

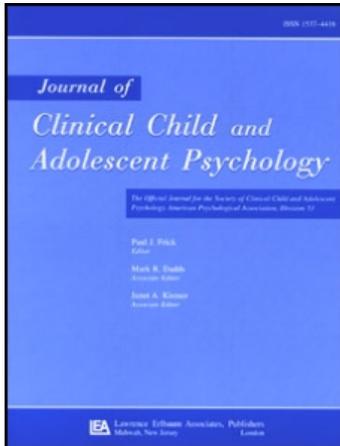
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Evidence-Based Psychosocial Treatments for Child and Adolescent Depression

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The evidence-base of psychosocial treatment outcome studies for depressed youth conducted since 1998 is examined. All studies for depressed children meet Nathan and Gorman's (2002) criteria for Type 2 studies whereas the adolescent protocols meet criteria for both Type 1 and Type 2 studies. Based on the Task Force on the Promotion and Dissemination of Psychological Procedures guidelines, the cognitive-behavioral therapy (CBT) based specific programs of Penn Prevention Program, Self-Control Therapy, and Coping with Depression-Adolescent are probably efficacious. Interpersonal Therapy-Adolescent, which falls under the theoretical category of interpersonal therapy (IPT), also is a probably efficacious treatment. CBT provided through the modalities of child group only and child group plus parent components are well-established intervention approaches for depressed children. For adolescents, two modalities are well-established (CBT adolescent only group, IPT individual), and three are probably efficacious (CBT adolescent group plus parent component, CBT individual, CBT individual plus parent/family component). From the broad theoretical level, CBT has well-established efficacy and behavior therapy meets criteria for a probably efficacious intervention for childhood depression. For adolescent depression, both CBT and IPT have well-established efficacy. Future research directions and best practices are offered.

In 1998, Kaslow and Thompson (Kaslow & Thompson, 1998) used the Task Force on Promotion and Dissemination of Psychological Procedures criteria (Chambless et al., 1996) to examine the psychosocial interventions for child and adolescent depression. That review concluded that no programs met criteria for well-established treatments. Two approaches met criteria for probably efficacious interventions: (a) school-based work of Stark and colleagues regarding Self-Control Therapy for children with elevated depressive symptoms (Stark, Reynolds, & Kaslow, 1987; Stark, Rouse, & Livingston, 1991), which falls under the theoretical rubric of cognitive-behavioral therapy (CBT); and (b) Adolescents Coping with Depression (CWD-A) program, another

CBT approach, conducted by Lewinsohn, Clarke, and colleagues with high school students with major depressive disorder (MDD), with dysthymic disorder (DD; Lewinsohn, Clarke, Hops, & Andrews, 1990; Lewinsohn, Clarke, Rohde, Hops, & Seeley, 1996), or who were "at risk" due to elevated depressive symptom scores (Clarke et al., 1995).

This article first reviews the psychosocial intervention outcome studies for depressed children and adolescents conducted since the 1998 Kaslow and Thompson article (Kaslow & Thompson, 1998). Remaining consistent with the previous review and to underscore the need for developmentally sensitive interventions tailored for different age groups, the review is divided between studies conducted with children versus adolescents. These studies are analyzed in accord with the guidelines set forth by Nathan and Gorman (2002) in *A Guide to Treatments that Work*, which delineates criteria for six types of studies ranging from the most methodologically rigorous clinical trials (Type 1 studies) to reports with marginal value (Type 6 studies). Specifically, Type 1 studies refer to double-blind, randomized controlled

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prospective clinical trials that have a clear delineation of sample characteristics, state-of-the-art assessment and diagnostic procedures, adequate sample size, comparison groups, and appropriate data analytic procedures. Type 2 studies are clinical trials that lack some components of a Type 1 study. Type 3 studies are those with pilot-data and case-control methodologies. Type 4 studies use sophisticated data analytic techniques (e.g., meta-analysis) to conduct secondary data analysis. Type 5 studies are reviews, without secondary data analysis, that overview the literature and give opinions. Type 6 studies are case studies, essays, and opinion papers.

Then, the currently reviewed studies, as well as those focused on in the Kaslow and Thompson (1998) article and those investigations inadvertently not included in the prior review (King & Kirschenbaum, 1990; Vostanis, Feehan, Grattan, & Bickerton, 1996a; Wood, Harrington, & Moore, 1996), are examined for the extent to which each conforms to the Task Force on the Promotion and Dissemination of Psychological Procedures criteria (Chambless et al., 1998; Chambless & Hollon, 1998; Chambless et al., 1996; Lonigan, Elbert, & Johnson, 1998) for well-established and probably efficacious interventions. The Task Force criteria have been debated and evolved over time, such as the criterion for well-established interventions to be superior to a placebo or alternative treatment rather than no-treatment control conditions and the criterion for a treatment manual to be utilized. For this review, the more stringent criteria are used and are summarized next.

The following are the Task Force's criteria for evidence-based treatments used in this review. Because the depression literature does not include a large series of single case design experiments, only criteria related to between-group design studies are delineated. For an intervention to be deemed *well-established*, there must be at least two well-conducted, between-group design experiments demonstrating efficacy in one of the following ways: (a) superior to pill or psychological placebo or to another treatment, or (b) equivalent to an already-established treatment in experiments with adequate sample sizes. The experiments must be conducted in accordance with a treatment manual, sample characteristics must be detailed, and at least two different investigators or investigatory teams must demonstrate intervention effects. For an intervention to be classified *probably efficacious*, either (a) two experiments must demonstrate that the intervention is more effective than a no-treatment control group (e.g., waitlist condition) in improving functioning, or (b) the studies meet all criteria for a well-established treatment except for the requirement that treatment effects are shown by two different research teams. Probably efficacious treatment also must be conducted in accordance with a treatment manual and have sample characteristics clearly specified. In this review, we deem interventions as

experimental if they are promising interventions that demonstrate significant treatment effects but have received limited evaluation through only one randomized controlled trial.

After reviewing the findings, which includes a presentation of effect sizes, suggestions for future research directions and recommendations for best practice are offered. The concluding section underscores the importance of devising more developmentally, gender, and ethnoculturally sensitive interventions that incorporate a broad array of theoretical orientations and treatment modalities and that target the unique needs of each depressed youth. The importance of conducting studies that compare active interventions is noted. Attention also is paid to mediators, moderators, and predictors of treatment outcome and the ways in which these factors may inform treatment outcome.

STUDY INCLUSION AND EXCLUSION CRITERIA

The review of treatments that work includes only those empirical examinations that used a randomized controlled trial design and that were published since 1998 (Tables 1 and 2). Studies were identified through a comprehensive search of online data bases (e.g., PsycINFO, Medline) and examination of the reference lists of all located studies. Key search terms included *adolescent depression, youth depression, teen depression, bereaved youth, suicidal youth, depression intervention, and depression treatment*. The review separates investigations with children (age 12 and younger) and adolescents (13 and older). Studies that included children and adolescents were categorized based on the age group of the majority of the participants. The final evaluation and summary of the evidence-based status of the psychosocial interventions include all treatment outcome research, regardless of publication date, and is done separately for children and adolescents (Tables 3 and 4).

For both the examination of treatments that work and the review of well-established and probably efficacious interventions, studies are included if the samples of children or adolescents met diagnostic criteria for MDD or DD. We also included intervention studies that targeted "at-risk" youth (e.g., youth with a depressed parent, bereaved youth, school-referred youth) who had elevated levels of depressive symptoms on self-report measures and the primary outcome of the studies was a reduction in depressive symptoms. The rationale for including these youth is that we were considering interventions that targeted not only clinical cases of depression, but also depressive symptoms. Typically, youth who met diagnostic criteria for a mood disorder were recruited from clinic settings, and youth with elevated symptom scores

were recruited from schools. Characteristics of the target samples and intervention settings are noted when information is available. We did not include studies when youth were deemed at-risk because of sociocultural factors (Cardemil, Reivich, Beevers, Seligman, & James, 2007; Cardemil, Reivich, & Seligman, 2002).

A number of projects that demonstrated efficacy in reducing depressive symptoms were excluded because they did not use a randomized controlled trial design (Kovacs et al., 2006). In addition, the focus of this review is on interventions with the primary purpose to reduce depressive symptoms, so prevention studies where the youth were not identified as having depressive symptoms were excluded (Beardslee, Gladstone, Wright, & Cooper, 2003; Chaplin et al., 2006; Merry, McDowell, Wild, Bir, & Cunliffe, 2004; Pattison & Lynd-Stevenson, 2001; Spence, Sheffield, & Donovan, 2003). We also excluded programs targeting youth of depressed parents when the youth were not identified as depressed or having depressive symptoms. Further, we excluded interventions that targeted suicidal youth, all students regardless of presence of depressive symptoms or risk factors (i.e., universal prevention programs), or other child/adolescent problems in which depression was secondary, except when such an intervention was compared to a treatment protocol targeting depressed youth (Shochet & Ham, 2004). We did not review studies examining electroconvulsive therapy (American Academy of Child and Adolescent Psychiatry, 2004). Finally, pharmacological studies are not reviewed except when a medication intervention was compared to and/or paired with a psychosocial treatment (Treatment for Adolescents with Depression Study [TADS] Team, 2004).

TREATMENTS THAT WORK (1998–PRESENT)

Child Studies

Table 1 presents the following information on each study conducted with depressed children: investigators, sample characteristics, assessment tools and source of information, therapists, description of interventions and settings, results, effect sizes, and follow-up data. It should be noted that the effect sizes reported only reflect the significant differences that emerged in the study. In some instances there were significant between-group differences and in other cases there significant within group differences, and the tables clarified where these significant differences were found. The effect sizes are either those reported by the authors or were calculated using means, standard deviations, and samples sizes. Each study is rated using the criteria for treatments that work (Nathan & Gorman, 2002).

As seen in Table 1, there are seven recently published intervention studies with children with elevated depressive symptoms (Asarnow, Scott, & Mintz, 2002; De Cuyper, Timbremont, Braet, De Backer, & Wullaert, 2004; Gillham, Hamilton, Freres, Patton, & Gallop, 2006; Gillham, Reivich et al., 2006; Pfeffer, Jiang, Kakuma, Hwang, & Metsch, 2002; Roberts, Kane, Thomson, Bishop, & Hart, 2003; Yu & Seligman, 2002) and three with children who met criteria for a depressive disorder (Muratori, Picchi, Bruni, Patarnello, & Romagnoli, 2003; Nelson, Barnard, & Cain, 2003; Trowell et al., 2007) in accord with the *Diagnostic and Statistical Manual* (4th ed.; *DSM-IV*; American Psychiatric Association, 1994) for a total of 10 new studies since 1998. These studies included relatively similar proportions of males and females in their samples, and children ranged in age between 6 and 15 years and were drawn from schools and outpatient mental health settings. In general, limited information was provided with regards to the ethnicity of the samples, but for those in which such data were available, most of the children were Caucasian, and African American youth were underrepresented. There were three unique populations studied, namely, Chinese, Dutch, and rural Australian children. A broad range of measures was used. The Children's Depression Inventory (CDI; Kovacs, 1992) was the most often used measure of self-reported depressive symptoms, whereas the Schedule for Affective Disorders and Schizophrenia for Children (K-SADS; Chambers et al., 1985) was the diagnostic tool most frequently used. It is interesting that parents' perceptions of their children's functioning were collected in only four studies, with three studies assessing children's externalizing and internalizing functioning with the Child Behavior Checklist (CBCL; Achenbach & Edelbrock, 1991) and the other assessing children's social adjustment with the Social Adjustment Inventory for Children and Adolescents (John, Gammon, Prusoff, & Warner, 1987).

All studies included one experimental condition and a control condition (e.g., waitlist, community services). Seven of the 10 studies included a parent component, which included separate parent education and support sessions or therapy sessions with the parent and child dyad. One study that included a family therapy condition (Trowell et al., 2007) did not specify the scope of family members included in this treatment. Thus, it appears that none of the studies incorporated standard family therapy with all family members present. Interventions were conducted in individual, group, and child–parent formats, typically for 8 to 16 sessions. In 4 studies, little to no information about the therapists was provided. In the other 6 studies, clinicians varied by discipline (e.g., psychology, psychiatry, nursing, teaching) and level of experience (e.g., bachelor's level to graduate students to licensed clinicians).

TABLE 1
Randomized Childhood Depression Treatment Outcome Studies Since 1998

Investigators	Sample	Source-Measures	Therapist	Treatment Conditions	Results	Follow-Up	Nathan & Gorman (2002) Criteria
Asarnow, Scott, & Mintz (2002)	23 4th to 6th graders (65% female; 57% Caucasian, 17% Hispanic, 13% Asian, 13% African American) with elevated depressive symptoms	Self: ATQ, CDI, Self-Report Coping Scale	Clinical psychology graduate students	10-session school based Stress-Busters CBT group and parent education intervention over 5 weeks, waitlist control	Children in treatment group showed significantly greater reductions in depressive symptoms (when outlier was removed), negative automatic thoughts, and internalized coping than control according to self-report. ES: CDI = .92	No follow-up data were reported.	Type 2
Pfeffer, Jiang, Kakuma, Hwang, & Metsch (2002)	75 6- to 15-year-olds (52 families) "at-risk" based on suffering the suicide of a parent or sibling; no ethnicity data were presented	Self: CDI, RCMAS, SAICA Parent: BDI, SAICA Clinician: CPTSRI, K-SADS	Not specified	10 90-min community-clinic based BGI with psychoeducational and supportive components and separate parent group, usual care and bimonthly phone calls received by control group	Children in BGI had significantly greater reductions in depressive and anxiety symptoms than controls according to self-report. There was no impact on children's PTSD symptoms, children's social adjustment, or parent depression. ES: CDI = .7, RCMAS = .9	No follow-up data were reported.	Type 2
Yu & Seligman (2002)	220 8- to 15-year-olds (55% male; 100% Chinese) "at-risk" based on elevated depressive symptoms and family conflict	Self: CDI, Conflict subscales of FES, CASQ	Teachers with 40 hr of intervention training and weekly supervision	10 120-min weekly school based POP group, nonintervention control group, POP is culturally modified version of the Penn Prevention Program (PPP).	Children in POP group showed significantly greater decreases in depressive symptoms and increases in optimistic explanatory style than controls according to self-report. More optimistic explanatory style mediated the prevention of depressive symptoms. At posttest, 41% of POP group and 46% of control at a CDI cutoff score of 15. ES: CDI = .25, CASQ = .54	3- and 6-month follow-up; POP group had significant fewer depressive symptoms and more optimistic explanatory styles than controls according to self-report. ES 3 month: CDI = .33, CASQ = .36. ES 6 month: CDI = .39, CASQ = .41	Type 2

(Continued)

TABLE 1
Continued

Investigators	Sample	Source-Measures	Therapist	Treatment Conditions	Results	Follow-Up	Nathan & Gorman (2002) Criteria
Muratori, Picchi, Bruni, Patarnello, & Romagnoli (2003)	58 6- to 10-year-olds (60% male) who met <i>DSM-IV</i> criteria for depression or anxiety disorder; no ethnicity data were presented	Parent: CBCL Clinician: C-GAS, K-SADS	Psychotherapists with degree in psychology or child and adolescent psychiatry	11-week PP with parent and child conducted in a hospital clinic, usual care community services condition	Children in both groups showed significant improvements in overall functioning and decreases in internalizing according to parent and clinician rating at 6 months postbaseline. PP and community service groups did not significantly differ on any measure between pre- and postintervention.	2-year follow-up; PP had significantly improved overall functioning and less internalizing and externalizing symptoms than control according to parent and clinician report. ES: CBCL-total: .72; CBCL-ext: .59; CBCL-int = .61; C-GAS = .72	Type 2
Nelson, Barnard, & Cain (2003)	28 8- to 14-year-olds (71% male; 71.4% Caucasian, 21.4% Hispanic, 7.2% African American) who met <i>DSM-IV</i> criteria for depression	Self: CDI Clinician: K-SADS-P	Not specified	8-week, parent-child face-to-face CBT in community clinic, parent-child videoconferencing CBT	Children in the both groups showed decreases in depressive symptoms. Children in the videoconferencing group showed significantly greater reduction in depression than face-to-face CBT based on self-report. Across groups, 82% remission rate. ES: CDI = .56	No follow-up data were reported.	Type 2
Roberts, Kane, Thomson, Bishop, & Hart (2003)	189 11- to 13-year-old 7th graders (50% female; 100% rural/Australian) "at-risk" based on elevated depressive symptoms	Self: CDI, CASQ, RCMAS Parent: CBCL	School psychologists and nurses with bachelor-level behavioral science degrees, psychologist had master's degree	12-session school-based CBT group intervention from the PPP, usual care control group with monitoring of symptoms plus health curriculum	Children in both groups showed decreases in depressive symptoms. According to self-report, groups did not differ on depression, but CBT group had less anxiety. CBT group had significantly fewer internalizing problems than control group based on parent report. ES: RCMAS = .26, CBCL = .28	6-month follow-up; CBT group had less anxiety than control on self-report, but groups did not differ on other self- and parent measures. ES: RCMAS = .24	Type 2

