific.* Factors contributing to events may be interpreted as pervasive or as changing according to situational variables.

It was proposed that individuals who possessed internal, stable, and global explanations for undesirable events would develop a pessimistic style, whereas those who attributed negative events to external, unstable, and specific sources would develop an optimistic style. In addition, attributing external, unstable, and specific attributions to *positive* events is considered to be characteristic of depressive cognitions. Seligman and colleagues (1984) confirmed this pattern in a study with children ages 8–13. Results indicated that children who attributed negative events to internal, stable, and global causes were more likely to report depressive symptoms than were their peers who attributed negative events to external, unstable, and specific causes. Similarly, Sacco and Graves (1984) found that when compared with their nondepressed peers, depressed children showed more negative self-evaluations and more negative attributional cognitive styles, and Kaslow, Brown, and Mee (1994) have suggested that depressed children may perceive a lack of control when important events of their lives are concerned. Studies have suggested that the ways that individuals interpret the causes of events remain fairly stable over time (Kaslow et al., 1994).

Recent research in the area of attributional styles and learned helplessness has focused on defining subtypes of depression and heterogeneity of cognitive patterns in depressed individuals. Abramson, Metalsky, and Alloy (1989) further refined the learned helplessness theory to propose a subtype of depression called hopelessness depression, which may result when someone who already possesses a depressogenic attributional style and pessimistic expectations is exposed to negative or stressful events. Asarnow and Bates (1988) found that children with remitting depression scored similarly to nondepressed children on measures of cognitive patterns and attributional styles. This finding suggests that there may be a difference in cognitive patterns between children with depression that resolves and those with a chronic disorder.

Alloy, Hartlage, and Abramson (1988) have also suggested a need to differentiate between attributions for specific events and a pervasive attributional style. Similarly, Weisz, Sweeney, Proffitt, and Carr (1993) suggested distinguishing between subtypes of personal helplessness and universal helplessness forms of depression. They found that both perceived incompetence and perceived noncontingency were strongly related to children's depression on Children's Depression Inventory scores of elementary school children.

### Family Theories

As with any childhood disorder, depression in children cannot be comprehensively assessed without taking into consideration the effects of family environment and quality of interaction. The way parents model and coach emotion regulation strategies and contribute to the family environment in general helps to determine how children learn to deal with negative affect (Stark et al., 2000). Interesting descriptions of family characteristics of depressed children are beginning to take shape, including reports of giving affection contingent upon high standards of achievement (Cole & Kaslow, 1988; Cole & Rehm, 1986), descriptions of lower levels of family support (McCauley & Meyers, 1992), increased levels of family discord (Kaslow, Deering & Racusin, 1994), and engagement in fewer pleasant

activities than for families of nondepressed children (Stark et al., 2000).

When Asarnow, Tompson, Hamilton, Goldstein, and Guthrie (1994) examined parents' descriptions of their children, they found that parents of depressed children exhibited higher levels of criticism and emotional overinvolvement as compared to parents of nondepressed children. They hypothesized that excessive criticism may in fact reinforce a depressed child's negative feelings, helping to maintain the depressive disorder. Puig-Antich and colleagues (1985) observed poorer communication, decreased warmth, and increased hostility in interactions of mothers and their clinically depressed 6–12-year-olds, compared to nondepressed psychiatric and normal control groups. They found the mother–child relationship in dyads of depressed children to be cooler and more distant. Similarly, Cole and Rehm (1986) found that parents of depressed children exhibited higher standards for their children and rewarded them at lower rates compared to parents of nondepressed parents performing a collaborative family task. Interestingly, they also found that the children in these depressed dyads mirrored their mothers' response patterns of withholding praise until high levels of achievement were reached when evaluating themselves.

Parental depression also has a strong influence on parenting styles. Garber and colleagues (1991) found that the overall strategies of depressed mothers exhibited in a collaborative task with their children were significantly poorer than the strategies of dyads with nondepressed mothers. While each of these findings provide valuable insights about the environments of depressed children, it is important to remember the bidirectional nature of interpersonal relationships. It is therefore difficult to determine if certain environmental variables contribute to a child's depression, if a child's depression influences the quality of the environment, or more likely, if they are mutually influential across time.

### Summary

Thus, childhood depression is an evolving field and has changed dramatically since the 1970s when it was not believed to exist.

However, difficulties remain in our understanding of childhood depression, and, unfortunately, these problems have an impact on our ability to evaluate children with depression. The issue of comorbidity of depression is especially salient for our understanding of depression. Furthermore, the developmental progression or differences in expression of depression affect not only our ability to treat depression but also the initial difficulty with diagnosis. Emerging evidence indicates that depression may be present in early childhood, and that with this earlier expression of the symptoms there is an increase in the severity and duration of the disorder. Few studies have been conducted longitudinally to examine this issue in more detail. Methodological problems continue to plague our understanding of childhood depression and cloud our ability to evaluate children most appropriately. Moreover, models of depression are not often incorporated into the assessment of depression and many instruments are atheoretically based. The models that do exist are developed mainly from adult data and little work has been conducted to assist our understanding in how they translate into childhood. This chapter seeks to provide a brief overview of these issues with the main emphasis on the assessment tools available for an appropriate diagnosis of depression. A secondary goal is to provide recommendations for the clinical use of these instruments in mental health centers and schools.

### ISSUES IN ASSESSMENT

A multi-instrument, multi-informant method for assessing childhood depression provides the broad base of information required in developing a careful diagnosis. The optimum assessment needs to include information from parents, teachers, and the child. This information should include behavioral data (behavior rating scales, observations, etc.) as well as interviews and, as necessary, projective testing. The scope of this chapter does not include projective testing, and interested readers are referred to Chapter 7 (in this volume) on the Rorschach and the Thematic Apperception Test. Di Giuseppe (1981) suggests three aspects for assessment.



First, the behaviors evidenced by the child need to be evaluated. This step requires an assessment of the frequency, duration, and severity of these behaviors. Moreover, it is important to identify antecedent as well as consequent events surrounding such behavior. Second, the child's cognitions are assessed. It is important to evaluate not only what the child is thinking while the interviewer is working with him or her but also what was being thought during the occurrence of the behavior. Finally, an assessment of the child's ability to problem-solve is important; this step is particularly important for the development of intervention strategies. In all parts of this assessment it is particularly important to assess the child's developmental stage. As indicated in a previous section of this chapter, the expression of depression may differ depending on the age of the child.

It is also important to assess who "owns" the problem. Most young children are referred for assessment by their parent or teachers—few self-refer. Frequently in my practice, when I ask a child why he or she is at my office, the response is because the parent wanted the child to come or that there are concerns about school. Over 25 years of practice I have had only one instance in which a child has said, "Because I am sad." Thus, it is particularly important to use various methods for assessing childhood depression that include behavioral as well as cognitive variables.

The assessment techniques reviewed in the following section include self-report scales, clinical interviews, peer nomination inventories, behavior rating scales, assessment of cognitions, cognitive style, and thought-sampling procedures. Before beginning a discussion of instruments and techniques, it is important to note the obvious but often neglected proposition that children are a special population and that results, conclusions, and measures appropriate to adults may not be appropriate for children. Moreover, the child needs to be an integral part of the assessment and an active participant. Assessment with children, and with adults for that matter, needs to be a problem-solving process in which working hypotheses are advanced and checked out. Moreover, as advanced in the first half of this chapter, a transactional approach that

takes into consideration environmental, personal, and biological influences on development is crucial for an ecological assessment of the child's needs. Each of the following instruments, taken by themselves, is not sufficient to arrive at a diagnosis of depression in childhood and adolescence. Rather, the ability of the clinician to put all the data together into an integrated form is the most crucial task required of us.