De Cuyper, Timbremont, Braet, De Backer, & Wullaert (2004)	20 9- to 11-year-olds (75% female; 100% Dutch) "at-risk" based on elevated depressive symptoms	Self: CDI, SPPC, STAIC Parent: CBCL Clinician: CAS	Therapists of unknown training status who were supervised by trained CBT therapist	16 60-min weekly group sessions of Taking Action at university clinic, one individual parent session, booster session at 1 and 4 month for postintervention, waitlist control	Children in both groups showed significant improvements in self-reported depression and global-self worth but no significant between-group differences. No significant within or between-group differences on self-reported anxiety or parent reports.	4- and 12-month follow-up. At 4-month treatment effects were maintained except control group no longer showed effect on self-reported depression. At 12-month sample included waitlist control who were provided treatment; significant improvements on self-reported depression, anxiety, self-worth and on parent reports between pretreatment and follow-up.	Type 2
Gillham, Hamilton, (2006)	271 11- to 12-year-olds (53% female; 73% Caucasian) "at-risk" based on elevated depressive symptoms	Self: CASQ, CDI Clinician: DICA-R, K-SADS, Diagnostic information from HMO database	Child psychologist and child social worker with 21-24 years of experience and who were supervised by one of the program developers	12 90-min CBT group intervention sessions from the PRP in primary care setting; usual care control group	No significant between-group differences in the reduction in depressive symptoms or impact on depressive disorders.	6-, 12-, 18-, and 24-month follow-up; PRP showed significant improvements in explanatory style for positive events. At 12-month, girls in PRP showed significantly reduced depressive symptoms. Over course of follow-up, RPR significantly prevented depression, anxiety, or adjustment disorders combined among high symptom children. ES: CASQ = .28, CDI (girls) = .31	Type 2
Gillham, Reivich et al. (2006)	44 6th to 7th graders (70% male; 91% Caucasian) "at-risk" based on elevated depressive and anxiety symptoms	Self: CDI, RCMAS Parent: BAI, BDI	Bachelor degrees in psychology trained and supervised by program developer; psychologist with doctorate who was a program developer	8 90-min weekly CBT group intervention sessions from the PRP plus 6 90-min parent group sessions in school setting; usual care control group	No significant between-group differences in the reduction in depressive or anxiety symptoms.	6- and 12-month follow-up; PRP plus parent had significant fewer depressive or anxiety symptoms at both follow-ups. ES: CDI (6m) = .63, CDI (12m) = .46, RCMAS (6m) = .63, RCMAS (12m) = .81	Type 2

(Continued)

TABLE 1
Continued

<i>Investigators</i>	<i>Sample</i>	<i>Source-Measures</i>	<i>Therapist</i>	<i>Treatment Conditions</i>	<i>Results</i>	<i>Follow-Up</i>	<i>Nathan & Gorman (2002) Criteria</i>
Trowell et al. (2007)	72 9- to 15-year-olds (62% male; 87% Caucasian) who met <i>DSM-IV</i> criteria for Major Depression or Dysthymia	Self: CDI, MFQ Clinician: K-SADS, C-GAS	Individual and family therapists trained by program developers	8-14 90-min SIFT sessions; 16-30 FIPP sessions plus Individual Parent sessions; in community and hospital clinics	Children in both groups showed significant improvements on self-reported measures and clinician rated functioning. 75.7% of SIFT and 74.3% of FIPP no longer clinically depressed. SIFT significantly better improvement on self-reported measures, but no group differences on clinician measures. ES: CDI = .51, MFQ = .29	6-month follow-up; 81% of SIFT and 100% of FIPP no longer clinically depressed. Both groups continued improvements on all measures. No significant group differences on any measures.	Type 2

Note: Effect size (ES) is Cohen's *d*; ATQ = Automatic Thoughts Questionnaire-Revised; BAI = Beck Anxiety Inventory; BDI = Beck Depression Inventory; BGI = Bereavement Group Intervention; CAS = Child Assessment Schedule; CASQ = Children's Attributional Style Questionnaire; CBCL = Child Behavior Checklist; CBT = Cognitive Behavioral Therapy; CDI = Children's Depression Inventory; C-GAS = Children's Global Assessment Scale; CPTSRI = Childhood Posttraumatic Stress Reaction Index; DICA-R = Diagnostic Interview for Children and Adolescents; *DSM-IV* = *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.); ext = externalizing; FES = Family Environment Scale; FIPP = Focused Individual Psychodynamic Psychotherapy; int = internalizing; K-SADS-P = Schedule for Affective Disorders and Schizophrenia for Children-Present Episode; MFQ = Moods and Feelings Questionnaire; POP = Penn Optimism Program; PP = Psychodynamic Psychotherapy; PRP = Penn Resiliency Program; PTSD = Posttraumatic Stress Disorder; RCMAS = Revised Children's Manifest Anxiety Scale; SAICA = Social Adjustment Inventory for Children and Adolescents; SIFT = Systems Integrative Family Therapy; SPPC = Self-Perception Profile for Children; STAIC = State-Trait Anxiety Inventory for Children.

Most researchers focused on some form of CBT: problem solving, social skills training, attribution retraining, and self-control techniques (Asarnow et al., 2002; Gillham, Reivich et al., 2006; Nelson et al., 2003; Roberts et al., 2003; Yu & Seligman, 2002). However, two studies examined a psychodynamic intervention (Muratori et al., 2003; Trowell et al., 2007), one study examined a family system intervention (Trowell et al., 2007), and another program utilized a combination of psychoeducation and support (Pfeffer et al., 2002).

Whereas in the past most intervention protocols were downward extensions of approaches designed for adults, and thus were not guided by a developmental psychopathology framework, some of the more recent studies were developmentally informed. For example, the study by Pfeffer and colleagues (2002) for depressed, suicidally bereaved children utilized attachment theory (Bowlby, 1980) as a guide. The psychodynamic program (Muratori et al., 2003) was influenced by a protocol originally developed for infants and toddlers (Cramer & Palacio Espasa, 1993). Further, the CBT was made more developmentally appropriate by adding components related to generalization to key environmental contexts (Asarnow et al., 2002) and by including parents and encouraging them to help with the learning and generalization of the skills (Asarnow et al., 2002; Gillham, Reivich et al., 2006; Nelson et al., 2003).

Despite increased attention to developmental issues, attention to cultural and/or ethnic factors in the design and implementation of the interventions remained rare. Some protocols did incorporate assessment tools specific to their population (e.g., Dutch; De Cuyper et al., 2004). In addition, the intervention protocol conducted with Chinese children (Yu & Seligman, 2002) gave consideration to how Western approaches (e.g., assertiveness training) are contrary to traditional Chinese values and implemented a modified protocol that was more sensitive and feasible to conduct with the population of interest.

Overall, results from these studies reveal that a variety of interventions were more effective in ameliorating depressive symptoms and disorders in children than were the control conditions. Interventions improved affective functioning for at-risk children with elevated depressive symptoms and children who met diagnostic criteria for a depressive disorder. Whereas in the prior review most studies utilized CBT offered in a group format, there is now increasing support for interventions built on other theoretical perspectives (e.g., behavior therapy; nondirected support/psychoeducational) and that utilize other treatment modalities (e.g., parent-child sessions, child group plus parent component/intervention). However, the bulk of the published work continues to examine group-based CBT; thus these programs have the most empirical support. Further, no psychosocial intervention

has been established as the superior treatment for depressed children. The lack of data on the superiority of one condition over another reflects the limited number of between-group design investigations that compare different active experimental interventions.

Three of the 10 studies had no follow-up data, and of those with available data, the sustainability of intervention effects was variable. For instance, one study found children in the CBT condition to continue to have fewer depressive symptoms than controls at the 3- and 6-month follow-ups (Yu & Seligman, 2002), whereas another found posttreatment differences between the CBT and control conditions on internalizing symptoms as rated by parents were no longer present at the 6-month follow-up (Roberts et al., 2003). Two studies found no group differences in depressive symptoms between the intervention and control condition at post-intervention, but at follow-up, youth who received the active treatment had fewer internalizing symptoms than the comparison group (Gillham, Reivich et al., 2006; Muratori et al., 2003). In addition, another study found youth participating in individual or family therapy continued to improve following treatment and initial post-treatment between-group differences disappeared at the 6-month follow-up (Trowell et al., 2007). Because of these mixed findings, the long-term benefit for psychosocial intervention for depression for children remains unclear.

Finally, Table 1 shows that all 10 studies were categorized as Type 2 in accord with the Nathan and Gorman (2002) criteria, indicating that although each study had elements of a well-designed and methodologically sound randomized controlled trial, each had design limitations that precluded it from being categorized as a Type 1 intervention. Limitations included small sample sizes, lack of clearly specified inclusion and exclusion criterion, limited diagnostic information based on the lack of comprehensive assessment batteries, and problems with the randomization protocol.

Adolescent Studies

Studies of psychosocial interventions with depressed adolescents published since 1998 are presented in Table 2 and comparable information to the review of child studies in Table 1 is provided. Table 2 illustrates that since 1998 there have been 18 published treatment outcome studies with depressed adolescents. Six studies were conducted with at-risk adolescents with elevated depressive symptoms (Ackerson, Scogin, McKendree-Smith, & Lyman, 1998; Asarnow et al., 2005; Clarke et al., 2001; Kowalenko et al., 2005; Sheffield et al., 2006; Young, Mufson, & Davies, 2006a), and 12 studies included adolescents who met diagnostic criteria for MDD and/or DD (Clarke et al., 2005; Clarke et al.,

TABLE 2
Randomized Adolescent Depression Treatment Outcome Studies Since 1998

Investigators	Sample	Source-Measures	Therapist	Treatment Conditions	Results	Follow-Up	Nathan & Gorman (2002) Criteria
Ackerson, Scogin, McKendree-Smith, & Lyman (1998)	22 7th to 12th graders (64% female; 68.2% Caucasian, 27.3% African American, 4.5% mixed race) "at-risk" based on elevated depressive symptoms	Self: CDI, ATQ, DAS, CBT Parent: CBCL Clinician: HRSD	Self-directed therapy; assessments conducted by master's-level clinicians	4-week, self-directed, in-home CBT <i>Feeling Good</i> (Burns, 1980); delayed treatment control group; both conditions received weekly phone calls from experimenter but no therapy	Bibliotherapy group showed significant reductions in depressive symptoms and improvement in dysfunctional thinking relative to self, parent, and clinician report. ES: CDI = 1.05; DAS = 1.32; CBCL = .45; HRSD = 2.57	1 month follow-up; no control group comparison; Bibliotherapy group maintained improvements in depressive symptoms on self and parent report. Continued improvement in clinician reported depression and self-reported dysfunctional thinking	Type 2
Clarke, Rohde, Lewinsohn, Hops, & Seeley (1999); Lewinsohn, Clarke, Rohde, Hops, & Seeley (1996)	123 14- to 18-year-olds (71% female) who met <i>DSM-III-R</i> criteria of Major Depression or Dysthymia; no ethnicity data were presented	Self: BDI Parent: CBCL Clinician: HAM-D, K-SADS-E, LIFE, GAF	Advanced graduate psychology or social work students; master's- or doctoral-level clinicians	8-week, 16 two-hour adolescent CBT group sessions of CWD-A, sessions of CWD-A with separate parent group, wait list control. Active treatments randomized to follow-up conditions of booster session and assessment every 4 months, assessment every 4 months, or assessment every 12 months. Conducted in research clinic	CWD-A groups (with and without parent intervention) showed significantly better improvements in depression than control according to youth report, but not parent and mixed findings based on clinician report. CBT group had significantly improved global functioning according to clinician. Addition of parent group had no significant effect. At post-treatment, 64.9% of CWD-A only, 68.8% group plus parent, and 48.1% of control were recovered. ES: for CWD-A only BDI = .59, GAF = .55; for CWD-A plus parent BDI = .24, GAF = .40	Over 24 months; no control condition. According to parent, booster + assessment had less externalizing symptoms than assessment only. ES: CBCL = .63 for 4-month assessment only and CBCL = .47 for 12-month assessment only. 4-month assessment only had less internalizing sym. relative to 12-month assessment. ES: CBCL = .16	Type 1

Mufson, Weissman, Moreau, & Garfinkel (1999)	48 12- to 18-year-olds (73% female; 71% Hispanic) who met <i>DSM-III-R</i> criteria of Major Depression; no other ethnicity data were presented	Self: BDI, SAS-SR, Social Problem-Solving Inventory-Revised Clinician: C-GAS, DISC 2.3, HRSD, K-SADS-E	Child psychiatrists, licensed clinical psychologist, master's-level psychologist with 10 years' experience	12 45-min weekly individual sessions of IPT-A, clinical monitoring control. Conducted in hospital clinics	IPT-A group had stronger decrease in depression and improvement in social functioning and interpersonal problem-solving than control based on self- and clinician report. Significantly more (74%) in IPT-A group recovered than control (46%). ES: BDI = .66; HRSD = .66; SAS-friend = .55; SAS-dating = 1.0; SAS-total = .45	No follow-up data were reported	Type 1
Rossello & Bernal (1999)	71 13- to 18-year-olds (54% female; 100% Puerto Rican) who met <i>DSM-III-R</i> criteria of Major Depression, Dysthymia, or both	Self: CDI, PHCSGS, SASCA, FEICS Parent: CBCL	Doctoral clinical psychology students with 3 years' experience	12 1-hr individual sessions over 12 weeks for both active treatment conditions of individual CBT and individual IPT, waitlist control. Conducted in a hospital clinic	CBT and IPT had significantly greater reduction of depressive symptoms than control. IPT also superior to control in increasing self-esteem and social adaptation. Group differences based on self-, not parent report. There were no differences between IPT and CBT. At posttreatment, 82% in IPT and 59% in CBT had CDI score of 17 or less. ES for CBT: CDI = .35; ES for IPT: CDI = .76; PHCSGS = .46; SASCA = .74	3-month follow up; no-control group comparison; no significant differences between CBT and IPT according to self- and parent report	Type 1
Clarke et al. (2001)	94 13- to 18-year-olds (59% female; 11% nonwhite) "at-risk" based on having depressed parents and elevated depressive symptoms; no other ethnicity data were presented	Self: CES-D Parent: CBCL Clinician: F-SADS GAF, HAM-D, K-SADS-E	Master's-level therapists	15 1-hr group sessions of CWD-A plus parent component and HMO care, usual HMO care only. HMO setting	CBT group showed significantly better improvements in depressive symptoms than control according to self-report and interview ratings, but not parent report. According to clinician, CBT group had significantly fewer suicide items and better global functioning. ES: CES-D = .47; HAM-D = .31; K-SADS = .10; CAF = .04	12- and 24-month follow-up; significantly fewer prospective cases of major depression in CBT group than control at 12-month follow-up; CBT group preventive effect persisted at 24-month follow-up but at a declined level	Type 2

(Continued)

TABLE 2
Continued

Investigators	Sample	Source-Measures	Therapist	Treatment Conditions	Results	Follow-Up	Nathan & Gorman (2002) Criteria
Clarke et al. (2002)	88 13- to 18-year-olds (69% female; 9% minority) who met <i>DSM-III-R</i> criteria of Major Depression and/or Dysthymia; no other ethnicity data were presented	Self: CES-D Parent: CBCL Clinician: F-SADS, HAM-D, K-SADS, GAF	Master's-level therapists	16 2-hr group sessions of CWD-A plus parent component and HMO care, usual HMO care only. Conducted in HMO setting	No significant advantage of CBT over usual HMO care according to self-, parent, and clinician report	12- and 24-month follow-up; no significant group differences according to self-, parent, and clinician report	Type 2
Diamond, Reis, Diamond, Siqueland, & Isaacs (2002)	32 13- to 17-year-olds (78% female; 69% African American, 31% Caucasian; 69% low income) who met <i>DSM-III-R</i> criteria of Major Depression	Self: BDI, BHS, YSR, SRFF, STAIC, Suicidal Ideation Parent: CBCL Clinician: HAM-D, K-SADS-P	Doctoral and master's-level therapists	12-week ABFT including adolescent and parent conducted in a children's hospital/child guidance clinic, 6-week waitlist control that included weekly 15-min phone calls restricted to monitoring	ABFT group had significantly lower levels of depressive symptoms than controls according to clinicians, and lower levels of anxiety and family conflict on self-report. At the end of treatment, 81% of ABFT group did not meet criteria for MDD vs. 47% of control group. ES: HAM-D = .64; STAIC = 1.05; SRFF = 1.3	6-month follow-up; no control group. Of 15 ABFT group adolescents in follow-up sample, 87% continued to not meet criteria for Major Depression	Type 2
Mufson et al. (2004); Young, Mufson, & Davies (2006)	63 12- to 18-year-olds (84.1% female; 71% Latina) who met <i>DSM-IV</i> criteria for a depressive disorder; no other ethnicity data were presented	Self: BDI, SAS-SR Clinician: HAM-D, C-GAS, CGI	School-based social workers and doctoral-level psychologists	12 30-min individual school-based session of IPT-A over 12 weeks, individual treatment as usual control (supportive therapy)	IPT-A had significantly fewer depressive symptoms and better global functioning than control according to clinician ratings. IPT-A had significantly fewer depressive symptoms and better general and social functioning than self-report. No significant group differences in functioning for youth with comorbid anxiety. ES: HAM-D = .50; C-GAS = .54; CGI = .48; SAS-dating = .43; SAS-total = .55	16-week follow-up. According to clinician ratings, IPT-A group had significantly fewer depressive symptoms than control. ES: HAM-D = .51	Type 1

TADS Team (2004)	439 12- to 17-year-olds (54.4% female; 73.8% Caucasian, 12.5% African American, 8.9% Hispanic) with a primary DSM-IV diagnosis of current Major Depressive Disorder, IQ > 80 and not taking an antidepressant prior to the initiation of the study	Self: RADS, SIQ Clinician: CDRS-R, CGI	Adolescent psychiatrist and CBT therapists trained and supervised by program developers	15 sessions of 50–60 min of CBT alone over a 12-week period plus two parent-only sessions; fluoxetine alone (monitoring and encouragement during 6 20- to 30-min visits across 12 weeks, starting dose of 10 mg/day increased to 20mg/day, maximum dose of 40mg/day); CBT plus fluoxetine; placebo (same dosages as fluoxetine plus monitoring). Interventions for the multicenter trial were conducted in academic health sciences centers	Combined treatment was more effective than both the placebo and either intervention alone in reducing depressive symptoms and overall psychological difficulties according to clinician ratings and suicidal ideation according to the youth. Fluoxetine alone was better than CBT alone. ES calculated relative to placebo. ES for combined: CDRS-R = .98; CGI = .84; SIQ = .28; RADS = .57. ES for CBT alone: CDRS-R = .03; CGI = .20; SIQ = .33; RADS = .10. ES for med alone: CDRS-med = .68; CGI = .58; SIQ = .05; RADS = .10	Follow-up data are forthcoming	Type I
Asamow et al. (2005)	418 13- to 21-year-olds (78% female; 13.4% African American, 1.2% Asian, 56% Hispanic, 13.6% Mixed, 12.7% Caucasian, 3.1% other; 64% spoke language other than English at home) "at-risk" based upon elevated depressive symptoms	Self: CICI-12, CES-D, MCS-12, MHI-5, Satisfaction survey Clinician: DISC	Doctoral and master's-level therapists or nurses trained and provided ongoing consultation on CBT therapy, primary care physicians and nurses	Quality improved treatment included support/training of primary care clinicians and treatment options of CBT, CBT and medication, care manager follow-up, or referral. Patients could change treatment. CBT was 3 4-sessions modules conducted weekly for 50-min. Individual vs. family sessions not specified. Treatment as usual was usual interaction with primary care clinicians who had training and education materials about depression but not CBT. Conducted in primary care setting	Quality improved treatment had significantly less depressive symptoms, and greater satisfaction with mental health improvements than control according to self report. ES: CES-D = .19; MCS-12 = .15; Satisfaction = .32	No follow-up data were reported.	Type I

(Continued)

TABLE 2
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Investigators	Sample	Source-Measures	Therapist	Treatment Conditions	Results	Follow-Up	Nathan & Gorman (2002) Criteria
Clarke et al. (2005)	152 12- to 18-year-olds (78% female; 14% minority) who met <i>DSM-IV</i> criteria for Major Depression and were prescribed an SSRI by a primary care physician	Self: CES-D, HRSD, YSR Parent: CBCL Clinician: K-SADS, C-GAS, SASY; Short Form-12	Master's-level therapists	5-9 60-min individual CBT plus SSRI, SSRI education, telephone contact at 1, 2, 3, 5, 7, and 9 months after in person sessions, and separate monthly parent education sessions; HMO treatment as usual plus SSRI. Conducted in a HMO setting	No significant advantage of CBT plus SSRI over usual HMO plus SSRI care according to self, parent, and clinician report	6-, 12-, 26-, and 52-week follow-ups. No significant group differences in dep. recovery at any follow-up. Dep. recurrence occurred equally in the groups by Week 52. CBT significantly greater improvement on Short-Form 12, number of visits, and medication days	Type 2
Kowalenko et al. (2005)	82 13- to 16-year-olds (100% female; 70% Australia or New Zealand) "at-risk" based on scoring above 18 on CDI	Self: CDI, ACS, CATS	School counselor and community adolescent mental health worker trained and supervised by program developer	8 90-min weekly CBT ACE group; waitlist control. Conducted at school	ACE females had significantly lower depression and improved coping than control. ACE female significantly less likely to be above clinical cutoff on CDI than control (50% vs. 81.5%). ES: CDI = .55, ACS = .38-.57, CATS = .52-.53	6-month follow-up; no-control group. Relative to pretreatment, ACE females show significant improvements in depression and coping at follow-up	Type 2
Rohde, Clarke, Mace, Jorgensen, & Seeley (2004); Kaufman, Rohde, Seeley, Clarke, & Stice (2005)	93 13- to 17-year-olds (48% female; 80.6% Caucasian, 1.1% African American, 3.2% Native American, 1.1% Asian, 4.3% Hispanic, 9.7% other ethnicity) who met <i>DSM-IV</i> criteria for Major Depression and Conduct Disorder	Self: BDI-II, SAS-SR, ATQ, PES, Issue Checklist Parent: CBCL Clinician: HDRS, K-SADS-E, LIFE	CWD-A included at least master's-level mental health provider and college/high school student assistant; LS utilized high school teachers and adult assistants	16 2-hr CWD-A plus parent component over 8 weeks; LS; Conducted in research clinic	Depression recovery rates (39% vs. 19%) and social adjustment was significantly better with CWD-A than LS based on self, but not parent report. Clinician results were mixed. Change in negative thinking mediated the reduction of depressive symptoms. Groups did not differ in Conduct disorder recovery rates. ES: BDI = .17; HDRS = .39; SAS-SR = .30	6- and 12-month follow-up; no significant group differences on depression or conduct according to self, parent, and clinician report	Type 1

Melvin et al. (2006)	73 12- to 18-year-olds (66% female; 90% Australian; 69% comorbid diagnosis) who met <i>DSM-IV</i> criteria for Major Depression, Dysthymia, or Depression NOS	Self: RADS, RCMAS, SIQ, SEQ, FAD Parent: CBCL, FAD Clinician: K-SADS, GAF, GARFS	Registered psychologists, supervised probationary psychologist, general medical practitioners, and social work with 1-5 years experience in providing CBT. Weekly to biweekly supervision with expert therapist and weekly peer supervision.	12 50 minutes, individual weekly CBT sessions with separate parent sessions available and two parent-adolescent sessions; sertraline alone (education and monitoring across 12 weeks, starting dose of 25 mg/day, maximum dose of 100 mg/day); CBT plus sertraline. 3 monthly posttreatment booster sessions for each condition. Interventions for the multi-center trial were conducted in community-based clinic	For odds of a depressive disorder, CBT alone had significantly lower odds than medication alone, and combined group did not significantly differ from CBT alone or medication alone. No between-group differences on full remission rates. All groups demonstrated significant improvements on self-reported depression, anxiety, and suicidal ideation, on parent reported internalizing, and on clinician report of general functioning; however, no significant between-group differences on measures	6-month follow-up; within group differences maintained on self-report measures; no between-group differences in odds of depression disorder, remission rates, or continuous measures	Type 1
Sanford et al. (2006)	31 13- to 18-year olds (64.5% female; 100% from Hamilton, Ontario; high rate of comorbid disorders) who met <i>DSM-IV</i> criteria for Major Depression and resided with parent; no other cultural or ethnicity data were presented	Self: ACL, CSQ, FAD, RADS, SSAI, substance use Parent: CSQ, FAD, SSAI Clinician: C-GAS, K-SADS-P	Noted not to be delivered by novice clinicians but do not report on specific qualifications of therapist	12 90-min FPE including all family members, plus one booster session, and usual treatment of individual or group therapy and/or medication; usual treatment control; all participants received handouts about depression. FPE conducted in family home. Usual treatment conducted in outpatient clinics	Both FPE and control had declines in self-reported depression, but groups did not significantly differ. 21% of FPE and 50% of controls continued to meet criteria for Major Depression. ES: SSAI = 1.14; SSAI = 1.17; greater improvements in social functioning and adolescent-parent relationship according to adolescent and parent reports and greater parental treatment satisfaction. ES: SSAI = .93; SSAI = .96; ACL = .52-.92	9-month follow-up; group differences favoring FPE were maintained. 25% of FPE and 53% of controls continued to meet criteria for Major Depression. ES: SSAI = 1.14; SSAI = 1.17; ACL = .63-1.1	Type 2

(Continued)

TABLE 2
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Investigators	Sample	Source-Measures	Therapist	Treatment Conditions	Results	Follow-Up	Nathan & Gorman (2002) Criteria
Sheffield et al. (2006)	521 13- to 15-year-olds (69% female; 88% Australian born) "at-risk" based scoring in the top 20% on two self-report depressive measures no other cultural or ethnicity data were presented 2,479 13- to 15-year-olds (54% female; 87% Australian born) selected for universal component without regard to symptoms of depression	Self: BHS, CASAFS, CATS, CDI, CES-D, NPO, SCAS, SPSS-R, substance use, YSR Clinician: ADIS-C, LIFE	Indicated condition by school counselors, community or mental health professions. Universal condition by teachers	Indicated for "at-risk": 8 90-min group CBT sessions over 8 weeks; Universal: 8 45-50-min CBT class sessions over 8 weeks; Universal plus indicated for "at-risk": 8-week universal component followed by 8-week indicated component; no intervention control. Conducted in school setting	Across conditions, "at-risk" showed significant reductions in depression, hopelessness, negative thinking, anxiety, externalizing and negative problem solving and improvements in social functioning according to self-report. 20% of "at-risk" had depressive episode over study. None of the conditions significantly differed on self-reported outcome measures	12-month follow-up; none of the conditions significantly differed on outcome measures	Type 1
Young, Mufson, & Davies (2006)	41 11- to 16-year-olds (85% female; 93% Hispanic) "at-risk" based on CES-D, K-SADS, C-GAS; youth with clinical disorders excluded	Self: CES-D Clinician: K-SADS, C-GAS	Indicated condition by doctorate and master level therapists and social workers. Control condition by school guidance counselors and social workers	2 individual and 8 90 minutes weekly group sessions of IPT-AST; 0-7 individual or group SC sessions. Conducted in school setting	IPT-AST had significantly fewer depressive symptoms and better overall functioning than SC according to self- and clinical report. No IPT-AST youth and 3 SC adolescent had clinical depressive disorder. ES: CES-D = 1.52, C-GAS = .96	3- and 6-month follow-up; IPT-AST had significantly fewer depressive symptoms and better overall functioning than SC. Across follow-up, 3.6% of IPT-AST and 28.6% of SC developed depression diagnosis. ES: CES-D (3 m) = 1.10, CES-D (6 m) = 1.09, C-GAS (3 m) = .82, C-GAS (6 m) = 1.21	Type 2

Goodyer et al. (2007)	208 11- to 17-year-olds (74% female; 72% Manchester, England; 28% Cambridge, England) who met <i>DSM-IV</i> criteria for Major or probable depression and moderate to severe difficulties on HoNOSCA	Self/Parent: Mood and feelings questionnaire, CDRS-R, C-GAS, CGI Clinician; K-SADS, HoNOSCA	Psychiatrists therapists trained and experienced with CBT	19 55-min, individual CBT sessions over 28 weeks (weekly for 12 weeks, bimonthly for 12 weeks) with parent participation at end of each session plus SSRI; SSRI only (fluoxetine primary other SSRIs allowed, starting dose of 10 mg/day, maximum dose of 60 mg/day). Intervention at outpatient mental health clinics.	Both groups showed improvement in depression, mood, functioning, and suicidality. No significant advantage of CBT plus SSRI over SSRI care according to self/parent and clinician report.	No follow-up data.	Type 1
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Note: Effect size (ES) is Cohen's *d*. ABFT = Attachment-Based Family Therapy; ACE = Adolescents Coping with Emotions; ACL = Adjective Checklist; ACS = Adolescent Coping Scale; ADIS-C = Anxiety Disorders Interview Schedule for Children; ATQ = Automatic Thoughts Questionnaire; BDI = Beck Depression Inventory; BHS = Beck Hopelessness Scale; CASAFS = Child and Adolescent Social and Adaptive Functioning Scale; CATS = Children's Automatic Thought Scale; CBCL = Child Behavior Checklist; CBT = Cognitive Behavioral Therapy; CBT = Cognitive Bibliotherapy Test; CDI = Child Depression Inventory; CDRS-R = Children's Depression Rating Scale-Revised; CES-D = Center for Epidemiological Studies-Depression Scale; C-GAS = Children's Global Assessment Scale; CGI = Clinical Global Impressions; CIDI-12 = Composite International Diagnostic Interview, Version 2.1; CSQ = Client Satisfaction Questionnaire; CWD-A = CBT Adolescents Coping with Depression Course; DAS = Dysfunctional Attitude Scale; DISC 2.3 = Diagnostic Interview Schedule for Children Version 2.3; *DSM-III-R* = *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed., Rev.); FAD = Family Assessment Device; FEICS = Family Emotional Involvement and Criticism Scale; FPE = Family Psychoeducation; F-SADS = Family Schedule of Affective Disorders and Schizophrenia; GAF = Global Assessment of Functioning Scale; GARFS = Global Assessment of Relational Functioning Scale; HAM-D = Hamilton Depression Rating Scale; HoNOSCA = Health of the Nation Outcome Scales for Children and Adolescents; HRS-D = Hamilton Rating Scale for Depression; IPT-A = Interpersonal Psychotherapy for Depressed Adolescents; IPT-AST = Interpersonal Psychotherapy-Adolescent Skills Training; K-SADS-E = Schedule for Affective Disorders and Schizophrenia for Children-Epidemiologic Version; LIFE = Longitudinal Interval Follow-up Evaluation; LS = Life Skills/Tutoring; MCS-12 = Mental Health Summary Score; MHI-5 = Mental Health Inventory 5; NOS = Not Otherwise Specified; NPO = Negative Problem Orientation; PES = Pleasant Events Schedule; PHCSGS = Piers-Harris Children's Self-Concept Scale; RADS = Reynolds Adolescent Depression Scale; RCMAS = Revised Children's Manifest Anxiety Scale; SASCA = Social Adjustment Scale for Children and Adolescents; SAS-SR = Social Adjustment Scale-Self-Report version; SASY = Social Adjustment Scale for Youth; SCAS = Spence Children's Anxiety Scale; SC = School Counseling; SEQ = Self-Efficacy Questionnaire for Depressed Adolescents; SIQ = Suicidal Ideation Questionnaire; SPSSI-R = Social Problem-Solving Inventory-Revised; SRFF = Self-Report of Family Functioning; SSAI = Structured Social Adjustment Interview; STAIC = State-Trait Anxiety Inventory for Children; YSR = Youth Self-Report.

2002; Clarke, Rohde, Lewinsohn, Hops, & Seeley, 1999; Diamond, Reis, Diamond, Siqueland, & Isaacs, 2002; Goodyer et al., 2007; Melvin et al., 2006; Mufson, Dorta, Wickramaratne et al., 2004; Mufson, Weissman, Moreau, & Garfinkel, 1999; Rohde, Clarke, Mace, Jorgensen, & Seeley, 2004; Rossello & Bernal, 1999; Sanford et al., 2006; TADS Team, 2004) in accord with the *DSM* (American Psychiatric Association, 1987, 1994).

Relative to the child domain, there were more recently published adolescent studies, and these focused more on clinically referred individuals who met diagnostic criteria for a depressive disorder than on school-based interventions with youth with elevated depressive symptoms. Male and female adolescents were included in these protocols, although female participants tended to be overrepresented. This gender pattern is consistent with the higher rates of depression for female adolescents than male (American Academy of Child and Adolescent Psychiatry, 1998). Participants typically ranged in age from 12 to 18 years, but one study included those as old as 21 (Asarnow et al., 2005).

As observed with the child studies, information about the ethnicity of the adolescent samples was limited, but available data indicated a varied sample population with the inclusion of several typically understudied populations. Some studies included predominantly Caucasian adolescents (Ackerson et al., 1998; Clarke et al., 2001; Rohde et al., 2004; TADS Team, 2004), whereas others included predominantly African American (Diamond et al., 2002), Latino (Asarnow et al., 2005; Mufson, Dorta, Wickramaratne et al., 2004; Mufson et al., 1999; Young et al., 2006a), Puerto Rican (Rossello & Bernal, 1999), or Australian (Melvin et al., 2006) adolescents. A broad range of assessment tools were used with the Beck Depression Inventory (Beck, Steer, & Garbin, 1988; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) being the self-report measure of depressive symptoms most often used. The Externalizing and Internalizing Symptom subscales and an Extracted Depression subscale of the CBCL were the most common measures of parental perceptions of their adolescents' functioning. Based on adolescent and/or parent interviews, the K-SADS served as the diagnostic tool most frequently completed by a clinician.

All investigations included one to two experimental conditions and/or a control condition (e.g., waitlist, treatment as usual). Consistent with the child studies, only 10 of the 18 adolescent studies included a parent/family intervention component (Clarke et al., 2005; Clarke et al., 2001; Clarke et al., 2002; Clarke et al., 1999; Diamond et al., 2002; Goodyer et al., 2007; Melvin et al., 2006; Rohde et al., 2004; Sanford et al., 2006; TADS Team, 2004), and 1 additional study discussed the importance of interventionists being sensitive to cultural values about the authority and respect of

parents even when parental involvement was limited to symptom assessment (Rossello & Bernal, 1999). When parents were included, involvement ranged from participation in a separate parent course where they reviewed what the adolescents were learning (Clarke et al., 2001; Clarke et al., 2002; Clarke et al., 1999; Rohde et al., 2004) to attendance at parent-adolescent sessions (Diamond et al., 2002). One study evaluated the efficacy of a family psychoeducation component added to a usual care condition that was conducted in the adolescent's home with all family members (Sanford et al., 2006). Interventions, conducted in individual, group, and adolescent-parent formats, typically ranged in length from 8 to 16 sessions, although 1 study examined a brief CBT program that had an average of 5 completed sessions (Clarke et al., 2005). Clinicians represented various disciplines (e.g., psychology, child psychiatry, social workers), and their experience level was broad (layperson to graduate students to licensed clinicians).