### ADDITIONAL CONSIDERATIONS WHEN ASSESSING CHILDREN

The extent to which children are able or willing to report on their depressive symptoms varies greatly. Children who are depressed may show difficulties in paying attention and following directions on measures. Thus, procedures should be adapted to the child and their attentional abilities (Semrud-Clikeman & Hynd, 1991). In a study that examined the use of self-report scales with children (Birleson, Hudson, Buchanan & Wolff, 1987), it was noted that the establishment of rapport was likely to increase the validity of the response, as children, particularly depressed children, may worry about revealing secrets and making mistakes. Furthermore, a child may show depression in one setting but not another; therefore, a clinician's task is not only to assess the child but to assess the interaction between the child and adults in the child's different settings.

It is important to remember that the capacity of a child to understand an item or describe an experience is largely influenced by developmental and educational level. Younger and less cognitively developed children are less abstract and have more limited short-term memory spans, making longer questions difficult to answer. Current measures of depression ask subtle questions about symptom duration and intensity; children may not be able to describe their symptoms in such detail (Kazdin, 1990; Kazdin & Petti, 1982). Young children have shown more difficulty reporting depression and tend to underestimate it as well (Birleson, Hudson, Buchanan, & Wolff, 1987). An examination of the relationship between reliability and validity of child self-report to different developmental levels as to the

dimensions of time perspective, emotion differentiation, self and social awareness is needed (Hodges, McKnew, Burbach & Roebuck, 1987).

### Correspondence of Measures

To what extent do measures of depression correspond with each other? Concordance among informants is often poor for an overall diagnosis of depression. Specifically, correspondence between child and parent/teacher/peer report has been as low as .00-.30 (Kazdin, 1988). In another study, informants showed significant agreement on clusters of behavior symptoms for depression, although there was some differential patterns for self-reports between boys and girls (Epkins & Meyers, 1994). Children generally report fewer symptoms than do parents (Kazdin, 1988), with the exception of more frequent reporting of decreased energy and fatigue by both informants (Ivens & Rehm, 1988). Mothers have been shown to report more symptoms in children than fathers or children themselves. At the item level, interrater agreement is extremely high for certain symptoms and extremely low for others. In a study looking at measure items, results showed that self-report, peer report, and teacher report generally measure unrelated constructs. Second-order analysis, however, showed that the global construct of depression is being measured by items from all three instruments (Crowley, Worchel, & Ash, 1992).

It may be the case that measures designed for different informants are predictors of different criteria. Child self-reports generally measure internal experience, whereas parent reports measure social behavior and affect-related experience. Peer-teacher reports measure popularity and academics (Kazdin, 1988). Although measures completed by different informants do not correlate well, each can still reliably predict different external criteria relevant to a diagnosis of depression. Therefore, despite discrepancies among measures, the importance of obtaining reports from various sources is required to adequately assess depression. One study, for example, points out that one-third of all diagnoses for depression would have been missed from the sam-

ple if only one source had been interviewed (Hodges, 1990).

### Issues of Culture and Ethnicity

Culture and ethnicity can affect the diagnostic utility of assessment measures in a variety of ways. Gibbs and Huang (1989) discuss the subtle differences in nonverbal communication, eye contact, affective expression, and value judgments that may influence a clinician's psychosocial assessment of children from a different ethnic background. For example, affective expression in children is more animated or reserved in certain cultures; therefore, culturally appropriate norms of expressing affect should not be confused with lack of affect, depressed affect, or disrespect. Direct eye contact between children and adults is discouraged in some ethnic groups, so looking away should not always be interpreted as a sign of evasiveness. Because each ethnicity may place different value on self-esteem, interpersonal competence, emotion regulation, and the definition of mental illness itself, it is important for clinicians to familiarize themselves with these values when necessary, so that they do not confound a diagnosis of depression. Also, historical difficulties between ethnic groups may make it difficult for minority clients to trust a therapist from a different ethnic or socioeconomic background. Finally, low-income children may suffer from poor diet or home conditions, affecting energy level and sleep (Gibbs & Huang, 1989), which may be misread as symptoms of depression.

Differences between ethnic backgrounds were examined by Ramirez (1989) specific to the assessment of Mexican American children. Ramirez states that the clinician should be aware that it is common for Mexican Americans to disclose personal information slowly. During assessment interviews, it is possible that parents may feel that it is impolite to disagree, because of a cultural emphasis on cooperation. Also, when addressing parents, the therapist should first address questions to the father, then to the mother, then to other adults, in respect of traditional family age and sex roles. A neutral opening statement that allows the family to choose its own spokesperson is also appropriate.

Possible multicultural variations in the assessment of depression using self-report scales are just beginning to be studied (Allen & Majidi-Ahi, 1989). Roberts, Chen, and Solovitz (1995) found few differences among Anglo, African, and Mexican American adolescents using the CBCL and a structured interview (Diagnostic Interview for Children 2.1). In studies using self-reported feelings of depression and suicidality, the Mexican American subjects were found to evidence a higher rate of depression and suicidal thoughts with the highest prevalence rates found for Mexican American females (Roberts, 1994; Roberts & Chen, 1995; Roberts, Chen, & Roberts, 1997; Roberts, Roberts, & Chen, 1997). Similarly, Mexican American adolescents have been found to be at higher risk for depression than Asian American adolescents, with females and those adolescents from lower socioeconomic groups scoring the highest (Roberts, Roberts, & Chen, 1997). Similarly, Takeuchi, Roberts, and Suzuki (1994) found that Hispanic youths scored higher on depressive symptomatology than did Japanese American adolescents, followed by Caucasians. Girls in all three ethnic groups were found to show more depressive symptoms than boys. Comparing boys across ethnicities, the Japanese American boys scored the highest, followed by the Hispanic group.

Thus, a number of issues are important when assessing depression, including age, gender, and ethnic status. It may also be important to be aware of socioeconomic status given the emerging evidence that this variable may be a mediating influence on the expression of depression no matter what the ethnic background. It may well be that the expression of depression will vary between cultures as to what is accepted and what is not. For example, a young Asian American boy was referred for assessment because of seemingly unprovoked anger. When asked about his anger, he was unwilling to discuss these feelings or his behavior, although he admitted deep embarrassment about what he had done. When an Asian American therapist was brought into the school for a consultation, he reported that culturally it was not acceptable to show strong uncontrolled anger and that the boy was becoming quiet when first provoked. However, as

his anger built, he would become less and less able to maintain his behavioral control and the result would be an extreme overreaction to a minor situation. Assisting the understanding of the behavior within a cultural context helped in developing a plan to assist this young boy. It is not unlikely that similar cultural differences exist in the expression of depression.

## SELF-REPORT SCALES

In many aspects, self-report scales are the most frequently used instruments in hospitals, clinics, and schools. Kerr, Hoier, and Versi (1987) evaluated the empirical research assessing childhood depression and found that the most commonly used source of data was self-reports with an increase in the use of ratings provided by peers. Willcutt, Hartung, Lahey, Loney, and Pelham (1999) found that behavioral ratings add substantial information when used as a supplement to parent and teacher reports. The following section evaluates the most commonly used self-report scales for depression.