Similar to the child studies, most interventions with adolescents were consistent with CBT and taught mood monitoring, affect regulation, pleasant activities scheduling, cognitive restructuring, social skills, communication, and conflict resolution (Ackerson et al., 1998; Asarnow et al., 2005; Clarke et al., 2001; Clarke et al., 2002; Clarke et al., 1999; Goodyer et al., 2007; Kowalenko et al., 2005; Rohde et al., 2004; Rossello & Bernal, 1999; TADS Team, 2004). In addition, there is a growing literature on interpersonal psychotherapy (IPT) for adolescents and with this theoretical approach, the following issues are addressed: grief, interpersonal dispute, role transitions, interpersonal deficits, and other family and relational problems (e.g., single-parent families; Mufson, Dorta, Wickramaratne et al., 2004; Mufson et al., 1999; Rossello & Bernal, 1999; Young et al., 2006a). One recently published family intervention utilized an attachment-based model to guide the process of repairing relational ruptures and rebuilding trustworthy relationships (Diamond et al., 2002), and another integrated medical, patient education, stress, communication, and coping models (Sanford et al., 2006). Intervention tasks in the family treatments include increasing knowledge, relational reframing, improving communication, building alliances with the adolescent and parent, addressing attachment failure, and building competency and coping.

As shown in Table 2, greater reductions in depressive symptoms and disorders were observed in depressed and at-risk youth who participated in CBT, IPT, or attachment-based family therapy relative to those in treatment control conditions. Taking together all the research to date, there is some limited support for family interventions for depressed youth, but CBT and IPT appear to be the most promising psychosocial interventions for depressed adolescents at the present time. As is the case

with the child intervention literature, no psychosocial intervention is clearly superior for depressed adolescents. In the one study that compared CBT and IPT, no significant between-group differences emerged (Rossello & Bernal, 1999).

Fourteen studies reported follow-up data with periods ranging from 1 to 24 months postintervention (Ackerson et al., 1998; Clarke et al., 2005; Clarke et al., 2001; Clarke et al., 2002; Clarke et al., 1999; Diamond et al., 2002; Kowalenko et al., 2005; Melvin et al., 2006; Mufson, Dorta, Wickramaratne et al., 2004; Rohde et al., 2004; Rossello & Bernal, 1999; Sanford et al., 2006; Sheffield et al., 2006; Young et al., 2006a). Relative to the child studies, slightly more information is available on the long-term efficacy of treatments for adolescents. However, for most studies with follow-up data, the control group was not available. Thus, it was only possible to ascertain if treatment gains were maintained, and the continuation of between-group differences could not be examined. When both treatment and comparison groups were available at follow-up, some studies found that between-group differences at postintervention were not maintained over time (Boris et al., 2000; Rohde et al., 2004). However, there were exceptions to these results, such as findings by three investigatory teams that youth who participated in the active interventions continued to be less depressed at follow-up than youth in the control group (Clarke et al., 2001; Mufson, Dorta, Wickramaratne et al., 2004; Young et al., 2006a). Another study examining the benefits of booster sessions found that youth who were still depressed at the end of the active treatment phase experienced continued recovery when randomly assigned to receive booster sessions (Clarke et al., 1999). Unfortunately, however, the booster sessions were not associated with reduced rates of reoccurrence of a unipolar depressive episode. These findings suggest that for youth who do not respond fully to short-term psychosocial interventions, continued periodic treatment contact may be helpful in further reducing depressive symptoms.

Finally, Table 2 indicates that 10 of the 18 studies meet the Nathan and Gorman (2002) criteria for a Type 1 study, as they were methodologically sophisticated, randomized controlled trials with reasonable sample sizes. These research designs included clearly articulated inclusion and exclusion criterion and used appropriate diagnostic information gleaned from state-of-the-art assessment batteries. The other adolescent studies were Type 2 and had similar limitations to those noted previously for the child studies. The fact that 56% of the adolescent studies were Type 1 is in stark contrast to the child studies, in which all of the studies were classified as Type 2 secondary to some minor methodological flaws.

EVIDENCE-BASED TREATMENTS

To ascertain the evidence-based status of child and adolescent psychosocial treatments for depression according to the Task Force on Promotion and Dissemination of Psychological Procedures criteria (Chambless et al., 1998; Chambless & Hollon, 1998; Chambless et al., 1996; Lonigan et al., 1998), we included all of the studies published to date in our evaluation, and summary reviews are presented in Tables 3 and 4. Based on the guidelines, we did not include (a) studies that failed to demonstrate that an active intervention was more likely to be associated with improvements in depression than a control or comparison group, even if the intervention being examined reduced depressive symptoms (Butler, Mieztis, Friedman, & Cole, 1980; Clarke et al., 2002; Goodyer et al., 2007; Liddle & Spence, 1990; Vostanis, Feehan, Grattan, & Bickerton, 1996b); (b) open trials, which are available for both CBT with children (Hannan, Rapee, & Hudson, 2000; Kerfott, Harrington, Harrington, Rogers, & Verduyn, 2004; Szigethy et al., 2004) and IPT-A with adolescents (Santor & Kusumaker, 2001) and offer promising results; (c) programs that selected for children with depressive symptoms but where the intervention was not targeted toward the amelioration of these symptoms (Fristad, Arnett, & Gavazzi, 1998; Fristad, Gavazzi, & Soldano, 1998; Fristad, Goldberg-Arnold, & Gavazzi, 2003); and (d) interventions that did not demonstrate treatment effects immediately following the completion of active treatment, even if group differences were found at long-term follow-up (Gillham, Reivich et al., 2006; Muratori et al., 2003).

Information about the evidence-based treatment classification (e.g., probably efficacious, well-established) of the interventions is presented in three forms: (a) evidence-based treatment classification for specific intervention programs within a given theoretical orientation (*specific program*), (b) evidence-based classification for overall modality within a given theoretical orientation (*modality*), and (c) evidence-based classification for all treatment protocols that fall under the rubric of a given theoretical orientation or approach (*theoretical orientation*). We selected to classify interventions by their specific program, as well as their modality and theoretical orientation, to enhance the clinical relevance of this work and to provide youth, families, and therapists a broader perspective on the evidence-based support of different programs and approaches to better meet varying individual and setting needs. The specific program, modality, and theoretical orientation categories utilized were independently judged by the two authors of this review, and a consensus was reached on each determination. The authors formed their categorizations based on information presented

TABLE 3
Summary of Evidence-Based Treatment Status of Childhood Depression Treatment Studies by Theoretical Orientation, Modality, and Specific Program

<i>Intervention</i>	<i>Treatment Studies Supporting Significant Benefit Relative to Alternative Treatment or No-Treatment Control</i>	<i>Evidence-Based Status</i>
<u>Cognitive-Behavioral Treatment</u>	Stark, Reynolds, & Kaslow (1987); Kahn, Kehle, Jenson, & Clark (1990); Stark, Rouse, & Livingston (1991); Jaycox, Reivich, Gillham, & Seligman (1994); Gillham, Reivich, Jaycox, & Seligman (1995); Weisz, Thurber, Sweeney, Proffitt, & LeGagnoux (1997); Asarnow, Scott, & Mintz (2002); Yu & Seligman (2002); Nelson, Barnard, & Cain (2003); Roberts, Kane, Thomson, Bishop, & Hart (2003)	<u>Well-Established</u>
Group, child only	Stark, Reynolds, & Kaslow (1987); Kahn, Kehle, Jenson, & Clark (1990); Jaycox, Reivich, Gillham, & Seligman (1994); Gillham, Reivich, Jaycox, & Seligman (1995); Weisz, Thurber, Sweeney, Proffitt, & LeGagnoux (1997); Yu & Seligman (2002); Roberts, Kane, Thomson, Bishop, & Hart (2003)	Well-Established
Child group plus parent component	Stark, Rouse, & Livingston (1991); Asarnow, Scott, & Mintz (2002)	Well-Established
Parent-child	Nelson, Barnard, & Cain (2003)	Experimental
Individual video self-monitoring	Kahn, Kehle, Jenson, & Clark (1990)	Experimental
<i>Coping with Depression</i>	Kahn, Kehle, Jenson, & Clark (1990)	<i>Experimental</i>
<i>Penn Prevention Program including culturally relevant modifications as seen in the Penn Optimism Program</i>	Jaycox, Reivich, Gillham, & Seligman (1994); Gillham, Reivich, Jaycox, & Seligman (1995); Yu and Seligman (2002); Roberts, Kane, Thomson, Bishop, & Hart (2003)	<i>Probably Efficacious</i>
<i>Primary and Secondary Control Enhancement Training Program</i>	Weisz, Thurber, Sweeney, Proffitt, & LeGagnoux (1997)	<i>Experimental</i>
<i>Self-Control Therapy</i>	Stark, Reynolds, & Kaslow (1987); Stark, Rouse, & Livingston (1991)	<i>Probably Efficacious</i>
<i>Stress-Busters</i>	Asarnow, Scott, & Mintz (2002)	<i>Experimental</i>
<u>Nondirected Support/Pschoeducational</u>	Pfeffer, Jiang, Kakuma, Hwang, & Metsch (2002)	<u>Experimental</u>
Child group plus parent intervention	Pfeffer, Jiang, Kakuma, Hwang, & Metsch (2002)	Experimental
<i>Bereavement Group Intervention</i>	Pfeffer, Jiang, Kakuma, Hwang, & Metsch (2002)	<i>Experimental</i>
<u>Family Systems</u>	Trowell, Joffe, Campbell, Clemente, Almqvist, Soiminen et al. (2007)	<u>Experimental</u>
Family intervention	Trowell, Joffe, Campbell, Clemente, Almqvist, Soiminen et al. (2007)	Experimental
<i>Systems Integrative Family Therapy</i>	Trowell, Joffe, Campbell, Clemente, Almqvist, Soiminen et al. (2007)	<i>Experimental</i>
<u>Behavior Therapy</u>	Kahn, Kehle, Jenson, & Clark (1990); King & Kirschenbaum (1990)	<u>Probably Efficacious</u>
Group, child only, relaxation training	Kahn, Kehle, Jenson, & Clark (1990)	Experimental
Child group plus parent/teacher consultation, social skills training	King & Kirschenbaum (1990)	Experimental
<i>Wisconsin Early Intervention</i>	King & Kirschenbaum (1990)	<i>Experimental</i>

Note: Bold and Underlined is theoretical orientation; bold is modality; italicized is specific intervention. Studies are listed chronologically.

in the studies, manuals, and/or communications with investigators.

A program was identified as “specific” when the investigators either provided sufficient information in the study about the session-by-session content and intervention procedures and/or provided references to the specific manualized intervention they implemented and evaluated. If a specific program was evaluated in more than one study, it is noted in this review any modifications in content and/or implementation procedures the investigators reported using. In instances when it was unclear whether a specific intervention evaluated by one set of investigators differed from a specific intervention implemented by another set of investigators (Mufson, Dorta, Wickramaratne et al., 2004; Mufson et al., 1999; Rossello & Bernal, 1999), the investigators were contacted to clarify the specificity of their program.

The intervention modality and theoretical orientation typically were clearly stated by investigators. For interventions where the treatment modality only included individual or group sessions with children or adolescents and no parent component was offered (i.e., identified as Group, child only; Group, adolescent only; Individual), investigators usually clearly stated that parents were involved only to provide consent for participation, to receive information about the length and format of the intervention, and/or to participate in the assessment-only portion of the study. In such studies, it is possible that investigators did not always report the presence of limited informal contact or occasional individual meetings between the interventionists and parents that were outside the treatment protocol but clinically necessary. The theoretical frameworks for interventions examined in this review were also typically directly stated by investigators. Investigators usually presented this information by directly stating they were, for instance, evaluating a cognitive behavioral intervention and/or providing references that clearly indicated the theoretical underpinnings of their intervention.

In Tables 3 and 4, child (Kahn, Kehle, Jenson, & Clark, 1990; Nelson et al., 2003) and adolescent (Asarnow et al., 2005; Brent et al., 1997; Fine & Carlson, 1991; Reynolds & Coats, 1986; Rossello & Bernal, 1999; TADS Team, 2004) studies may be listed under a modality and theoretical orientation indicating that the active treatment was found to have a significant benefit relative to the control condition, but the study may not be listed with a specific program. This omission occurs when the intervention’s treatment modality and theoretical approach are clearly identified but the specific program is not. When investigators report that their unnamed specific program was developed based in part on another program that is identifiable, this information is presented next.

For a specific program to be deemed well-established or probably efficacious, it must meet the Task Force criteria previously summarized. For our review, a modality or theoretical orientation is deemed well-established if it meets the Task Force criteria for well-established plus at least one of the specific programs under the rubric is classified as at least probably efficacious. For our review, for a modality or theoretical orientation to be deemed probably efficacious, it must meet the Task Force criteria for probably efficacious, without our additional requirement that at least one of the specific programs under the rubric is classified as at least probably efficacious. Interventions are deemed experimental if they demonstrate significant improvements in youth’s functioning relative to a treatment control condition but are examined by only one study.

Child Studies

Table 3 presents the evidence-based treatment status of the child protocols.

Specific program classification schema. Consistent with the 1998 review (Kaslow & Thompson, 1998), from the present review we conclude that the Self-Control Therapy of Stark and colleagues (Stark et al., 1987; Stark et al., 1991) meets criteria for a *probably efficacious* psychosocial intervention for depressed children. In addition, the Penn Prevention Program, which includes culturally relevant modifications associated with the Penn Optimism Program, can be deemed *probably efficacious* (Cardemil et al., 2002; Gillham & Reivich, 1999; Gillham, Reivich, Jaycox, & Seligman, 1995; Jaycox, Reivich, Gillham, & Seligman, 1994; Roberts et al., 2003; Yu & Seligman, 2002). A brief review of these two specific protocols and the evidence-based criteria met by these programs is presented next.

First, Self-Control Therapy is a school-based intervention based on a cognitive-behavioral model and teaches self-management skills (e.g., self-monitoring, self-evaluating, self-consequating, causal attributions). Stark et al. (1987) weighed the relative efficacy of a 12-session group intervention involving Self-Control Therapy, behavioral problem-solving therapy, and a waitlist control for 29 fourth through sixth graders with elevated depressive symptoms. The behavioral problem-solving therapy consisted of education, self-monitoring of pleasant events, and problem solving directed toward improving social behavior. Children in the waitlist control condition were required to wait the 5-week duration of the active interventions before being able to receive those services; however, during this waiting period, they had access to services as usual.

Postintervention within-group analyses found that children in both active interventions self-reported fewer

symptoms of depression and anxiety, whereas the control group reported minimal change. Between-group analyses revealed that children in the self-control condition reported significantly fewer depressive symptoms on the CDI than children in the waitlist control condition at posttesting. Furthermore, group comparisons of pre- and posttreatment responses on the Reynolds Children Depression Scale (Reynolds, 1989) and on the Children's Depression Rating Scale-Revised (Poznanski et al., 1984) approached significance in favor of the self-control condition, but none of these between-group differences were significant. Significant between-group differences did not merge on mother ratings.

At 8-week follow-up, 88% of the children in the self-control condition and 67% of those in the behavioral problem-solving condition obtained CDI scores below the cutoff for depression, and none of the participants in either experimental group met criteria for clinically significant levels of depressive symptoms according to their responses on the Children's Depression Rating Scale-Revised. At follow-up, children in the self-control condition were significantly less depressed on the Children's Depression Rating Scale-Revised and reported significantly better self-concepts on the Coopersmith Self-Esteem Inventory (Coopersmith, 1967, 1975) than children in the behavioral problem-solving group. In contrast, the behavioral problem-solving group was rated by mothers on the CBCL as significantly less socially withdrawn and as having fewer internalizing symptoms than the self-control group. No between-group differences in depression levels were noted on the CDI or on children's reports of anxiety. Taken together, results reveal that both experimental interventions were relatively successful in reducing symptoms of depression in a school setting. For the most part, findings regarding the comparison of the self-control and behavioral problem-solving group interventions were equivocal. However, the pattern suggested that the self-control intervention was more beneficial to the children.

Based on results from the aforementioned study, Stark et al. (1991) evaluated an expanded version of Self-Control Therapy with 26 fourth through seventh graders who endorsed high levels of depressive symptoms. This research, also conducted in a school setting, offers only a partial replication of Stark's earlier work (Stark et al., 1987), as the self-control therapies tested in the two different treatment outcome studies were similar but not identical, and there was no behavioral problem-solving condition in this second study. The experimental intervention in this second study was a 24- to 26-session CBT program that consisted of self-control and social skills training, assertiveness training, relaxation training and imagery, and cognitive restructuring. This treatment was compared to a traditional

counseling condition designed to control for nonspecific elements of the intervention. Monthly family meetings for the CBT group encouraged parents to assist their children in applying their new skills and to increase the frequency of positive family activities. Monthly family sessions for the traditional counseling condition addressed improving communication and increasing pleasant family events. Postintervention and 7-month follow-up assessments revealed significant decreases in self-reported depressive symptoms for both groups of children. At postintervention, youth in the CBT condition self-reported significantly fewer depressive symptoms on a semistructured interview and endorsed significantly fewer depressive cognitions than children in the control condition.

In sum, these two outcome studies (Stark et al., 1987; Stark et al., 1991) suggest that Self-Control Therapy meets the criteria for a probably efficacious treatment, as client characteristics were specified, a treatment manual was used, and two adequate group design studies demonstrated that a self-control program was superior to a placebo psychological treatment (i.e., treatment as usual; traditional counseling). However, the self-control interventions used in the two studies were not identical in terms of length of treatment or material covered. In addition, the examination of this intervention has been limited to one research group. With these qualifications, this specific intervention is best classified as a probably efficacious evidence-based treatment.

The second specific psychosocial intervention we want to review is the Penn Prevention Program (Gillham & Reivich, 1999; Gillham, Reivich et al., 2006; Gillham et al., 1995; Jaycox et al., 1994; Roberts et al., 2003), and its culturally relevant modification the Penn Optimism Program (Yu & Seligman, 2002). The program has also been referred to as the Penn Resiliency Program. This specific intervention is based on a cognitive-behavioral model and is designed to address depressive symptoms among at-risk 10- to 15-year-olds in school settings. This group intervention has two components: cognitive and social problem solving. The cognitive component teaches children to identify negative beliefs, to evaluate the evidence for them, and to generate more realistic alternatives. It also involves explanatory training (i.e., attribution retraining), in which young people are taught to identify pessimistic explanations and generate alternative more optimistic and realistic explanations. The social problem-solving component focuses on goal setting, perspective taking, information gathering, generating alternatives for action, decision making, and self-instruction. The program educates children about strategies for effectively dealing with family conflict and other stressors, such as decatastrophizing, distancing and distraction, relaxation training, and enhancing their social support network.

Jaycox et al. (1994) compared at-risk 10- to 13-year-olds assigned randomly to the 12 session Penn Prevention Program or to a no-treatment control condition. Random assignment was based on school rather than child. Children were identified as at risk if they had elevated self-reported depressive symptoms on the CDI and elevated parental conflict scores on the Child's Perception Questionnaire (Emery & O'Leary, 1982).

At postintervention, those in the experimental condition self-reported significantly greater reductions in depressive symptoms on the CDI and Reynolds Children Depression Scale than those in the control condition. In a related vein, fewer children in the experimental group as compared to the control group self-reported moderate or more severe depressive symptoms at postintervention. These group differences based on self-report were maintained at 6-month follow-up. However, no significant between-group differences emerged with regards to the major treatment target of explanatory style as assessed by the Children's Attributional Style Questionnaire (CASQ; Seligman, Peterson, Kaslow, Tanenbaum, & Abramson, 1984). There were no significant between-group differences on parents' reports of internalizing and externalizing problems on the CBCL at postintervention, but at 6-month follow-up children who received the experimental treatment had significantly fewer conduct, but not internalizing, problems than their peers in the control group. Further, compared to children in the control group, those in the experimental group manifested significantly greater improvements in classroom behavior at postintervention. No follow-up teacher data were available. Intervention effects were maintained at the 2-year (Gillham et al., 1995), but not the 3-year (Gillham & Reivich, 1999), follow-ups.

Yu and Seligman (2002), using a culturally relevant modification of the Penn Prevention Program for children in China, also implemented the intervention in schools. Modifications included a reduction in the number of sessions (from 12 to 10 sessions), culturally relevant alterations to the assertiveness training component, and protocol implementation by teachers rather than mental health professionals. The program was compared to a nonintervention control group. The sample consisted of 8- to 15-year-olds in China selected based on elevated levels of depressive symptoms on the CDI and of family conflict on the Cohesion and Conflict subscales of the Family Environment Scale (Moos & Moos, 1981). At posttreatment, compared to children in the control condition, those in the active treatment showed significantly greater reductions in depressive symptoms on the CDI and greater increases in their optimistic explanatory styles on the CASQ. Treatment effects were maintained at 3- and 6-month follow-up assessments.

Roberts et al. (2003) also used the Penn Prevention Program in a school setting and compared it to a usual care control condition that included symptom monitoring plus a regular health curriculum. Participants were 11- to 13-year-olds in rural Australia who had elevated depressive symptoms on the CDI. Although children in both conditions self-reported decreases in depressive symptoms at postintervention, there were no significant between-group differences. In contrast, parents of youth in the experimental group reported on the CBCL that their children had significantly fewer internalizing problems at postintervention when compared to the parents' reports of children in the control group. At 6-month follow-up, there were no significant group differences according to child or parent reports.

The Penn Resiliency Program also has been evaluated for its effectiveness in reducing depressive symptoms when delivered in a primary care setting (Gillham, Hamilton et al., 2006). Participants were recruited from an HMO patient care directory and announcements in pediatrician offices. Children who were 11- to 12-year-olds and at risk due to elevated depressive symptoms on the CDI were assigned randomly to the 12 session group intervention or to a usual care control group. At postintervention, children in the two conditions did not differ significantly in their depressive symptoms, and no intervention effect was found for depressive disorders. At follow-up, children in the intervention condition showed significant improvements in their explanatory style for positive events on the CASQ, and girls in the intervention condition showed significantly fewer depressive symptoms on the CDI.

Recognizing parental depression as a risk factor for youth, the effect of the Penn Resiliency Program has been examined when it includes a supplemental parent group that teaches parents the same skills their children are learning in the school groups (Gillham, Reivich et al., 2006). Children, deemed at risk because of elevated depressive and anxiety symptoms, and their parents were recruited from schools. Families were randomly assigned to the group treatment and a usual care control group. At the conclusion of the active intervention, children in the Penn Resiliency Program condition did not differ significantly in their depressive or anxiety symptoms relative to their peers in the control condition. However, intervention effects became evident at the 6- and 12-month follow-ups when youth in the active treatment did show significantly fewer symptoms on the CDI and RCMAS than control children.

Overall, outcome studies evaluating the Penn Prevention Program (Gillham, Reivich et al., 2006; Gillham et al., 1995; Jaycox et al., 1994; Roberts et al., 2003; Yu & Seligman, 2002) provide sufficient information to deem this intervention a probably efficacious treatment in reducing depressive symptoms, as client

characteristics were specified, a treatment manual was used, and at least two adequate group design studies demonstrated that the program was more efficacious than comparison conditions. Although this program has been evaluated by different investigatory teams, it falls short of being a well-established intervention because only one study has demonstrated it superior to a psychological placebo or alternative treatment condition and not the required two studies. The other studies have found the intervention more effective than a no-treatment control group. An effort has been made to fill this gap by designing a study to compare the Penn Resiliency Program to another active treatment (Penn Enhancement Program); however, because of recruitment challenges, this study included all consented children rather than an at-risk sample (Gillham et al., 2007). At postintervention, the universal Penn Resiliency Program was not more effective than the other active intervention in reducing depressive symptoms, but its potential benefit became more evident over time, and there were some differences between schools.

Other specific psychosocial interventions (i.e., Coping with Depression, Primary and Secondary Control Enhancement Training Program, Stress-Busters, Bereavement Group Intervention, Systems Integrative Family Therapy; Wisconsin Early Intervention) have been found to be efficacious in reducing depressive symptoms relative to control conditions (Asarnow et al., 2002; Kahn et al., 1990; King & Kirschenbaum, 1990; Pfeffer et al., 2002; Trowell et al., 2007; Weisz, Thurber, Sweeney, Proffitt, & LeGagnoux, 1997). However, these specific interventions are deemed experimental because of the limited extent to which they have been reviewed to date.

Modality classification schema. Given the number of protocols that fall under the CBT rubric, the studies were divided by modality (group-child only, child group plus parent, parent-child, individual video self-monitoring). Table 3 reveals that CBT modalities of the group-child only (Gillham et al., 1995; Jaycox et al., 1994; Kahn et al., 1990; Roberts et al., 2003; Stark et al., 1987; Weisz et al., 1997; Yu & Seligman, 2002) and child group plus parent component (Asarnow et al., 2002; Stark et al., 1991) are the only modalities that are well-established interventions.

At least two well-conducted studies from different investigative teams found these modalities more effective in reducing depressive symptoms than a psychological placebo or alternative treatment, and at least one specific intervention (Penn Prevention Program, Self-Control Therapy) included in each modality meets criteria for a probably efficacious treatment. Because only one CBT study utilized the parent-child modality (Nelson et al., 2003) and only one CBT study examined individual

video self-monitoring (Kahn et al., 1990), these approaches are deemed experimental at the present time. The individual video self-monitoring modality included video taping participants behaving in a nondepressed way and then having them watch the video during treatment sessions. For the other theoretical orientations (e.g., nondirected support/psychoeducational, systems therapy, behavior therapy), different modalities have been examined on a limited basis; accordingly, they are also deemed experimental.

Theoretical orientation classification schema. Using theoretical orientation broadly as the classification rubric when considering the quality and quantity of psychosocial interventions for depressed youth, we conclude that CBT is a well-established intervention (Asarnow et al., 2002; Gillham et al., 1995; Jaycox et al., 1994; Kahn et al., 1990; Nelson et al., 2003; Roberts et al., 2003; Stark et al., 1987; Stark et al., 1991; Weisz et al., 1997; Yu & Seligman, 2002). This decision is based on the fact that there are more than two studies demonstrating that CBT is more effective than psychological placebo or alternative treatment controls in improving children's affective functioning. In addition, the studies have been conducted by different investigators and at least two of the studies have adequate sample size, specify sample characteristics clearly, and use treatment manuals. Finally, at least one of the specific program protocols that falls under CBT was at least probably efficacious (i.e., Penn Prevention Program, Self-Control Therapy).

Although CBT interventions have received the most attention, other broad theoretical approaches are gaining support. The broad theoretical classification of behavior therapy meets criteria for a probably efficacious intervention (Kahn et al., 1990; King & Kirschenbaum, 1990; Stark et al., 1987). Behavior therapy in these studies included education, self-monitoring of pleasant events, problem solving to improve social behavior, and progressive relaxation. This theoretical approach has been examined by at least two different investigative teams who have found children participating in behavior therapy have greater reductions in depressive symptoms than children in control conditions, and the studies under this rubric specify client characteristics and use treatment manuals. However, because each specific behavior therapy interventions is experimental, it is premature to view this theoretical approach as well-established. One recent study using the theoretical approach of nondirected support/psychoeducational (Pfeffer et al., 2002) found greater improvements among children in the active intervention relative to the control condition, but this approach is experimental because of its limited examination to date. An examination of an intervention based on systems

TABLE 4
 Summary of Evidence-Based Treatment Status of Adolescent Depression Treatment Studies by Theoretical Orientation, Modality, and Specific Program

<i>Intervention</i>	<i>Treatment Studies Supporting Significant Benefit Relative to Alternative Treatment or No-Treatment Control</i>	<i>Evidence-Based Status</i>
<u>Behavior Therapy</u>	Reynolds & Coats (1986)	<u>Experimental</u>
Group, adolescent only, relaxation training	Reynolds & Coats (1986)	Experimental
<u>Cognitive-Behavioral Treatment</u>	Reynolds & Coats (1986); Lewinsohn, Clarke, Hops, & Andrews (1990); Clarke et al. (1995); Lewinsohn, Clarke, Rohde, Hops, & Seeley (1996); Wood, Harrington, & Moore (1996); Brent et al. (1997); Ackerson, Scogin, McKendree-Smith, & Lyman (1998); Clarke, Rohde, Lewinsohn, Hops, & Seeley (1999); Rossello & Bernal (1999); Clarke et al. (2001); Rohde, Clarke, Mace, Jorgensen, & Seeley (2004); TADS Team (2004); Asarnow et al. (2005); Kowalenko et al. (2006)	<u>Well-Established</u>
Group, adolescent only	Reynolds & Coats (1986); Lewinsohn, Clarke, Hops, & Andrews (1990); Clarke et al. (1995); Lewinsohn, Clarke, Rohde, Hops, & Seeley (1996); Clarke, Rohde, Lewinsohn, Hops, & Seeley (1999); Kowalenko et al. (2005)	Well-Established
Adolescent group plus parent component	Lewinsohn, Clarke, Hops, & Andrews (1990); Lewinsohn, Clarke, Rohde, Hops, & Seeley (1996); Clarke, Rohde, Lewinsohn, Hops, & Seeley (1999); Clarke et al. (2001); Rohde, Clarke, Mace, Jorgensen, & Seeley (2004)	Probably Efficacious
Individual	Wood, Harrington, & Moore (1996); Rossello & Bernal (1999)	Probably Efficacious
Individual plus parent/family component	Brent et al. (1997); TADS Team (2004); Melvin et al. (2006)	Probably Efficacious
Self-directed bibliotherapy	Ackerson, Scogin, McKendree-Smith, & Lyman (1998)	Experimental
CBT enhanced primary care services	Asarnow et al. (2005)	Experimental
<i>Adolescents Coping with Depression</i>	Lewinsohn, Clarke, Hops, & Andrews (1990); Clarke et al., (1995); Lewinsohn, Clarke, Rohde, Hops, & Seeley (1996); Clarke, Rohde, Lewinsohn, Hops, & Seeley (1999); Clarke et al. (2001); Rohde, Clarke, Mace, Jorgensen, & Seeley (2004)	<i>Probably Efficacious</i>
<i>Adolescents Coping with Emotions</i>	Kowalenko et al. (2005)	<i>Experimental</i>
<i>Depression Treatment Programme</i>	Wood, Harrington, & Moore (1996)	<i>Experimental</i>
<i>Feeling Good (Burns, 1980) Bibliotherapy</i>	Ackerson, Scogin, McKendree-Smith, & Lyman (1998)	<i>Experimental</i>
<i>Time for a Future-Adolescent Depression Program</i>	Melvin et al. (2006a)	<i>Experimental</i>
<u>Interpersonal Psychotherapy</u>	Mufson, Weissman, Moreau, & Garfinkel (1999); Rossello & Bernal (1999); Mufson et al. (2004); Young, Mufson, & Davies (2006a)	<u>Well-Established</u>
Individual	Mufson, Weissman, Moreau, & Garfinkel (1999); Rossello & Bernal (1999); Mufson et al. (2004)	Well-Established
Group, adolescent only	Young, Mufson, & Davies (2006a)	Experimental
<i>Interpersonal Psychotherapy for Depressed Adolescents</i>	Mufson, Weissman, Moreau, & Garfinkel (1999); Mufson et al. (2004)	<i>Probably Efficacious</i>
<i>Interpersonal Psychotherapy-Adolescent Skills Training</i>	Young, Mufson, & Davies (2006a)	<i>Experimental</i>
<u>Nondirected Support</u>	Fine, Forth, Gilbert, & Haley (1991)	<u>Experimental</u>
Group, adolescent only	Fine, Forth, Gilbert, & Haley (1991)	Experimental
<u>Family Systems Theory</u>	Diamond, Reis, Diamond, Siqueland, & Isaacs (2002)	<u>Experimental</u>
Parent-adolescent	Diamond, Reis, Diamond, Siqueland, & Isaacs (2002)	Experimental
<i>Attachment-Based Family Therapy</i>	Diamond, Reis, Diamond, Siqueland, & Isaacs (2002)	<i>Experimental</i>

Note: Bold and Underlined is theoretical orientation; bold is modality; italicized is specific intervention. Studies are listed chronologically.

therapy, also deemed experimental at this time, demonstrated that children in this treatment condition improved more on self-rated depression and mood and on clinician ratings of functioning relative to a individual, psychodynamic treatment condition (Trowell et al., 2007); however, both groups demonstrated postintervention improvements and between-group differences were no longer present at follow-up.

Adolescent Studies

Table 4 presents the evidence-based treatment status of the adolescent interventions.

Specific program classification schema. Although the literature examining psychosocial interventions for depressed adolescents has continued to grow since the 1998 review by Kaslow and Thompson (1998), no specific psychosocial intervention for depressed adolescents has emerged as well-established. Consistent with the previous review, CWD-A (Clarke et al., 1995; Clarke et al., 2001; Clarke et al., 2002; Clarke et al., 1999; Kaufman, Rohde, Seeley, Clarke, & Stice, 2005; Lewinsohn et al., 1990; Lewinsohn et al., 1996; Rohde et al., 2004) meets criteria for a probably efficacious intervention. Our review presented here also reveals that IPT-A (Mufson, Dorta, Wickramaratne et al., 2004; Mufson et al., 1999) is a probably efficacious intervention for adolescent depression. The following is a brief review of these two specific protocols.

The prior review revealed that the CWD-A course met criteria for probably efficacious (Clarke et al., 1995; Lewinsohn et al., 1990; Lewinsohn et al., 1996), and more recent studies further support the efficacy of this intervention (Clarke et al., 2001; Clarke et al., 1999; Kaufman et al., 2005; Rohde et al., 2004). A series of studies have examined the CWD-A program (Clarke et al., 1995; Clarke et al., 2001; Clarke et al., 2002; Clarke et al., 1999; Kaufman et al., 2005; Lewinsohn et al., 1990; Lewinsohn et al., 1996; Rohde et al., 2004). All but one of these studies (Clarke et al., 2002), which was conducted in an HMO setting, found this program to be efficacious. The CWD-A program is an adolescent-version of an earlier program designed for depressed adults. The adolescent version has been modified over the years, but in all versions, adolescents are taught relaxation, cognitive restructuring, pleasant activity scheduling, communication, and conflict-reduction techniques. The program is typically 15 to 16 sessions, and sessions range from 45 min to 2 hr. For some of the protocols, there are separate parent groups, during which time parents are informed about the general topics being addressed in the CWD-A program, the skills being taught, and the rationale for their use.