### Children's Depression Inventory

The Children's Depression Inventory (CDI; Kovacs, 1992) evolved from the Beck Depression Inventory (BDI). The CDI contains 27 multiple-choice items that cover an array of overt depressive symptoms, such as sadness, anhedonia, suicidal ideation, and sleep/appetite disturbance. Each CDI item contains three choices; each choice is rated on a 0–2 scale, with a rating of 2 being the most severe. The child rates the statement that best describes his or her feelings in the previous 2 weeks. The scale can be administered to children ages 7–17. Cutoff scores for various levels of severity have been developed. There are five subscales presented in the manual, including negative mood, interpersonal problems, ineffectiveness, anhedonia, and negative self-esteem. These subscales were reported in the manual to have been derived from the normative data.

Several studies have found internal consistency in the .80s (Cole & Carpentieri, 1990; Crowley et al., 1992; Kovacs, 1981), moderate test–retest reliability (Nelson &

Politano, 1990; Weiss et al., 1991) with variances in test-retest reliability ascribed to differences in time between assessments (Reynolds, 1994; Reynolds & Graves, 1988). Factor analysis has found two to three factors on the CDI. Hodges and Craighead (1990) found higher scores for depressed children on the scales measuring dysphoric mood, loss of personal and social interest, and low self-worth. A study contrasting clinical samples with a control sample found two factors in the clinical sample of psychiatric inpatients (depressive affect and oppositional behavior) and three factors for the control sample (depressive affect, oppositional behavior, and personal adjustment; Carey, Faulstich, Gresham, Ruggiero, & Enyart, 1987). Weiss and colleagues (1991) found that factors differed between children and adolescents, suggesting a developmental effect on this measure.

Previous research has indicated that the CDI is more appropriate as a screening instrument than as a diagnostic tool. Carey and colleagues (1987) found that the CDI was able to discriminate between 70.4% and 71.6% in a control population of nonreferred children. It was unable to discriminate between depressed and the conduct-disordered clinical samples. Most studies indicate that the CDI is a good general measure of emotional distress but that it is unable to discriminate between conduct-disordered and affectively disordered groups (Nelson, Politano, Finch, Wendel, & Mayhall, 1987; Saylor, Finch, Baskin, et al., 1984; Saylor, Finch, Spirito, & Bennett, 1984). The CDI has been found to correlate poorly with parent and teacher ratings of depression (Doerfler, Feller, Rowilson, & Raley, 1988).

The CDI has also been used for teacher rating of depression. Ines and Sacco (1992) compared the ratings of teachers and those of children using the CDI. There was moderate correspondence between the teacher and child ratings with the most concordance found for school-related behaviors.

The lack of a manual for this instrument was a major drawback in the past; however, a manual has recently been published. Normative data are now available for the CDI. There are some difficulties with the manual. Reynolds (1994) points out that the data for children in grades 2-8 is provided while norms are provided for children up to age

17. Ethnicity is not fully reported in the manual. The main drawback to the data presented in the manual is that there is limited support for the clinical interpretation of the subscales. Low internal consistency reliabilities are reported as well as small numbers of items loading on each of the scales.

Thus, although the CDI is the most commonly used instrument for diagnosing depression, empirical support for such use is mixed at best. Results vary depending on the type of groups used for contrast as well as the level of the cutoff scores (Reynolds, 1994). The most commonly recommended use of the CDI is for the screening of referred children for assessment and interpretation of elevated scales as signs of psychological distress, rather than to support a diagnosis of depression. Gender differences have also been found, with the CDI showing more accuracy with females than with males (Berard, Boormeester, Hartman, & Rust, 1997).

### Children's Depression Scale

The Children's Depression Scale (CDS) was developed by Lang and Tisher (1978). It is recommended for children ages 9-16 and has 66 items with 48 items focusing on depressive symptoms and reactions and 18 on positive experiences. The CDS also uses a somewhat different format from the typical paper-and-pencil rating scale. The child is asked to sort statements on cards into one of five boxes, ranging from "very wrong" to "very right." There are alternative forms so that both children and adults can rate the behavior. The subscales themselves were drawn from the literature on depressive symptomatology. The subscales consist of symptoms including pleasure, guilt, affect, social difficulties, thoughts of sickness and death, and low self-esteem. Responses are tallied on a 1-5 scale, with low scores indicating the presence of depression. Factor analysis has found one general factor so the subscales are not individually reported (Kazdin, 1981).

Psychometric characteristics of the test have been found to be adequate. Test-retest reliability has been found to be at .74 for a 1-week interval (Tisher, Lang-Takac, & Lang, 1992). Internal consistency reliability coefficients are high and range from .90 for total depression (Bath & Middleton, 1985;

Knight, Hensley, & Waters, 1988) to .79 for positive affect (Kazdin, 1987). Correlations between the CDS and CDI have been found to be in the moderate range ( $r = .48$  to  $.84$ ; Kazdin, 1987; Knight et al., 1988; Rotundo & Hensley, 1985). The concordance between parent and child ratings is very poor ( $r = .04$ ; Kazdin, 1987).

The CDS has been found to discriminate between depressed and nondepressed children for the child form but not for the parent form (Fine, Moretti, Haley, & Marriage, 1984). The CDS shows promise for diagnosis as a self-report instrument. The parent form should not be used given the findings of low concordance. The main drawback to the CDS is the cumbersome administration and the limited empirical validation of this instrument (Fristad, Emery, & Beck, 1997).

### Hopelessness Scale

The Hopelessness Scale was developed by Kazdin, French, Unis, Esveltd-Dawson, and Sherick (1983). It was modeled after the scales developed for adults by Beck and is designed for children ages 8–13 years. The scale consists of 17 true-false items; it is scored so that the higher the score, the greater the assessed amount of hopelessness or negative view of the future. Acceptable internal consistency ( $r = .70$ ) was found by the authors. Concurrent validity was assessed using performance on the CDI, the Bellevue Depression Inventory, and a depression checklist developed from Weinberg research criteria. All these measures were positively correlated with the Hopelessness Scale at a moderate level. Kazdin, Rodgers, and Colbus (1986) found that the Hopelessness Scale was positively correlated with depression and negatively correlated with self-esteem. The scale was also found to relate to diminished social behavior, especially when children with high hopelessness scores were compared with children with low hopelessness scores. Two factors were identified in the Kazdin and colleagues study; these were that the future would be negative and the child would not be able to alter this fact.

### Depression Self-Rating Scale

The Depression Self-Rating Scale (DSRS) was developed by Birlson (1981) on the

basis of a literature search for the most common depressive symptoms of childhood depression. The scale is designed for children ages 7–13. It consists of 18 items rated on a 0–2 scale. Birlson found test-retest reliability to be .80 and split-half reliability to be .86 with one major factor identified. He used a small sample of 20 children from a psychiatric residential school and 19 from a local school. Asarnow and Carlson (1985) modified the DSRS by including three items from the Hopelessness Scale and two items assessing the child's capacity for empathy.

Criterion validity of the DSRS was established with the finding that the previously diagnosed children with depression scored significantly higher on the DSRS than did the nondepressed children. A cutoff score of 17 was found to correctly classify 77% of the depressed children. The DSRS scores have been found to correlate significantly with scores on the CDI. It has been found to show good concurrent validity particularly with psychiatric inpatients (Asarnow & Carlson, 1985; Beck, Carlson, Russell, & Brownfield, 1987; Birlson et al., 1987; Ivarsson, Lidberg, & Gillberg, 1994). The DSRS has not been as carefully studied as the CDI, and its usefulness should be evaluated as more research is provided.