CWD-A has been examined in a number of studies. For instance, Lewinsohn et al. (1990) randomly assigned 59 adolescent students who met diagnostic criteria for Major Depression or for minor or intermittent depression to one of three conditions: CWD-A adolescent group only, CWD-A adolescent group plus parent, or a waitlist control. Relative to youth in the control condition, youth in both treatment groups showed significantly greater declines in depression based on self-reports and clinician interviews but not parent reports. In the two treatment groups there was a significant decline in adolescents meeting diagnostic criteria for depression at posttreatment relative to the control group, but there were no significant differences between the two treatment groups. Effects were maintained at the 2-year follow-up, but information was available only for the two treatment groups.

Clarke et al. (1995) reported findings from a school-based intervention study with 150 at-risk adolescents who had elevated but subdiagnostic levels of depressive symptoms on the Center for Epidemiologic Studies–Depression Scale (CES-D; Radloff, 1977) and the K-SADS. Youth were randomly assigned to either CWD-A or usual care (i.e., free to continue with any pre-existing intervention or seek new assistance). Relative to the usual care condition, at postintervention CWD-A was associated with significantly better improvements in depressive symptomatology as assessed by the CES-D and in global psychological functioning, but between-group differences were lessened at the 12-month follow-up. In the CWD-A group, there were significantly fewer cases of MDD and/or DD at follow-up than the usual care group. No between-group differences were noted for nonaffective disorders.

A replication study (Clarke et al., 1999; Lewinsohn et al., 1996) of the original examination of CWD-A (Lewinsohn et al., 1990) further supported the benefits of this specific program. The replication study had two modifications: skills training was presented throughout the course and booster sessions were added. This study included 123 adolescents with MDD or DD recruited from the community (announcements to health professionals and school counselors, media). Youth were randomly assigned to CWD-A, CWD-A plus parent, or a waitlist control condition (i.e., received no treatment during the time frame of the experimental interventions but offered an experiment treatment at the conclusion of the study). Participants also were randomized to follow-up conditions of booster sessions plus assessment or assessment only conditions. Youth in both the active interventions showed significantly higher depression recovery rates and significantly greater improvements in self-reported depressive symptoms on the BDI at postintervention when compared to their peers in the waitlist control condition. No between-group differences

emerged according to parent reports, and differences according to interviewer report were mixed. The addition of the parent group had no significant effect. The addition of the booster sessions was associated with accelerated rates of recovery of youth still depressed at the end of the active treatment, but they had no impact on the rates of reoccurrence.

In a study with 94 at-risk adolescents (i.e., youth with elevated depressive symptoms and depressed parents), Clarke et al. (2001) compared CWD-A plus usual HMO care to usual HMO care only. Youth in both conditions were permitted to initiate or continue any non-study-related mental health services conducted in an HMO clinic. The CWD-A plus HMO care group showed significantly greater improvements in overall psychological functioning and depressive symptoms at post-intervention relative to their counterparts in the HMO care only condition. These differences were noted by the adolescents on the CES-D and interviewers who rated the adolescents using the Hamilton Depression Rating Scale (Endicott, Cohen, Nee, Fleiss, & Sarantakos, 1981) but not by parents on the CBCL. At the 12-month follow-up, there were significantly fewer cases of depressive disorders for youth in the active intervention as compared to the control group. This finding continued at the 18- and 24-month follow-ups but at a declined level.

In a hybrid efficacy-effectiveness study, Rohde et al. (2004) randomly assigned 93 youth who met criteria for both MDD and conduct disorder to CWD-A or a life skills/tutoring control group. In this evaluation, the CWD-A course was modified slightly to include two group leaders to assist with behavior management and assignment completion, a behavioral point reward system, and two optional group meetings of parents only to provide information and teach problem-solving skills. Youth in both conditions were allowed to receive no-research treatment as usual. All of the youth were referred by the Department of Corrections and were under the supervision of an intake, probation, or parole officer. At posttreatment, depression recovery rates were significantly better for teens assigned to the CWD-A condition as compared to those in the control group, but recovery rates for conduct disorder did not differ by intervention. These differences were most pronounced according to the youth's self-report and least evident based on parent report. Interviewer data were mixed. Despite the between-group differences noted at postintervention, at the 6- and 12-month follow-ups, there were no between-group differences with regards to depression or conduct disorder.

Overall, this series of outcome studies on CWD-A suggest that this specific intervention meets the criteria for a probably efficacious treatment, as client characteristics were specified, a treatment manual was used, and

more than two adequate group design studies demonstrated that CWD-A, with or without a parent component, was superior to an alternative or no-treatment control condition. However, this specific program fails to meet the full criteria for a well-established treatment as CWD-A has been evaluated by only one interrelated research group.

CWD-A has guided the development of treatment protocols by other investigatory teams (Asarnow et al., 2005; TADS Team, 2004) that found the active treatment more effective in improving adolescent functioning than control conditions. CWD-A also has been utilized as a basis for an acute, brief intervention (Clarke et al., 2005), but this brief treatment was not found to be more efficacious than the treatment as usual condition in reducing depression symptoms. None of these studies utilized the specific CWD-A treatment program.

IPT-A also is a probably efficacious specific psychosocial treatment for adolescent depression. Two randomized controlled studies that have examined the efficacy of IPT-A (Mufson, Dorta, Wickramaratne et al., 2004; Mufson et al., 1999) in reducing depressive symptoms and improving interpersonal functioning found this specific program to be more efficacious in improving functioning than control conditions. IPT-A is an adolescent version of an earlier program designed for depressed adults. Similar to the adult program, IPT-A addresses a specific area of interpersonal difficulty but shifts the focus to interpersonal issues specific to adolescence, such as changes in the parent-adolescent relationship due to shifts in closeness and authority. The program supports adolescents in relating their difficulties to one of four primary problem areas (i.e., grief, role disputes, role transitions, interpersonal deficits) and in developing effective strategies (e.g., improved communication, expression of affect related to changes in relationship, development of a new and effective social support system) to deal with their problem area. IPT-A consists of 12 individual sessions, 30 to 60 min in length. Sessions are conducted during a 12- to 16-week period, and one study evaluating this program (Mufson et al., 1999) also included a weekly phone contact between the therapist and adolescent for the first 4 weeks of the intervention.

To evaluate the efficacy of IPT-A, Mufson et al. (1999) randomly assigned 48 adolescents who met criteria for any depressive disorder to the IPT-A program or a clinical monitoring control condition. Participants were recruited from hospital and school clinics or were family or self-referred. Youth in the control condition were assigned a therapist with whom they could meet monthly, with an option for a second session within the month, and this therapist monitored their symptoms but refrained from advice giving or skill training. Adolescents in the IPT-A treatment showed significantly greater improvements in their depressive symptoms,

social functioning, and interpersonal problem solving than adolescents in the control condition according to self-report measures and clinical interviews. The study did not include a follow-up assessment to help determine whether the benefits of IPT-A were maintained over time.

In an examination of the same version of the IPT-A program delivered in a school-based setting, 63 adolescents who met criteria for a depressive disorder were randomly assigned to IPT-A or an individual therapy control condition that resembled supportive therapy and that was the customary treatment offered in the school health clinic (Mufson, Dorta, Wickramaratne et al., 2004). Engagement in both conditions led to reductions in depressive symptoms, but IPT-A participants evidenced a significantly greater reduction in their depression and significant improvements in their global and social functioning according to self-report and clinician ratings relative to youth in the control condition. Teens were re-evaluated at a 16-week follow-up with a clinician assessment, and the significant between-group differences were maintained.

Taken together, outcome studies evaluating IPT-A (Mufson, Dorta, Wickramaratne et al., 2004; Mufson et al., 1999) provide sufficient information to deem IPT-A a probably efficacious treatment for adolescent depression, as client characteristics were specified, a treatment manual was used, and two adequate group design studies demonstrate that IPT-A was superior to treatment controls. Rossello and Bernal (1999) also evaluated the efficacy of an IPT treatment with Puerto Rican adolescents and found youth in the IPT condition had significantly greater reductions in depressive symptoms and significantly greater increases in self-esteem and social adaptation when compared to youth in the control group. However, the IPT treatment protocol utilized by Rossello and Bernal is not the same specific program as IPT-A examined by Mufson and colleagues (Mufson, Dorta, Wickramaratne et al., 2004; Mufson et al., 1999). Accordingly, as is found for CWD-A, IPT-A also falls short of being a well-established specific treatment for depressed adolescents as it has only been evaluated by one investigatory team.

Other specific psychosocial interventions (i.e., Adolescents Coping with Emotions, Attachment-Based Family Therapy, Depression Treatment Program, Feeling Good, Interpersonal Psychotherapy-Adolescent Skills Training, Time for a Future-Adolescent Depression Program) have been found to be efficacious in reducing depressive symptoms (Ackerson et al., 1998; Diamond et al., 2002; Kowalenko et al., 2005; Wood et al., 1996) and rates of depression diagnosis (Melvin et al., 2006) relative to control conditions. However, these specific interventions are deemed experimental because of their limited examination.

Modality classification schema. The adolescent treatment studies also utilized a variety of modalities, and their status as an experimental, probably efficacious, or well-established modality of treatment is presented in Table 4. Several intervention protocols for depressed adolescents have been examined that fall under the CBT rubric, and these CBT studies were divided by modality (i.e., adolescent-only group, adolescent group plus parent component, individual, individual plus parent/family component, self-directed bibliotherapy, CBT-enhanced primary care services). The modality of CBT group, adolescent only (Clarke et al., 1995; Clarke et al., 1999; Kowalenko et al., 2005; Lewinsohn et al., 1990; Lewinsohn et al., 1996; Reynolds & Coats, 1986) can be considered well-established because it includes at least two well-conducted studies by different investigatory teams that found this approach more effective than a psychological placebo or alternative treatment control condition, specified client characteristics, had adequate sample sizes, and utilized treatment manuals. In addition, one specific intervention (i.e., CWD-A) included in this modality meets criteria for probably efficacious.

The modalities under CBT of individual (Rossello & Bernal, 1999; Wood et al., 1996) and individual plus parent/family component (Brent et al., 1997; TADS Team, 2004) are deemed probably efficacious, because they do not include a specific CBT program that is at least probably efficacious. The adolescent group plus parent component modality (Clarke et al., 1995; Clarke et al., 2001; Clarke et al., 1999; Lewinsohn et al., 1990; Lewinsohn et al., 1996; Rohde et al., 2004) does include a specific CBT program (i.e., CWD-A) that is probably efficacious; however, it falls short of being well-established as it has only been examined by one interrelated investigatory team.

Finally, the CBT modalities of self-directed bibliotherapy (Ackerson et al., 1998) and enhanced primary care services (Asarnow et al., 2005) are presently experimental because of the limited extent to which they have been evaluated. Self-directed bibliotherapy involves adolescents independently reading *Feeling Good* (Burns, 1980), which is based on Beck's (1970) cognitive theory of depression, and completing the book's exercises. Enhanced primary care services includes education and support of primary care clinicians in evaluating and managing adolescents' depression, care managers trained in manualized CBT for depression, coordination of treatment between care managers and primary care clinicians, and patient and clinician choice on treatment approach.

The modality of individual treatment under the theoretical orientation of IPT also is a well-established approach for adolescent depression. This modality has been used in more than two well-conducted studies from

different investigative teams that have found it more effective than a psychological placebo or alternative treatment control condition. Studies using this modality specified client characteristics, had adequate sample sizes, and used a treatment manual (Mufson, Dorta, Wickramaratne, et al., 2004; Mufson et al., 1999; Rossello & Bernal, 1999). Further, one specific intervention (i.e., IPT-A) included in this modality is at least probably efficacious. Group treatment under the theoretical IPT approach is experimental because of its limited examination to date (Young et al., 2006a).

Other treatment modalities for adolescent depression also have been examined and are promising. These include nondirected support provided through an adolescent only group (Fine, Forth, Gilbert, & Haley, 1991), as well as a family-systems-oriented approach offered with the parent-adolescent subsystem (Diamond et al., 2002). These approaches have been examined in few studies and thus are classified as *experimental* at the present time.

Theoretical orientation classification schema. The status of interventions for treating adolescent depression also was examined from the broader theoretical orientation perspective. Based on the published studies, CBT (Ackerson et al., 1998; Asarnow et al., 2005; Brent et al., 1997; Clarke et al., 1995; Clarke et al., 2001; Clarke et al., 1999; Kowalenko et al., 2005; Lewinsohn et al., 1990; Lewinsohn et al., 1996; Reynolds & Coats, 1986; Rohde et al., 2004; Rossello & Bernal, 1999; TADS Team, 2004; Wood et al., 1996) and IPT (Mufson, Dorta, Wickramaratne, et al., 2004; Mufson et al., 1999; Rossello & Bernal, 1999; Young et al., 2006a) meet criteria for well-established treatments. Numerous studies demonstrate that CBT and IPT are more efficacious than alternative treatments or treatment controls; studies have been conducted by different investigators; and at least two studies have adequate sample sizes, specify sample characteristics, and use treatment manuals. One of the specific protocols for CBT (i.e., CWD-A) and IPT (i.e., IPT-A) also meets criteria for at least probably efficacious treatments for adolescent depression.

The theoretical approaches of nondirected support (Fine et al., 1991), family systems theory (Diamond et al., 2002), and behavior therapy (Reynolds & Coats, 1986) are viewed as experimental even though they have been found more effective than control conditions, used treatment manuals, and specified sample characteristics. These theoretical approaches have received limited study, and none include a specific intervention that is at least probably efficacious, which limits the status of these overall theoretical orientations to experimental.

CONCLUDING COMMENTS

In this section, we offer some final evaluative comments about the published literature on psychosocial treatments for depressed youth and highlight some strengths and weaknesses of the literature. We provide research suggestions that would support the continued advancement of this field. Specific attention is paid to the growing interest and use of antidepressant medications with youth. Finally, recommendations for best practice are provided.

Review Summary

The field has made remarkable progress in expanding upon the breadth and quality of published evaluations of psychosocial interventions of youth since the 1998 Kaslow and Thompson review: More interventions now meet criteria for probably efficacious, unique treatment modalities (e.g., videoconferencing) are now being evaluated, and a greater range of theoretical approaches are being examined (e.g., psychodynamic, family systems). Several psychosocial interventions for child and adolescent depression, the majority of which are based on a cognitive-behavioral model or interpersonal model, reduce depressive symptoms and/or alleviating depressive disorders in clinical and nonclinical samples. This assertion is based on a growing number of studies that use varying treatment approaches and evaluation designs but generally are well-designed, methodologically sound randomized controlled trials. According to guidelines by Nathan and Gorman (2002), the child studies typically met criteria for Type 2 trials due to a series of minor methodological weaknesses. In contrast, the studies with adolescents were better designed and thus more met criteria for Type 1 trials.

The continued growth of well-designed, randomized controlled trials examining the efficacy of psychosocial interventions for depressed youth has bolstered the evidence-based status of specific programs, modalities of treatment, and broad theoretical approaches. Our review indicates that the specific interventions of Self-Control Therapy and Penn Prevention Program for children and of CWD-A and IPT-A for adolescents are probably efficacious. These programs fell short of being well-established specific interventions because they have been examined by only one investigatory team or their efficacy relative to a psychological placebo or alternative treatment has received limited study. However, the quality of the trials and at times breadth of investigations across a myriad of settings and patient populations indicate that these are very promising treatments.

Further, this review demonstrates that positive treatment effects are found regardless of treatment modality (group, individual, or family therapy) or the nature or

extent of parental involvement. However, for children, there is the most evidence to support the modalities of group-child only and child group plus parent component under the theoretical rubric of CBT, resulting in these being well-established modalities. For adolescents, the modalities of group adolescent under CBT and individual treatment under the broad framework of IPT have the most support and are deemed well-established. Other promising modalities under CBT for adolescents are adolescent group plus parent component, individual, and individual plus parent/family component, and these approaches meet criteria for probably efficacious. Direct comparisons of treatment modalities are limited and have not demonstrated any modality to be superior (Clarke et al., 1999; Lewinsohn et al., 1996; Spielmans, Pasek, & McFall, 2007).

From a broad theoretical perspective, CBT for both children and adolescents and IPT for adolescents appear to be well-established. These theoretical approaches have the greatest empirical support to guide the development and implementation of interventions with depressed youth, and the effectiveness of these approaches is supported by a recent meta-analytic review (Watanabe, Hunot, Omori, Churchill, & Furukawa, 2007). For children, the theoretical approach of behavior therapy also shows some promise, and available data suggest that this approach is probably efficacious.

Studies with both children and adolescents across modalities and theoretical orientations reveal positive findings regardless of the setting in which the intervention was conducted. Youth showed improvements in their levels of depressive symptoms, reductions in rates of depressive disorders, and progress in terms of other related psychological symptoms and psychosocial adjustment markers when they received active interventions in school settings, community clinics, hospital-based clinics, research clinics, primary care settings, or HMOs.

In addition, despite the broad range of control conditions, ranging from no-treatment or waitlist controls on one end of the continuum to treatment as usual, clinical monitoring or traditional counseling on the other end of the continuum, findings suggest that manualized and structured interventions are associated with greater intervention gains. However, treatment gains were endorsed primarily by the youth themselves. In general, mixed efficacy was found for clinician ratings based on input from youth and/or their parents, and parents frequently did not rate their youth in the active intervention as showing greater gains than those in the control groups.

As reported in Tables 1 and 2, even within informant, effect sizes ranged from small to large treatment gains for children (e.g., .25–.92 on the CDI) and adolescents (e.g., .17–.66 on the BDI). These effect size results are

consistent with variability indicated by prior reviews (M effect size = .34, Weisz, McCarty, & Valeri, 2006; M effect size = .72, Michael & Crowley, 2002), and with the general finding in these reviews that psychosocial interventions with depressed children and adolescents produce moderate treatment gains.

Future Research Directions

Relative to other problem areas for children and adolescents that are targeted by psychosocial interventions, the availability of studies examining interventions for depressed youth is currently a small but developing literature. Accordingly, there are many avenues for future research to consider and explore. In the following section, we offer recommendations of factors to consider when developing and evaluating psychosocial interventions for depressed youth. For instance, few investigators have examined variables that moderate (i.e., factors that influence the direction and/or strength of the intervention) and/or mediate (i.e., the mechanism by which an intervention is efficacious) treatment responses (Baron & Kenny, 1986; Holmbeck, 1997, 2002; Kraemer, Wilson, Fairburn, & Agras, 2002). Researchers who examine depression interventions increasingly assess theorized change mechanisms, but tests of mediation often are not conducted (Weersing & Weisz, 2002). We discuss some factors that should be considered as well as ways the field can be advanced by examining understudied theoretical approaches and modalities, comparing active interventions, and conducting effectiveness research. This line of empirical inquiry is crucial to further understanding of how and for which youth interventions are most likely to be beneficial.

Development. With regards to demographic factors, the limited data suggest that psychosocial interventions are more effective for adolescents than for children and for younger adolescents than older adolescents, but results are mixed regarding the moderating effect of age of onset of the first depressive episode (Clarke et al., 1992; Jayson, Wood, Kroll, Fraser, & Harrington, 1998; Michael & Crowley, 2002). Recent treatments for children have demonstrated increased attention to developmental issues (Asarnow et al., 2002; Muratori et al., 2003; Nelson et al., 2003; Pfeffer et al., 2002), and similar focus with adolescent interventions is warranted.

The design and implementation of future intervention programs must be developmentally informed. How the cognitive, biological, and socioemotional maturity of youth influence the development and presentation of depressive symptoms and how these factors may impact a youth's responsiveness to an intervention protocol need to be considered (Cicchetti & Toth, 1998). Data

suggests that more rational thinking is associated with better treatment response and short depressive episodes (Clarke, DeBar, & Lewinsohn, 2003). Because of the stronger cognitive maturity of adolescents relative to children, adolescents may respond better to intervention components that seek to address their cognitive skills (Durlak, Fuhrman, & Lampman, 1991).

Data, though, are mixed with regards to cognitive factors as treatment mediators. Kolko, Brent, Baugher, Bridge, and Birmaher (2000) found that changes in adolescents' cognitive distortions did not mediate the effects of a CBT intervention on depressive symptoms. In contrast, others have found changes in dysfunctional thinking patterns and automatic thoughts and in optimistic explanatory style have been found to mediate treatment outcomes with both children and adolescents (Ackerson et al., 1998; Gillham et al., 1995; Kaufman et al., 2005; Yu & Seligman, 2002). Continued examination of the effect of cognitive change components of interventions is needed, and investigators need to be attentive to the cognitive development of youth when designing these elements to be sensitive to developmental differences.

Because of the varying cognitive, biological, and socioemotional needs of children and adolescents, future treatment developers should follow the lead of more recent interventions and consider using developmentally informed theories to base their protocols on (Pfeffer et al., 2002). In addition, attention should be given to the increased involvement of key individuals, such as parents, to help support the development of more adaptive skills and to foster generalization beyond the therapy environment (Asarnow et al., 2002; Gillham, Reivich, et al., 2006; Nelson et al., 2003). Although Kolko et al. (2000) did not find family variables to mediate or moderate treatment outcome of adolescents, studies that have examined family factors have shown them to be significant predictors of youth's affective functioning and suggests they should be considered in future research. For example, greater parental involvement is associated with improved outcomes (Clarke et al., 2003), the positive effects of CBT are weakened for adolescents whose mothers are depressed (Weersing & Brent, 2003), and family factors predict youth's depression recovery and reoccurrence (Birmaher et al., 2000; Rohde, Seeley, Kaufman, Clarke, & Stice, 2006).

Further, the increased involvement and influence of peers during the adolescent stage of development suggest that the inclusion of peer components also may be an important developmental consideration when designing effective interventions for adolescents. Because of the limited attention to date of the potential mediating or moderating role of parents, peers, or other influential individuals and data not showing a clear benefit for involving others in psychosocial interventions

(Clarke et al., 1999; Lewinsohn et al., 1996; Sanford et al., 2006), additional evaluation is needed. This research would ascertain whether this developmental consideration impacts the direction and/or the magnitude of the intervention effect and what modality is the most likely to lead to enhanced impact (e.g., separate parent education group vs. integrated family therapy).

Attention to such developmental considerations appears in the ACTION treatment program that is currently being evaluated by Stark and colleagues (Stark et al., in press; Stark et al., 2006). This group intervention program includes developmentally appropriate experiential exercises and parent training and teacher consultation components. The evaluation of these elements will be informative to the next wave of intervention development.

Ethnocultural factors. Other patient characteristics, such as ethnocultural factors, may moderate or mediate treatment efficacy. One study that has examined the moderating role of ethnicity (Rohde et al., 2006) found that a CBT intervention was more effective for depressed Caucasian youth than a life-skills control condition, whereas non-White adolescents had similar recovery rates across conditions. In addition, there is evidence from a prevention of depression study (Cardemil et al., 2007; Cardemil et al., 2002) that the program may not be equally efficacious for children from different ethnic and racial backgrounds. Attention to ethnocultural factors in the design and implementation of interventions is developing but remains rare. Only two investigatory teams describe offering culturally competent care in treatments that were found to be efficacious (Rossello & Bernal, 1996, 1999; Yu & Seligman, 2002), and only a few others have discussed culturally informed intervention programs (Bernal & Scharron-del-Rio, 2001; Griffith, Zucker, Bliss, Foster, & Kaslow, 2001; McClure, Connell, Zucker, Griffith, & Kaslow, 2005). There is some evidence for the value of culture-specific interventions for depressed youth and their families (Breland-Noble, Bell, & Nicolas, 2006; Griffith et al., 2001; McClure et al., 2005) and the benefit that such approaches have for facilitating treatment engagement (Breland-Noble et al., 2006). Accordingly, the efficacy of psychosocial treatment for depression with cultural/ethnic minority youth is unknown and deserves further study.

Clinicians and researchers agree that the field and patients would benefit from the design and evaluation of ethnoculturally relevant interventions (American Psychological Association, 2003; Bernal & Scharron-del-Rio, 2001; Kleinman & Good, 1985). Interventions could be either created to be specific to a cultural group or adapted from existing evidence-based interventions to be culturally sensitive. With either approach, how

depression is commonly manifested and viewed by a particular community (e.g., stigmatized issue, family problem) must be taken into account (American Psychiatric Association, 1994; Marsella & Kaplan, 2002). In addition, potential ethnicity differences in recovery time should also be considered (Rohde et al., 2006).

Intervention developers must have knowledge of the history, customs, and traditions of the target population. Key members from the target community should be involved in the intervention's development to ensure the appropriateness and compatibility of an intervention's components (e.g., increasing assertiveness of youth vs. supporting authority of parents, emotional expression vs. reserve when discussing affect) and modality (e.g., individual, family, group) with the culture of the target population. Constructs particularly relevant to a targeted population should be incorporated and be examined as potential moderators, predictors, and/or outcomes when evaluating the intervention. When designing or selecting an intervention, it would be important to take into account a youth's ethnocultural background as well as their level of ethnocultural identity (Marsella & Kaplan, 2002). With the rapid growth of multiracial and multicultural families, how related identity issues may influence the acceptability and impact of a program should be examined (McDowell et al., 2005).

Treatments also need to be sensitive to language preferences and boundary issues that may develop as a result of using a translator or merely by the therapist being an outsider to the family and discussing a child's mental health needs. Intervention developers should consider the potential utility and/or ethnocultural necessity to have therapists from the same community being served and who fluently speak the dominant language of the targeted family. At a minimum, therapists must be aware of their own ethnocultural knowledge, attitudes, and biases and address these areas to enhance the level of trust and the efficacy of the intervention (American Psychological Association, 2003). Finally, treatment developers should adequately describe the cultural and ethnic makeup of their participants and should discuss the generalizability of their programs to other ethnocultural groups.

One of the inherent challenges of evaluating the efficacy of a treatment for varying ethnocultural groups is the limited availability of evaluation instruments that have appropriate psychometric properties for a wide range of unique population groups. To move culturally sensitive intervention research forward, instruments need to be developed and/or adapted for a broader range of ethnocultural groups (American Psychological Association, 2003; Bernal & Scharron-del-Rio, 2001; Marsella & Kaplan, 2002). These instruments need to be sensitive to the dialect and linguistic characteristics of the target group. The evaluation tools also need to

be tested to ensure the global construct (e.g., depression) as well as indicators (e.g., depressive symptoms) are valid in the target population. When interpreting data from these measures, sensitivity is needed to the unique background of the individual being evaluated, as well as the attitudes and biases the interpreter of the data may be bringing to bear on the data.

Finally, when assessing the mental health of youth and the impact of interventions, multiple informants (e.g., youth, parent, clinician) are typically employed, and as this review demonstrates, the apparent efficacy of an intervention often varies depending on the informant. Although discordance in reports of the affective functioning of youth is not rare (Achenbach & Rescorla, 2001), researchers should attend to how ethnocultural factors may play a role in an informant's awareness of a youth's mental health functioning and/or willingness to report positively or negatively on the functioning of the youth (Roberts, Alegria, Roberts, & Chen, 2005).

Gender. The moderating role of gender also remains uncertain because of limited examination to date and inconsistent findings. For instance, gender has been found to have no effect on treatment outcome (Jayson et al., 1998; Kolko et al., 2000), whereas other researchers suggest that interventions for depression are more efficacious for females (Michael & Crowley, 2002) and still others highlight trends for increase depression recovery for males (Clarke et al., 1999). As with other potential moderators of intervention efficacy, the question related to gender differences is how data related to these variations may suggest gender specific intervention components and modalities. Interventions should attend to data suggesting that female children are more likely to have risk factors for depression than their male peers even though these vulnerability factors may only manifest as depression after facing the biopsychosocial challenges of adolescence (Nolen-Hoeksema & Girgus, 1994), and this heighten vulnerability for female adolescents is supported cross-culturally (Galambos, Leadbeater, & Barker, 2004; Wade, Cairney, & Pevalin, 2002). Female youth may benefit more from interpersonally oriented treatments whereas their male peers may respond better to cognitive behaviorally oriented approaches, however the dearth of data make it premature to draw any conclusions in this regard (Garber, 2006).

In addition, data suggest that female and male youth experience different correlates for depression and cope with depression differently. When designing either entire intervention protocols specific for a particular gender group or in designing components of treatment that address the unique needs of males and females, such gender differences should be considered. For instance, peer difficulties appear to be more strongly correlated

with depressive symptoms in females than males (Nolen-Hoeksema, 2002), which suggests that intervention components that target the enhancement of social relationships may be particularly valuable for female youth. When developing intervention components, consideration should be given to findings that females tend to be more internally focused and cope using rumination strategies, whereas males tend to be more externally focused (Nolen-Hoeksema, Larson, & Grayson, 1999; Sethi & Nolen-Hoeksema, 1997). Interventions for females may increase their impact if they specifically target the negative thought cycle and the rumination that exacerbates and maintains their depressive symptoms, whereas programs for males may be more efficacious if they focus on how male youth perceive and interpret external cues. Finally, gender specific interventions should consider socialization differences that tend to promote females to be more emotionally expressive and gender differences regarding who youth seek help from to deal with a difficulty (Wintre, Hicks, McVey, & Fox, 1988). Females may be more likely to attend the intervention and experience positive treatment related impact (e.g., reductions in hopelessness) when their fellow group participants includes only other females (Chaplin et al., 2006).

The ACTION treatment program that is currently being evaluated by Stark and colleagues (Stark et al., in press; Stark et al., 2006), is a recently developed gender-sensitive intervention. The intervention format, activities used, coping skills emphasized, and interpersonal focus are specific for young females. Preliminary results suggest the ACTION Program is effective and associated with a 70% recovery rate. The descriptions of this program highlight important factors to consider in the development and implementation of a gender-sensitive protocol, which are extremely useful to the future development and evaluation of such programs.

Diagnosis/comorbidity. The moderating role of diagnostic factors, such as symptom severity and comorbidity, has received limited attention. One study found that youth with recurrent major depression evidenced significantly faster depression recovery after participating in a CBT intervention relative to a life-skills control condition, whereas adolescents experiencing their first depressive episode fared equally well across treatment conditions (Rohde et al., 2006). Trowell et al. (2007) found that individual psychodynamic therapy and family therapy were associated with decreases in the prevalence of MDD, DD, and both MDD and DD as well as other comorbid conditions. Available research also highlights a predictive association between many diagnostic factors and changes in depression over time and suggests that the examination of the moderating role

of such factors in psychosocial interventions would be important in future research. For instance, youth participating in CBT have been found to have significant reductions in their depressive symptoms when they entered the trial with a greater number of past psychiatric diagnoses, lower levels of depression, and suicidal ideation (Barbe, Bridge, Birmaher, Kolko, & Brent, 2004; Brent et al., 1998; Clarke et al., 1992; Jayson et al., 1998; Rohde, Clarke, Lewinsohn, Seeley, & Kaufman, 2001; Weersing & Brent, 2003).

Whereas some studies have revealed that comorbid anxiety disorders are associated with greater improvements in depression (Rohde et al., 2001; Weersing & Brent, 2003), others have found that lower levels of anxiety are associated with greater reductions in depressive symptoms (Clarke et al., 2002; Young, Mufson, & Davies, 2006b). In addition, lifetime substance use/dependence appears to be associated with slower time to recovery (Rohde et al., 2001), and comorbid attention deficit disorder and disruptive behavior disorders appear to be linked with longer recovery time and a greater risk for depression recurrence postintervention (Rohde et al., 2001). Investigators are beginning to ascertain the effectiveness of interventions with youth with comorbid conditions (Curry, Wells, Lochman, Craighead, & Nagy, 2003; Rohde et al., 2004; Trowell et al., 2007; Young et al., 2006b). Future research that includes more clinically referred youth will allow for a broader examination of the impact that symptom severity and comorbidity (e.g., MDD plus DD) have on treatment efficacy and effectiveness.

Examination of understudied theoretical approaches and modalities. This review demonstrates that there is growing attention to and support of theoretical approaches (e.g., behavior therapy, family systems theory, psychodynamic psychotherapy) other than CBT to addressing child and adolescent depression. A continued development and evaluation of such protocols would benefit the field by allowing for a greater range of evidence-based treatment options of youth, families, and therapists to better meet their individual needs and perspectives.

Increased attention to family-based interventions in particular is needed. Depression in youth often is associated with problems in family functioning (Kaslow, Deering, & Ash, 1996; Kaslow, Deering, & Racusin, 1994), and at long-term follow-up participation in family interventions is associated more strongly with reductions in family conflict and with improvements in parent-child relationships than is involvement in CBT (Kolko et al., 2000). In addition, family interventions with depressed youth have been found to enhance family members' knowledge about depression, increase their utilization of appropriate services, and improve family interactions

and adolescent's social functioning (Fristad, Arnett, & Gavazzi, 1998; Fristad, Gavazzi, & Soldano, 1998; Fristad et al., 2003). Family approaches also may be particularly important to building protective factors for youth when a parent is depressed (Beardslee et al., 2003).

Although studies with a parent component in this review did not demonstrate that parental involvement added to the benefits of the treatment protocol, only one study made clear that it evaluated a standard family therapy component with all family members present. In the reviewed programs that involved any family members in the treatment (Asarnow et al., 2002; Clarke et al., 2005; Clarke et al., 2001; Clarke et al., 2002; Clarke et al., 1999; Diamond et al., 2002; Gillham, Reivich, et al., 2006; Muratori et al., 2003; Nelson et al., 2003; Pfeffer et al., 2002; Rohde et al., 2004; Sanford et al., 2006; Trowell et al., 2007), typically a parent was the only family member involved, and frequently the parent had separate sessions.

The one study (Sanford et al., 2006) that evaluated a family psychoeducation component that involved all family members living in the adolescent's home did not find that it led to significant changes in depressive symptoms among adolescent participants relative to the control condition. However, it was associated with improvements in the adolescent's social functioning and the adolescent-parent relationship. Accordingly, it behooves future investigators to examine various forms of family therapy for depressed youth and to consider the inclusion of the entire family constellation rather than only a single parent (Cottrell, 2003; Kaslow, Mintzer, Meadows, & Grabill, 2000). The incorporation of family services may be substantial and include multiple sessions or it may be limited to a couple of sessions to review treatment progress, answer the family's questions, and/or reinforce learning principles taught in the program the target youth in participating in. In either case, it is important of investigators to consistently report in their studies the addition, frequency, and scope of family contact to broaden the understanding of the benefit of this modality.

Comparison of active interventions. Few between-group design studies that compare a psychosocial intervention to a pill or psychological placebo condition or another active treatment have been conducted, which precludes us from concluding that any specific intervention approach is more efficacious in reducing depression. Many psychosocial interventions are found to be efficacious relative to no-treatment control conditions (Clarke et al., 1999; Jaycox et al., 1994; Yu & Seligman, 2002), but the lack of an alternative treatment control group comparison limits the ability to rule out that positive results may be due to nonspecific factors such as attention.