### Reynolds Child Depression Scale

The Reynolds Child Depression Scale (Reynolds, 1989) is designed for use with children ages 8–13 years. It consists of 30 items with 29 using a 4-point response format ranging from almost never to all the time. The final item is a set of faces ranging from sad to happy—the child places an  $\times$  over the face most descriptive of his or her feelings that day. A strength of the Reynolds scale is the manual, which provides normative data for over 1,600 children of varying economic and ethnic backgrounds. Internal consistency coefficients reported in the manual are at .90 with test-retest reliability reported at .85 (Reynolds & Graves, 1989). Correlations between the Reynolds and the CDI range from .7 to .79 (Stark, Reynolds, & Kaslow, 1987) and with a structured clinical interview at .76 (Reynolds, 1989). The Reynolds has also been found to be sensitive to treatment outcome (Rawson & Tabb, 1993; Stark et al., 1987). There are few data

as to the ability of the Reynolds to discriminate depressed from nondepressed subjects. As such, it is unknown whether the measure is sensitive to general emotional distress or specific to depression. Further assessment of this issue is warranted.

### Children's Depression Rating Scale—Revised

The Children's Depression Rating Scale—Revised (CDRS-R) was developed by Poznanski, Cook, and Carroll (1979) to assess depression in children ages 6–12. It is a clinician-rated scale that provides a summed score from the items to indicate the severity of the depression. The scale was adapted from the Hamilton Depression Rating Scale for adults. There are 12 items that cover an array of behaviors, including communication, mood disturbance, physical complaints, and vegetative signs. The CDRS-R is completed by pooling information from parents, child, school, and medical personnel. The interview has a multiple-choice format with items scaled from 0 to 7 (“unable to rate” to “severe”) in the direction of increasing pathology. The summed total ranges between 18 and 118 with 40 being indicative of clinical depression and a score above 60 as severe depression.

Agreement among judges is reported as high ( $r = .96$ ) and acceptable correlations have also been reported between interviews and global clinical ratings of depression (Kovacs, 1981). Test-retest reliability has been reported as .81 with interrater reliability at .86 (Poznanski, 1984). Parent-child concordance has been found to be poor ranging from  $-.01$  to  $.42$  (Mokros, Poznanski, Grossman, & Freeman, 1987). Significant correlations between the CDRS-R and the CDI were found for females but not for males (Shain, Naylor, & Alessi, 1990). The specificity of the CDRS-R is questionable particularly in its ability to discriminate between depression and anxiety (Eason, Finch, Brasted, & Saylor, 1985). The CDRS-R has been found to be helpful in its ability to classify patients as acutely or chronically depressed and may be good for the prediction of rate of improvement (Shain et al., 1990).

The advantages of the CDRS-R are that it is relatively easy to use and to administer.

The reliability is adequate for this instrument but there is little validity information. This measure is frequently used in conjunction with the structured interviews and there is a body of research as to its relationship to these interviews discussed later in this chapter.

### Reynolds Adolescent Depression Scale

The Reynolds Adolescent Depression Scale (RADS; Reynolds, 1986, 1987) is designed for use with adolescents ages 12–18 in grades 7–12. It consists of 30 items and uses a 4-point response format (“almost never” to “most of the time”). The RADS reflects DSM-III (American Psychiatric Association, 1980) criteria for major depression and dysthymia and requires approximately a third-grade reading level. The instrument was designed to evaluate the severity of depression (Reynolds, 1994).

Psychometric properties of the RADS are generally good. Normative information from the manual includes data from more than 2,460 adolescents throughout the United States from an ethnically and geographically diverse sample. Scores range from 30 to 120 with a cutoff of 77 used to define significant depression.

Reliability is reported to be high ranging from .91 to .96 (Schoenert-Reichl, 1994). Internal consistency reliability has been found to be good, ranging from .87 with a sample with mental retardation (Reynolds & Miller, 1985) and .88 with a sample of conduct-disordered adolescents (Nieminen & Matson, 1989). Test-retest reliability has also been found to be good and generally is in the high 70s and low 80s (Reynolds, 1986, 1987). Internal consistency has been found to be .91 at first assessment and .93 for a second assessment (Reynolds & Mazza, 1998).

Validity is found to be adequate with the RADS, correlating strongly with the CDI (Brown, Overholser, Spirito, & Fritz, 1991; Kahn, Kehl, & Jensen, 1987). Higher scores have been found on the RADS in special education populations (Dalley, Bolocofsky, Alcorn, & Baker, 1992; Hagborg, 1992), children of alcoholic parents (Havey & Dodd, 1992), and suicidal adolescents (Brown et al., 1991; King, Raskin, Gdowski, Butkus, & Oipari, 1990). The RADS has also been

found to discriminate from adolescents with major depression and normal controls (Shain et al., 1991). It has been found to be most sensitive for females compared to males (Shain et al., 1990).

Thus, the RADS appears to have the strongest psychometric properties for the diagnosis of depression. The manual is helpful and clearly written. The RADS has also been found to be useful as an outcome measure for treatment efficacy (Hains, 1992). It has been recommended that the standardization sample needs to be expanded to include more than just Caucasian and African American midwesterners to be useful throughout the United States (Davis, 1990).

### Other Self-Report Measures

A number of additional self-report measures are either in press or have limited information as to psychometric properties. The Adolescent Psychopathology Scale (Reynolds, 1999) evaluates psychopathology in adolescents ages 13–19. It has 20 clinical disorder scales, including scales for major depression and dysthymia. The major depression scale consists of 29 items reflecting DSM-IV symptoms and the dysthymia scale consisting of 16 items. Preliminary reports of internal consistency are of .95 for the normal and clinical samples (Reynolds, 1993). Further study with this instrument is needed to determine its utility for the diagnosis of depression.

The Automatic Thoughts Questionnaire for Children (ATQ-C; cited in Stark et al., in press) presents 30 depressive self-statements that the adolescent rates as to frequency of occurrence. There are four choices ranging from “not at all” to “all the time.” Psychometric data were not provided at this time. The instrument looks promising as it provides a measure of thoughts that are frequently seen in depression.

The Self-Report Measure of Family Functioning—Children’s Version (SRMFF-C; Stark, Humphrey, Crook, & Lewis, 1990) is a measure including 65 items that assess family functioning and interaction patterns that contribute to the development of a depressive style of thinking. The SRMFF-C assesses characteristics such as family style, cohesion, conflict, sociability, and organization. It is organized on a 5-point scale rang-

ing from never true to always true. The SRMFF was developed by Bloom (1985) for adults through factor analysis of the most frequently used family functioning measures and revised by Stark and colleagues (1990) for children. There are 15 subscales included. Reliability has been found to be between .50 and .78 for the subscales with acceptable internal consistency. The validity of the SRMFF-C has not been studied, but the validity of the SRMFF has been reported to be good (Bloom & Naar, 1994). This instrument requires additional study to determine its usefulness in various populations.

### TEACHER AND PARENT RATING SCALES

Parent rating scales are generally omnibus scales that do not specifically identify depression but sample a wide variety of behaviors and symptoms. There are basically three main scales used in clinical practice as well as one scale particularly for teachers. Each of these is discussed with the understanding that these measures are not meant to diagnose depression but, rather, to point to important symptoms for further investigation.

#### Personality Inventory for Children

The Personality Inventory for Children—Second Edition (PIC-2; Wirt, Lachar, Seat, & Broan, 2001) is a revision of the PIC and is a parent-completed survey of his or her child’s behavior. There is a depression scale as well as an intellectual and achievement scale. The PIC can be used with children ages 5–19 and consists of a true-false format. The standard form has 275 questions while the brief form has 96 questions. The PIC-2 has 3 validity scales, 9 adjustment scales, and 21 subscales. Although there is no longer a depression scale, there are two scales of interest: psychological discomfort and social withdrawal. These scales measure fear, worry, depression, sleep disturbance, and social isolation. Test-retest reliability is good for this scale, as reported in the manual. Content validity has been described as satisfactory while construct validity is reportedly limited (Sattler, 2002). The PIC-2 has been found to correlate signifi-

cantly with other measures (Wirt et al., 2001).

### Child Behavior Checklist

The Child Behavior Checklist (CBCL; Achenbach & Edelbrock, 1983) relies on parent or teacher report to provide information as to the child's functioning. There are different forms for teacher and parent. The CBCL assesses social competencies as well as childhood problems for ages 2–16. Items are rated on a 3-point scale. Studies have found that scores on the social competency part of the CBCL reliably distinguished between suicidal and depressed children with the suicidal children withdrawing and the depressed children seeking out parent and teacher involvement (Cohen-Sandler, Berman, & King, 1982). The depressive items tap information that can be quite inferential in nature and may require the informant to make judgments based on the child's behavior. For this reason the reliability of the depression scale is lower than desired. This scale also tends to focus on the internal life of the child rather than on environmental stressors or contributions to problematic behaviors.

The teacher form of the CBCL is similar to the parent form and contains 85 out of the 118 items that are the same on both rating scales with an additional 9 with minor word changes. There are no validity scales. Psychometric properties are reported in the manual as adequate. Again, the teacher form is an omnibus measure and has been found to be less amenable to specifying a child's difficulty than is the parent form (Clarizio, 1994). Thus, the CBCL may be better as a overall screening method rather than a diagnostic tool.

### Behavior Assessment System for Children

The Behavior Assessment System for Children (BASC; Reynolds & Kamphaus, 1992) is a multimethod and multidimensional system for evaluating behaviors and self-perceptions of children ages 4–18 years. It measures several aspects of children's behavior and personality in terms of both clinical and adaptive dimensions. The components that make up the BASC system can be used independently, or in any combination.

### Teacher Rating Scales

The Teacher Rating Scales (TRS) measure problem behaviors and adaptive skills in school settings. The TRS is available at three age levels: preschool (4–5), child (6–11), and adolescent (12–18). The behaviors described in each item of the form are rated on a 4-point scale ranging from "never" to "almost always." The TRS generally takes 10–20 minutes to complete. The broad domains for clinical and adaptive assessment in the TRS include Externalizing Problems, Internalizing Problems, School Problems, and Adaptive Skills. The scales contain the same content at each age level, although the behavioral manifestations of child problems are adjusted according to developmental level. In addition to the composite scores for these domains, the TRS provides a score for the Behavioral Symptoms Index (BSI), which is a broad composite that assesses an overall level of problem behaviors in the child.

National age norms (general, female, or male) and clinical norms are available for reference. Critical items may also be interpreted individually. The scale also includes an F ("fake bad") index as a validity check to detect a negative teacher response set. The internal-consistency reliabilities of all age levels of the TRS in the general population sample are high, averaging above .80 for all three levels, and the reliability of the BSI ranges from .95 to .97. Internal-consistency reliabilities for the Clinical norm sample have median values ranging from .82 to .85. Test-retest reliability median values range from .82 to .91 for the three age-groups. Construct validity for the Depression scale is strongly supported as reported by the authors.

### Parent Rating Scales

Similar to the TRS, the Parent Rating Scales (PRS) measure adaptive and problem behaviors, but in the home and community settings. It is scored on the same 4-point scale from "never" to "almost always," is available at the same three age levels as the TRS, and takes approximately 10–20 minutes to complete. The same broad domains of assessment used in the TRS are present in the PRS, except for the domain of School



Problems and the scales for Learning Problems and Study Skills. The same norm reference groups and validity index offered for the TRS are offered for the PRS.

Internal-consistency reliability scores for the composites range from the middle .80s to the low .90s for all age levels in the general sample. The reliability scores for the BSI range from .88 to .94. Internal-consistency reliability scores for the clinical sample are generally higher than that of the general population sample (.84 to .94). Test-retest reliability for the PRS showed median values ranged from .70 to .88, with the adolescent group being the lowest. The construct validity of the Depression scale was strongly supported.

#### Self-Report of Personality

The Self-Report of Personality (SRP) consists of statements to which the child responds true or false and takes about 30 minutes to complete. The form is available at two age levels: child (8–11) and adolescent (12–18). Both forms have the same composite scores of School Maladjustment, Clinical Maladjustment, Personal Maladjustment, and the overall composite score, the Emotional Symptoms Index (ESI). The ESI includes both clinical and adaptive scales, unlike the BSI, which only includes problem items. Similar to the TRS and the PRS, national age norms and clinical norms can be referenced for interpretation. Validity check indexes include the *F* index, the *L* ("fake good") index for the adolescent form, and the *V* index to determine if invalid responses may be attributed to failure to follow directions, poor reading skills, or questionable contact with reality.

The internal-consistency reliability of the PRS averages about .80 for each gender at both age levels in the general-population sample. Composite score reliabilities range from the mid-.80s to the mid-.90s. Internal-consistency reliabilities for the Clinical norm sample are slightly higher than general-population sample reliabilities. Test-retest reliability scores have a median value for the scales at .76 for each age level, and in the low to middle .80s for the composites, with one exception. Construct validity for the Depression scale is supported as reported by the authors.

In addition to the TRS, PRS, and SRP, the BASC system also offers a Structured Developmental History (SDH) form, which serves to gather family history, and social and medical background information about the child, and a Student Observation System (SOS), used for recording the child's classroom behaviors. The BASC components can be used separately or in combination to aid in the clinical diagnosis of child and adolescent disorders. The detection of problem behaviors as well as strengths and deficits in adaptive behaviors can assist the clinician in designing effective treatment plans.

#### Teacher Affect Rating Scale

The Teacher Affect Rating Scale (TARS) was developed by Perti to evaluate depression through teacher report (cited by Cantwell, 1983). It consists of 26 items rated on a scale from 0 to 3 ("not at all" to "very much") and is based on the child's behavior in the past week. Items include information about the child's work, time on task, concentration, mood, lability, and affect. It is hypothesized that the scale involves three factors: behavior, learning, and depression. This scale is still in the development stage and little information is available concerning its psychometric properties.

#### INTERVIEWS

As discussed previously, a diagnosis of depression can be difficult to make if rating scales are the sole measure used. An overview of studies of adult depression found that rating scales are more likely reflect distress than depression (Coyne & Downey, 1991). Moreover, for children the main rating scale (CDI) has been found to be nonspecific and relatively insensitive for the diagnosis of depression (Hodges, 1994). In addition, results from the CDI and several scales similar to it (RADS, DSRS, CDRS, and Reynolds Child Depression Scale) may reflect the child's inability or unwillingness to identify the key symptoms of depression and yield spuriously low results not indicative of depressive symptoms. Not only do clinical interviews allow for the evaluation of depressive symptoms, they also provide for the ability to assess disorders that are

found to be comorbid with depression. Moreover, several of the interviews allow for follow-up questions to further clarify the areas of concern.

Interviews vary in terms of structured or semistructured status. Interviews that allow for additional questions and probes into the behaviors are considered semistructured. These interviews include the Schedule for Affective Disorders and Schizophrenia for School-Age Children (K-SADS; Orvaschel & Puig-Antich, 1987; Puig-Antich & Chambers, 1978), Interview Schedule for Children (ISC; Kovacs, 1984), and the Child Assessment Schedule (Hodges, 1990). Structured interviews allow for little variation in the questions and do not allow for further questioning. These interviews are designed to be administered by lay administrators, unlike the semistructured interviews that require trained professionals. The structured interviews include the Diagnostic Interview for Children and Adolescents (DICA; Herjanic, Herjanic, Brown, & Wheatt, 1975) and the Diagnostic Interview Schedule for Children (DISC; Costello, Edelbrock, Dulcan, Kalas, & Klaric, 1984). Each of these interviews has been modified to comply with the most recent version of DSM-IV. Moreover, each has parallel forms for parent interviews and the K-SADS allows for a teacher interview.

One of the difficulties with the semistructured and structured interviews is that the concordance between informants can be very poor. As previously mentioned, several studies using interviews with parents, teachers, and the child have found less than optimum agreement. However, the consistency of the same informant across measures has been found to be adequate in several studies (Brunshaw & Szatmari, 1988; Jensen et al., 1996; Kazdin, 1994; Kazdin, French, & Unis, 1980), whereas others have found discrepancy between self-report measures and a structured interview (Pellegrino, Singh, & Carmanico, 1999). In an interesting twist on this issue, Bidaut-Russell, Reich, Cottler, and Robins (1995) evaluated 51 pairs of parents and adolescents who answered 12 questions from the DISC and were asked to guess how the other member of the pair would answer. The adolescents explained the discrepancy in terms of the parent forgetting or being unaware of the symptoms.

In contrast, the parent reported that the adolescent did not remember how he or she felt, lied, or did not recognize the symptoms or minimized the significance of the symptom.

One of the ways to understand such poor concordance between parent and teacher interviews is that there may be valid differences between a child's behavior at home and at school that can affect the expression of affective disorders. A landmark study by Leon, Kendall, and Garber (1980) found that depressed children exhibited different types of behavior problems depending on the environment. A sample of 138 children in third to sixth grade were diagnosed as depressed or nondepressed based on a number of rating scales (PIC, CDI, Conners Parent and Teacher Rating scales). The depressed children showed more conduct problems, anxiety, impulsivity, learning problems, psychosomatic difficulty, and perfectionism at home than did nondepressed children. In contrast, the depressed children were more inattentive and passive in school than they were at home. Behaviors were also found to vary depending on the age of the child, with younger children showing more conduct problems and older children showing more anxiety.

Concordance among informants also appears to vary based on the disorder. Hodges, Gordon, and Lennon (1990) compared parent and child agreement and found that high concordance exists for externalizing behaviors with moderate agreement on affective symptoms. Parents tended to report more conduct problems and children tended to report more anxiety, somatic, and family problems. In a study evaluating the concordance between parent and child reports in a sample of nonreferred children, low concordance for affective difficulties was found and moderate concordance for externalizing behaviors (Thompson, Merritt, Keith, Murphy, & Johndrow, 1993). In addition, the concordance was found to be a function of age and gender, with poorer agreement for younger children and for males. Costello, Edelbrock, and Costello (1985) using a nonpsychiatric sample found that mild oppositional behavior was more frequently reported by parents and mild separation anxiety, fears, and dysthymia were more commonly reported by the child.

Age may also have an effect on the reliability and validity of the interview. In a study comparing parent and child report, Edelbrock, Costello, Dulcan, Kalas, and Conover (1985) found that the reliability of the child's report increases with age, being lowest for ages 6–9 and best for ages 10–23. In contrast, the parent's report reliability decreased with the age of the child, possibly due to changes in parent perception and awareness of the child's feelings and behavior. Schwab-Stone, Fallon, Briggs, and Crowther (1994) found that parent reliability was good using a structured clinical interview with ages 6–12, while the children being assessed reported fewer symptoms and were particularly unreliable in reporting duration, frequency, and onset of symptoms. The best reliability by report for these children was for affective disorders and ADHD with the poorest for oppositional defiant disorder. In addition, variables such as cognitive ability, age, and gender have been found to be related to the consistency of reports (Fallon & Schwab-Stone, 1994). Schwab-Stone (1995) suggests that children below the age of 12 have difficulty answering the questions on the DISC. Moreover, the clinician needs to be particularly sensitive to the child's understanding of the questions as well as in his or her ability to gather such information through collecting and combining data from other informants.

Multicultural issues in the use of structured interviews (and, for that matter, behavioral self-ratings) have been largely ignored in the literature. There are few studies evaluating the use of such interviews with populations that do not fit the typical Caucasian, middle-class scenario. Ezpetela, de la Osa, Domenech, Navarro, and Losilla (1997) used the Spanish adaptation of the DICA-R. Test-retest reliability was good and similar to findings with the English version. The parent report was the most stable with adolescent reports being less stable. Similar results were obtained by de la Osa, Ezpetela, Domenech, and Navarro (1996) with a sample of Spanish school-age children and Bravos, Woodbury-Farina, Canino, and Rubio-Stipec (1993) with a sample of Puerto Rican children.

A sample of children ages 9–27 from Puerto Rico was evaluated using the Spanish version of the DISC-2. Rubio-Stipec,

Canino, Shrout, and Dulcan (1994) found clinician diagnosis of depression to be more concordant with child report than parent report. Conversely, clinician report agreed more frequently with parent report of disruptive behaviors. Ribera, Canino, Rubio-Stipec, and Bravo (1996) found that Spanish translations of the DISC-2 were reliable. Moreover, externalizing disorders showed higher reliability than did internalizing disorders. Reliability was also affected by the training of the examiner with psychiatrists having significantly higher reliability than lay interviewers.

Roberts and colleagues (1995) compared the symptoms of DSM-III-R (American Psychiatric Association, 1987) among Anglo, African, and Mexican Americans ages 12–17. Similar symptoms were found across categories as well as prevalence. Similarly, Roberts, Solovitz, Chen, and Casat (1996) found that the DISC-2 to be reliable with male and female Anglo, African, and Hispanic American adolescents ages 12–17. Reliability was found to be somewhat higher for the African American sample than for Anglos or Hispanics. Males showed stronger reliability indices than did females and older adolescents showed better reliability than younger.

Thus, it appears that several issues can affect the results of structured and semistructured interviews. Age, gender, informant, and possibly multicultural issues can affect the diagnostic utility. In addition, comparison of lay and professionally trained interviews may also affect the reliability of the results. There is strong empirical evidence that the age of the child reporting the symptoms and the agreement with the parent or teacher vary in reliability. The additional issues are not as well researched; however, the astute clinician will be sensitive to these variables with their assessment. In addition, for some of the symptoms of depression, a child who is forthcoming in his or her feelings may be the most appropriate informant. The clinical difficulty arises when a child is unable or unwilling to discuss uncomfortable feelings. In this case, interviews of parent and teacher as well as clinical observations would appear to be most important and informative.

The five most commonly used interviews are discussed in the following section. These

interviews vary in format, training required for administration, and degree of structure. Each interview is discussed based on age range, reliability, validity, and suggestions for use. In addition the Children's Depression Rating Scale—Revised (CDRS-R; Poznanski et al., 1979) is discussed. The CDRS-R is frequently used in conjunction with a structured interview.

### Schedule for Affective Disorders and Schizophrenia for School-Age Children

The K-SADS is an adaptation of the interview for adults of the Schedule for Affective Disorders and Schizophrenia (SADS). It is intended for children and adolescents. There are two versions: K-SADS-P and K-SADS-E. The K-SADS-P is appropriate for present episodes and the K-SADS-E for current and past episodes. The K-SADS allows for a diagnosis of major depression using DSM-IV criteria. It also allows for information to be gathered from parents, teachers, and the child. Age range for the K-SADS is 6–16 years of age. The K-SADS requires familiarity with DSM-IV criteria for major depression. It begins with an unstructured interview and proceeds to a semistructured format. The items begin with a definition of the symptoms and continue with probes designed to determine severity, duration, and frequency of difficulty. The items are clustered together by diagnosis. The K-SADS allows the examiner to reword questions and to query beyond the items if deemed appropriate. It is recommended that the parent be interviewed first and the child second. When discrepancies between reporters are found, the clinician is charged to use clinical judgment (Ambrosini, Metz, Prabucki, & Lee, 1988).

Reliability over time has been found to be strongest for major depression, bipolar, generalized anxiety, conduct disorder, and oppositional defiant disorder with good reliability for posttraumatic stress disorder and ADHD (Kaufman, Birmaher, Brent, & Rao, 1997). Adolescent report has been found to be more reliable than child report (Weissman, Warner, & Fendrich, 1990). Validity data are generally in the moderate range. Agreement with behavior rating scales has been found to be in the moderate range (McCauley, Mitchell, Burke, & Moss,

1988) as well as with other semistructured interviews (Cohen, O'Connor, Lewis, & Velez, 1987).

The K-SADS is the most widely used interview for the study of depression (Hodges, 1994). It shows strong agreement with alternatively determined diagnoses as well as with response to treatment (Fine, Forth, Gilbert, & Haley, 1991). The disadvantage of the K-SADS is also its advantage in that it requires a highly trained professional who is able to integrate clinical information and knowledge with the results of the K-SADS. Such discretion can lead to varying diagnoses depending on the training and inclination of the clinician. It is critical for the practitioner to use strict DSM-IV criteria as well as to understand the degree of importance each informant brings to the diagnostic process.

### Interview Schedule for Children

The ISC (Kovacs & Beck, 1977) is a semistructured interview for children ages 8–13. This interview was originally developed to assess the occurrence of depression longitudinally and focuses on current symptom ratings rather than diagnosis (Kovacs, 1984). Symptom probes are concise and are to be applied verbatim. The ISC should be administered to the parent and then the child. The clinician actually makes three ratings: parent, child, and an overall summary rating. It is recommended that the clinician use clinical history, demographics, psychological testing, and situational variables as well as the ISC to arrive at a diagnosis (Kovacs et al., 1984). Reliability of this interview has not been comprehensively studied. One of the few studies using a test-retest interval of only a few hours resulted in excellent reliability (Last, Strauss, & Francis, 1987). In this study, the reliability for major depression was .84 and for dysthymia, .66. The short time interval likely resulted in spuriously high results (Last, 1987). Moderate correlations between informants has been found for mood ( $r = .52$ ), vegetative symptoms ( $r = .55$ ), and poor correlations for concentration/attention ( $r = .32$ ) (Kovacs et al., 1984). Moderate correlations between the ISC and the CDI ( $r = .33$ ) and with the CBCL depression scale ( $r = .38$ ) have been reported (Paulaskas & Kovacs, 1984). The

ISC has been used to evaluate the course of depression and has been found to be a valid indicator for the presence or absence of depression over time (Kovacs et al., 1984).

Caution should be used with the ISC not only because it requires a highly trained professional for administration but also because its psychometric properties are largely unresearched. The clinician must be highly versed in DSM-IV criteria. The strength of the ISC is the flexibility it offers in the questions asked as well as its use as a research instrument into the course of depression.

### Child Assessment Schedule

The Child Assessment Schedule (CAS; Hodges, 1990) has three versions. The initial version was designed for younger children (5–7), the second is for ages 7–12, and the third is for use with adolescents (Hodges, Kline, Stern, Cytryn, & McKnew, 1982). There are 11 topics that can be grouped by environment, self-concept, and mood. Questions are embedded in each group that query about the child's peers, school relations, family, hobbies, fears/worries, self-concept, mood, anger, and reality testing. Everyday functioning is explored by the clinician with probes into how the child understands his or her difficulties and his or her ability to solve problems. Scale scores can be generated for interview, each symptom, and for the topic areas. There is a manual available as well as a computerized program to provide diagnoses and scale scores (Hodges, 1990).

The CAS has been found to be reliable showing good test-retest reliability ( $r > 0.80$ ) (Hodges, Cools, & McKnew, 1989) and internal consistency (values of 80 or above) (Hodges, 1993; Hodges, & Saunders, 1989; Hodges, Saunders, Kashani, Hamlett, & Thompson, 1990). Validity has been established through comparison of the CAS with self-rating scales as well as with other interview schedules. Comparing the CAS with the Birleson Depression Self-Rating Scale (Birleson, 1981) the CAS showed more sensitivity to depressive symptoms (Kashani, Rosenberg, & Reid, 1989). The CBCL depression scale has been found to correlate significantly with the CAS depression subscale and with the CDI (Hodges, Kline, Stern, Cytryn, & McKnew, 1982). In

addition, the CAS and the K-SADS showed good concordance for parent informants (Verhulst, Althaus, & Berden, 1987) and fair for child report (Hodges et al., 1987).

The CAS is a promising instrument that allows for different interviews based on the child's age. Moreover, it provides extensive reliability and validity data. The provision of a computer scoring program as well as the clinician input is an innovation that makes this instrument unusual among the various interviews available.

### Diagnostic Interview Schedule for Children—2

The DISC was initially developed at the National Institutes of Mental Health and designed for ages 6–17. The DISC-2 is an updated version incorporating DSM-IV. The DISC-2 is a highly structured interview with specified questions. Clinical expertise is not needed, and probes are provided to ask for additional clarification of responses so that experienced clinicians can evaluate the responses at a later date. There are separate forms of the DISC-2 for parents, teachers, and child. The parent and child forms yield scores in 27 symptom areas coded on a scale of 0–2.

Test-retest reliability of the original DISC has been found to be satisfactory, ranging from .63 for the child version and .72 for the parent version. Fair to good test-retest reliability has been found for the DISC-2 for children and adolescents with stronger reliability evident for adolescents and for shorter test periods present (Breton, Bergeron, Valia, Berthiaume, & St. Georges, 1998; Jensen, Roper, Fisher, & Piacentini, 1995). These findings have been replicated with better reliability reported for the parent than for the child interview (Schwab-Stone, Fisher, Piacentini, & Shaffer, 1993; Shaffer, Fisher, Dulcan, & Davies, 1996). Interrater reliability has also been found to be high using the DISC-2 with children ages 11–17 (Shaffer, Schwab-Stone, Fisher, & Cohen, 1993).

Validity studies comparing the DISC with the K-SADS have found moderate agreement between the two interviews (Cohen et al., 1987). Comparison of the DISC-2 with clinician-generated diagnoses also showed moderate levels of agreement (Piacentini,

Shaffer, Fisher, & Schwab-Stone, 1993). In a study that interviewed youths ages 9–17, the DISC-2 was found to show good validity across a number of diagnoses, including major depression and moderate validity for anxiety disorders and dysthymia (Schwab-Stone, Shaffer, Dulcan, & Jensen, 1996).

The sensitivity of the DISC-2 for depression and suicidality was evaluated by King and colleagues (1997). The DISC-2 was found to correctly identify depressive symptoms and suicidality with good agreement between the DISC-2, the RADS, the CDRS, and the Suicide Ideation Questionnaire, suggesting good concurrent validity. The parent version has been found to be more sensitive than the child version, particularly for depression and suicidality (Fisher, Shaffer, Piacentini, & Lapkin, 1993; King et al., 1997).

The DISC-2 has shown good reliability and validity. There have been several revisions of the DISC and it is important for the clinician to have the most recent version. Fewer studies for reliability and validity are present for younger children. The studies that do exist for the DISC are poor for the younger sample and it is likely that the DISC should not be used for children under the age of 12. Bird and colleagues (1987) raised the issue that children under the age of 11 appear to have difficulty with the interview and the results may yield overdiagnosis of depression in a child of this age. In fact, an epidemiological research study found an overdiagnosis of depression at all age levels using the DISC (Bird, Gould, Yager, Staghezza, & Canino, 1989). It is unclear whether this finding continues with the DISC-2.

The DISC was purported to be appropriate for administration by lay interviewers; however, as Hodges (1994) rightly points out, most of the studies have used trained professionals. Thus, it is not established whether the DISC-2 can be used with lay interviewers. Given the concerns about the DISC and younger children it is likely that it should not be used with these children, and for use with older youths, a trained professional is required.

#### Diagnostic Interview for Children and Adolescents

The DICA was the first interview designed solely for children. It gives both current and

past diagnoses and is designed for children ages 6–17. There are separate forms for parent and child and it is to be administered by experienced clinicians. Specificity has been an area of concern with the original DICA in that it was found to discriminate well for overall pathology but poorly for individual diagnoses (Sylvester, Hyde, & Reichler, 1987).

The DICA-R has separate interviews for children under age 12 and adolescents to age 17 as well as a parent interview. In the child and adolescent versions the wording is changed to assist the child in understanding the questions (Reich, 1988). An analysis of the difference between the child and adolescent versions found that a high level of psychological impairment was related to poorer test-retest reliability (Perez, Ascaso, Masson, & de la Osa, Chaparro, 1998). Moreover, lower reliability for the child form was found for the longest questions, internalizing disorders, report of the duration of the symptoms, and how accurately the child compared him- or herself with others. For the adolescent form, reliability was affected by internalizing content, report of the duration of the symptoms, and the evaluation of the degree of impairment involved in the disorder.

Parent and child concordance has been difficult to establish for the DICA. Many studies have found poor concordance (Earls, Reich, Jung, & Cloninger, 1988; Kashani, Orvaschel, Burk, & Reid, 1985) with some finding fair concordance (Vitiello, Malone, Buschle, Delaney, & Behar, 1990; Welner, Reich, Herjanic, & Jung, 1987). These findings need to be replicated with the DICA-R.

The agreement of the DICA with clinician-generated hypotheses was found to be low to moderate possibly due to the tendency for clinicians to evaluate symptoms in a different manner and the strictness they use in applying DSM-IV to the diagnosis (Ezpeleta, de la Osa, Domench, & Navarro, 1997). Conversely, the DICA-R has been found to show high agreement between psychiatrist's diagnosis and DICA-R diagnosis (Boyle, Offord, Racine, & Sandford, 1993). Furthermore, Welner and colleagues (1987) found 81.5 % agreement between the DICA and clinician-generated diagnosis for externalizing behaviors with somewhat lower

though adequate agreement for internalizing disorders.

Thus, the DICA-R is a promising interview that needs additional validity research conducted in order for it to become more widely used. Data concerning dysthymia have not been forthcoming and further research is needed in this area (Hodges, 1994). The DICA-R has most frequently been used as a research tool with less use of the computerized program. Moreover, the use of the DICA-R with review by a trained professional has been found to increase the diagnostic specificity and accuracy and helps to offset a tendency to overdiagnose depression in children and adolescents (Kashani et al., 1987).

## CONCLUSIONS

In conclusion, it appears that the diagnosis of depression in childhood necessitates the use of various measures that tap into different areas of the child's life. From the studies reviewed previously, it appears that the combining of cognitive assessment with behavioral data is necessary for an accurate diagnosis of depression. Particularly important is information from the child as to subjective feelings and thoughts to which parents and teachers may not be privy. Parental input is important in determining time frames and duration of possible depressive symptoms. Of recurring importance is the interaction of parental psychopathology with parental reports of depression in children (Poznanski, 1982). Parents who are themselves depressed may overidentify the problems their child has or withdraw from interaction with the child. It would appear important to obtain information from both parents to try to offset this tendency. In addition, it may be a valuable tool in therapy to discuss the various points of view garnered from separate clinical interviews with parents.

Additional areas of concern are with the psychometric instruments themselves. The instruments reviewed earlier differ in their definition of depression, the criteria used to diagnose depression, the measurement of severity and duration of symptoms, the standardization on normal populations versus clinical populations, and the ability to

discriminate depression from other psychopathologies. In fact, this ability to distinguish depressed children from those with other types of psychopathology has repeatedly been cited as one of the weaknesses of most of the measures reported (Kazdin & Petti, 1982).

Reliability and validity studies are also needed to ascertain the utility of some of the methods. Of great concern is the tendency of the various measures to validate one another against each other. The foremost and most widely used instrument, the CDI, is often used to establish the credibility of a new instrument. Unfortunately, the CDI has not been found to discriminate among conduct disorder, anxiety disorders, and depression in psychiatric populations unless the scores are at the extreme range. Although a manual has recently been published, there are several unanswered questions as to the psychometric properties of this instrument.

Much of the depression research relies on identifying groups using the CDI or the CDRS-R. Both instruments have limited information as to their underlying validity and reliability. The use of structured and semistructured interviews appears to be more promising in the identification of depression in childhood. The questions involved in these interviews are problematic for younger children and such interviews are questionable at best. However, these interviews used with parents have provided diagnostic information that has been found to be helpful in identifying those children most at risk.

As previously discussed, a comprehensive assessment of depression should include multi-instrument, multi-informant methods. However, recent studies examining assessment procedures show that comprehensive assessment is not widely practiced, and that more uniformity is needed among clinicians when identifying depression in children. Although the CDI was never intended to diagnose depression, a recent study shows that it is still the most often used self-report inventory, found in more than three-fourths of the studies that use self-report inventories (Fristad, Emery, & Beck, 1997). Although half of all studies on childhood depression use the CDI, two-thirds of these do not use an additional clinical structured interview for diagnosis. In 44% of the studies that

used the CDI alone, those children scoring high were referred to as "depressed" with no explanation of the CDI's limitations.

In a study that surveyed school psychologists about their understanding of childhood depression (Clarizio & Payette, 1990), only 51% used the DSM-III-R classification system for a diagnosis. Sixty-four percent reported using their own knowledge, alone or in combination with other criteria. Techniques used were primarily unstructured, informal interviewing (79%), with observation methods listed as second and self-report third. When instruments were listed, many school psychologists reported projective techniques (the Thematic Apperception Test, for example), particularly those with 5 or less years' experience. Parent rating was only used by 3% of psychologists surveyed. Overall, these findings indicate that although school psychologists may use more than one assessment source, the sources are usually more subjective and informal than objective and structured.

It would appear most appropriate to take a developmental stance in our understanding and evaluation for the presence of depression. The expression of depression repeatedly has been found to vary with age and in some research with gender. Multicultural studies are sadly lacking in this area and the applicability of standard instruments to varying populations needs to be carefully completed. The use of these instruments in various cultures is just beginning to be explored (Frias, del Barrio, & Mestre, 1991).

Therefore, it appears that there are numerous researchable questions to be addressed in the area of assessment. Outcome research is scarce, and the comparison of differing types of therapeutic interventions is rare. The use of typically developing populations for standardization of the instruments is helpful. In addition, the use of various ages in the assessment of clinical populations showing anxiety and depression assists in our understanding of childhood affective disorders. Although the literature has generally concluded that childhood depression exists, the measures of this depression vary according to report source, assessment method used, cutoff scores used to delineate severity, and definition of symptomatology. All these variables

require more careful scrutiny. Studies with broad-based populations, both general and clinical, ideally will aid in our understanding of the underpinnings of childhood depression, and in our manner of intervention.

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