The few studies that have compared different active interventions (Brent et al., 1997; Rossello & Bernal, 1999; TADS Team, 2004; Trowell et al., 2007) yielded mixed results across informants and outcome measures. With the growing evidence supporting various specific interventions (e.g., Penn Prevention Program, Self-Control Therapy, CWD-A, IPT-A), between-group comparisons of active treatments are more likely to be conducted. It is imperative that future investigations be conducted in a culturally competent fashion, to examine a broader array of treatments including novel approaches (e.g., videoconferencing, Web-based treatments) and the involvement of parents and other family members, and to compare active interventions. In these future investigations, it also behooves researchers to report the percentage of youth who are fully recovered at the end of treatment across active treatments; this information is not consistently reported and previous reviews have suggested a large range of effectiveness by treatment (Weisz, Jensen, & McLeod, 2005).

Replication by unrelated investigatory teams. This review also indicates that one of the main stumbling block for gaining the necessary evidence-based support for a specific program (e.g., Self-Control Therapy, CWD-A, and IPT-A) to be deemed well-established is that intervention protocols tend to be evaluated by one investigatory team. The potential problems of allegiance effects (i.e., intervention effects tend to be larger when evaluated by the group of researchers who prefer and developed the intervention protocol) have been debated (Robinson, Berman, & Neimeyer, 1990). One strategy to address this difficulty would be to relax the evidence-based criteria, but such a strategy would remove the importance of replication. Replication is necessary to demonstrate that the treatment protocol is contributing to change, and that change is not only the result of expertise. In addition, replication is required to demonstrate that the positive impact of an intervention will generalize to different therapists, settings, and patients.

Future research is needed that involves independent evaluation of probably efficacious intervention. To support replication, it is helpful for investigators to report consistently even minor changes in manualized treatments from study to study for new investigatory teams to capitalize on the progress and lessons learned by the original developers of an intervention. Little attention has been paid to treatment adherence variables or therapist variables that may impact treatment outcome (Clarke et al., 2003; Kolko et al., 2000). Thus, the field is ripe for a more systematic and comprehensive evaluation of a broad array of variables that may influence treatment outcome.

Design and evaluation of long-term intervention effects. The long-term efficacy of the reviewed interventions remains unclear because of the limited availability of follow-up data and mixed results when available. A recent meta-analysis also questions the long-term benefit of psychotherapy with depressed youth relative to control conditions (Watanabe et al., 2007). Of the limited studies with follow-up data that we reviewed, a number found that between-group differences immediately following the active intervention were no longer evident at follow-up (Birmaher et al., 2000; Roberts et al., 2003; Rohde et al., 2004). In contrast, two interventions did not demonstrate treatment effects immediately following the completion of active treatment, but group differences in favor of the intervention were found at long-term follow-up (Gillham, Reivich et al., 2006; Muratori et al., 2003). Another study found the benefits of one treatment over another that were apparent at the end of the active phase of treatment disappeared at follow-up because both groups continued to improve following treatment and became relatively equal in their effect by the 6-month follow-up (Trowell et al., 2007). In addition, the limited inclusion of booster sessions (Clarke et al., 1999) and the low frequency with which participants use booster sessions when offered (Melvin et al., 2006) make it unclear whether periodic therapeutic sessions following the completion of the main treatment intervention could help to maintain and/or extend recovery.

Because depression is a recurrent disorder in young people that is associated with a myriad of psychosocial sequelae, it is imperative that future research includes follow-up evaluations, that longer term treatments be considered, and that more attention is paid to the utility of booster sessions. There is an inherent challenge to this recommendation in that youth initially assigned to a control condition often receive the active treatment after the postintervention assessment, and thus it is not practical to compare the treatment and control groups over time. With the likely conduct of studies that compare active interventions, this challenge may be less problematic.

Prevention research. This article focused on intervention trials with children and adolescents that had as their primary purpose to reduce depressive symptomatology, and prevention studies where youth were not identified as having depressive symptoms were excluded (Barrett, Farrell, Ollendick, & Dadds, 2006; Barrett & Turner, 2001; Beardslee et al., 2003; Chaplin et al., 2006; Merry et al., 2004; Pattison & Lynd-Stevenson, 2001; Possel, Baldus, Horn, Groen, & Hautzinger, 2005; Possel, Horn, Groen, & Hautzinger, 2004; Spence et al., 2003). Several of the reviewed studies treated youth with clinically significant levels of depression (Clarke et al., 1999; Nelson et al., 2003;

Rossello & Bernal, 1999), whereas others targeted at-risk youth who were deemed at risk because they had elevated depressive symptoms but were subclinical (Ackerson et al., 1998; Asarnow et al., 2005; Pfeffer et al., 2002). Studies targeting at-risk youth inconsistently self-identified themselves as prevention studies, but most that did self-identify as prevention had as their primary focus a treatment and reduction of depressive symptoms rather than the prevention of developing an affective disorder (Roberts et al., 2003; Yu & Seligman, 2002). For instance, Roberts et al. (2003) titled their study as a prevention trial but stated that the primary purpose of their project was to reduce depressive symptoms, and they did not evaluate at either postintervention or follow-up whether their program prevented the development of a depressive disorder.

Some studies examined whether at-risk youth who participated in an intervention program were less likely to have a depressive disorder at follow-up; thus, they represent true prevention trials. One protocol found adolescents in the active treatment experienced a significant preventative effect for a major depressive episode (Clarke et al., 2001). Another study also found adolescents in an active treatment were less likely than peers in a control condition to develop a depressive disorder (3.7% vs. 28.6%, respectively) although the difference was not statistically significant (Young et al., 2006a). In contrast, Gillham, Hamilton, et al. (2006) evaluating a prevention program for children did not find a significant preventative effect for depressive disorders but did support a significant preventative effect for high-symptom children for depression, anxiety, and adjustment disorders combined. Another study evaluated whether a targeted and/or universal intervention would have a preventative effect for at-risk youth and any participating adolescent and found that none of the interventions demonstrated a significant prevention effect relative to a no-treatment control condition, and despite improvements for most participating at-risk youth, 20% experienced a depressive episode over the course of the study (Sheffield et al., 2006).

One could argue that an intervention targeting subclinical youth for the purpose of reducing their depressive symptomatology is a prevention trial. However, for a study to be a prevention trial, it needs to have the prevention of the development of an affective disorder as one of its key objectives and hypotheses, and it must include an evaluation of clinical diagnosis at postintervention and/or follow-up. Prevention trials would also be strengthened by including an active comparison condition and having adequate sample sizes to detect change (Merry et al., 2004). Because depression has multiple negative outcomes for youth (Birmaher, Ryan, Williamson et al., 1996), the prevention of subclinical and clinically significant levels of depression is

extremely important (Birmaher, Ryan, & Williamson, 1996; Farrell & Barrett, 2007). Furthermore, prevention research would be strengthened by including a more complete evaluation of an intervention's preventative impact as well as utilizing more rigorous designs (e.g., randomized control trial). Such research would also be bolstered by considering developing preventions that are specifically tailored to youth most at risk for developing a depressive disorder and attend to developmental, cultural, and gender uniquenesses (Horowitz & Garber, 2006).

Efficacy and effectiveness. Most outcome research on the intervention of child and adolescent depression involves demonstrations of efficacy rather than evaluations of effectiveness. Because the majority of studies with children were conducted in schools with nonreferred youth with depressive symptoms and used relatively inexperienced clinicians, the generalizability of the findings across populations, settings, and clinician-experience level remains unclear. In addition, most studies focus predominantly on Caucasian youth and females, which further limit the practice inferences that can be drawn from available studies. Efficacy trials are critical first steps to understanding whether a particular intervention works in reducing depressive symptoms. However, as the evidence builds regarding the efficacy of various treatments, investigators are beginning to move toward effectiveness trials that can evaluate the generalizability of positive effects (Asarnow et al., 2005; Rohde et al., 2004). Mufson, Dorta, Olfson, Weissman, and Hoagwood (2004) provided a helpful discussion of their process, challenges, and strategies to adapting an evidence-based intervention (IPT-A) initially designed and implemented in a university setting for a school setting that others may draw upon when considering how to transport their intervention.

To support the evaluation of treatment effectiveness and dissemination of psychosocial treatments to broader populations of youth, attention is needed to methodological differences between efficacy and effectiveness studies (Schoenwald & Hoagwood, 2001). The development of researcher-community collaborations are also needed to support the design and implementation of interventions that are appropriate and acceptable to the selected setting's characteristics and population (Weisz, Southam-Gerow, Gordis, & Connor-Smith, 2003).

A series of evaluation studies also are needed to identify an intervention's necessary and sufficient treatment components and evaluate successive modifications to the treatment protocol to ensure the treatment is appropriate for the clinically referred and treated youth in terms of their gender, ethnicity, and developmental stage, whereas core treatment elements are maintained

(Weisz et al., 2005). It would be optimal if these evaluation studies were performed in a broad range of treatment settings, and with youth who range in their clinical presentation from depressive symptoms to clinically depressed to clinically depressed with comorbid conditions.

Further, treatments need to be assessed as to whether they are having the desired impact on the targeted cognitions and behaviors they are designed to have based in part on the theoretical foundation of the treatment and previous support of mediators of treatment efficacy (Zeiss, Lewinsohn, & Munoz, 1979), especially in light of findings that not all interventions do (Sheffield et al., 2006). To support such effectiveness trials and dissemination, attention also should be given to addressing barriers (e.g., poor detection of depressive symptoms in youth, lack of insurance, limited availability of services) that limit youth from receiving necessary interventions and to integrating mental health services into existing services, such as primary medical care, to reach a larger population of youth (Asarnow et al., 2005; Olfson, Gameroff, Marcus, & Waslick, 2003; Wells, Kataoka, & Asarnow, 2001).

Pharmacological Interventions

Although this review focuses on psychosocial treatments, many depressed young people receive antidepressant medications (Debar, Clarke, O'Connor, & Nichols, 2001; Delate, Gelenberg, Simmons, & Motheral, 2004; Olfson et al., 2003; Wagner & Ambrosini, 2001) either alone or in combination with psychosocial treatments. There is a burgeoning literature of randomized controlled trials documenting the efficacy of various pharmacological interventions with depressed youth, particularly adolescents. Positive effects have been for fluoxetine (Prozac; Emslie et al., 2002; Emslie & Mayes, 2001; Emslie et al., 1997; TADS Team, 2004), paroxetine (Paxil; Keller et al., 2001), sertraline (Zoloft; Wagner et al., 2003), and escitalopram (Lexapro; Wagner, Jonas, Findling, Ventura, & Saikali, 2006; Wagner et al., 2004). There is an algorithm for pharmacological interventions for depressed youth (Hughes et al., 1999) that has been found to be feasible and effective (Emslie et al., 2004) and has recently been revised (Hughes et al., 2007). At present, only fluoxetine is approved by the Food and Drug Administration (FDA) for use with children and adolescents with MDD.

One of the most recent and compelling studies supporting the efficacy of a selective serotonin reuptake inhibitor (i.e., fluoxetine) in the treatment of depressed adolescents comes from the National Institutes of Mental Health-sponsored multisite trial. This trial is the TADS, which has been described in several recent publications (Curry et al., 2006; Emslie et al., 2006;

Kennard et al., 2006; Kratochvil et al., 2006; March, Silva, Vitiello, & the TADS Team, 2006; May et al., 2007; The Treatment for Adolescents with Depression Study Team, 2003, 2005; TADS Team, 2004; Vitiello et al., 2006), and information about the study is presented in Table 2. TADS is a randomized, masked effectiveness trial that evaluates the short-term (12-week) and long-term (36-week) effectiveness of four interventions for adolescents who meet diagnostic criteria for MDD. The four interventions are CBT alone, fluoxetine alone, a combination of both medication and CBT (combined), and placebo pill alone.

The CBT intervention is a 15-session intervention over the course of 12 weeks that allows for flexibility in its modality to integrate parent and family sessions with individual sessions as needed. The CBT intervention is based on the CWD-A intervention developed and evaluated by Clarke, Lewinsohn, and Hops (1990) and the individual CBT intervention developed by Brent and Poling (1997). The CBT program is a skills-based treatment built on the premise that depression is caused by the maintenance of depressive thought patterns and a lack of positively reinforcing behavioral patterns. Sessions include psychoeducation about depression and its causes, goal setting, mood monitoring, increasing pleasant activities, social problem solving, cognitive restructuring, and enhancing social skills. There are two parent-only sessions that provide psychoeducation about depression and then one to three conjoint sessions to address parent and adolescent concerns. The fluoxetine condition uses a flexible dosing schedule starting at 10 mg per day and increasing to 20 mg per day at the end of the 1st week. Youth may receive up to 40 mg per day of fluoxetine by Week 8. Youth in the fluoxetine alone condition meet for six medication visits over 12 weeks with a pharmacotherapist, who provides clinical and medication monitoring and general encouragement about the effectiveness of pharmacotherapy. Youth in the combined treatment receive all of the components of both CBT alone and medication alone; however, the two interventions are functionally independent. Youth in the placebo group receive a sugar pill following the same dose pattern and monitoring pattern as the fluoxetine alone group.

Current results from TADS are based on a sample of 439 adolescents with a diagnosis of MDD and reveal that the combined treatment was more effective than either treatment alone or the pill placebo in reducing depressive symptoms according to clinician ratings and in alleviating suicidal ideation according to the youth's report. Further, fluoxetine alone was superior to CBT alone, and CBT was not more effective than placebo. Suicidal events were twice as common in adolescents treated with fluoxetine alone than in youth in the combined or CBT-alone groups, potentially indicating that

CBT protects against suicidal behavior; however, a benefit of CBT has not been supported by others (Goodyer et al., 2007). Following 12 weeks of acute treatment, 71% of teens across groups no longer met diagnostic criteria, but 50% had residual symptoms. The combined treatment group also had other positive outcomes, such as faster onset of benefit and stability of response relative to the placebo and CBT groups, greater improvements in global functioning and global health than fluoxetine alone and better effectiveness in treating mild to moderate depression than CBT alone or fluoxetine alone. These results represent the first of a series of outcome reports that will be published, and TADS will include a 1-year follow-up.

A program of research similar to the TADS trial that found a different pattern of results is the Time for a Future-Adolescent Depression Program (Melvin et al., 2006). This program evaluates the effectiveness of three interventions for adolescents who met diagnostic criteria for MDD, DD, or Depression NOS and had high rates of comorbidity (e.g., anxiety, conduct disorder). The three interventions are CBT alone, sertraline alone, and a combination of both medication and CBT. Youth in all interventions showed within group improvements in functioning. However, contrary to the TADS results, combined treatment was not superior to either CBT alone or medication alone. Adolescents in the CBT condition had a significantly superior response than adolescents in the medication-alone condition on rates of depressive disorders at postintervention. The researchers express caution in interpreting and generalizing their results because of the medication titration schedule they employed.

An additional multicenter trial currently underway is entitled the Treatment of Resistant Depression in Adolescents (<http://www.wpic.pitt.edu/research/tordia/>). This study targets 12- to 18-year-olds currently being treated for depression and whose depression has not responded adequately to treatment. Youth are assigned randomly to one of three medications: fluoxetine (Prozac), citalopram (Celexa), and venlafaxine (Effexor XR). These medications are administered either alone or in combination with CBT. Results from this trial will offer useful information about the relative efficacy of various medication/psychosocial interventions, for a relatively understudied population, namely adolescents with refractory depression.

Despite efficacy data, many parents and mental health professionals are concerned about the use of antidepressants in children and adolescents, in part because of recent warnings put out by the FDA (<http://www.fda.gov/cder/drug/antidepressants/default.htm>). In October 2004, the FDA requested that manufacturers of all antidepressant medications include in their labeling a boxed warning (black box) and Patient Education

Guide alerting consumers about the increased risk of suicidal thinking and behavior in youth treated with these agents. The warnings include the following:

1. Youth with MDD or other psychiatric disorders who take an antidepressant are at increased risk for suicidal thinking or behavior.
2. When considering an antidepressant for a child or adolescent, it is important to weigh the increased risk of suicidality with possible benefits of the medication.
3. Young people who initiate a trial of an antidepressant must be closely monitored for clinical worsening, suicidality, or unusual behavior changes.
4. Family members and other caregivers must closely observe the youth for increased symptoms or worsening of functioning and immediately communicate with the provider about any such observations.
5. A statement regarding whether the particular medication is approved for pediatric populations.

These FDA recommendations stem from a pooling of data across 24 short-term placebo-controlled antidepressant trials of more than 4,400 participants with MDD, obsessive-compulsive disorder, and other psychiatric disorders. The overall results from these studies indicated an increased risk of suicidal thinking or behavior in depressed youth (4% on active drug vs. 2% on placebo; Hammad, Laughren, & Racoosin, 2006). There was no evaluation of the risk for untreated youth, long-term trials, or the combination of medication and psychosocial interventions. There was no increase in suicidality reported for individuals with anxiety disorder, and there were no completed suicides in any studies. The Columbia Classification Algorithm of Suicide Assessment categorized suicide-related behavior in the FDA's pediatric risk analysis, and this methodology yielded more suicidal events but fewer suicide attempts (Posner, Oquendo, Gould, Stanley, & Davies, 2007). However, a recent matched case-control study of high-risk patients (e.g., severely depressed who required inpatient treatment) demonstrated children and adolescents treated with antidepressants were significantly more likely to attempt and complete suicide than youth who were not treated with antidepressants (Olfson, Marcus, & Shaffer, 2006).

The use of pharmacological interventions, either alone or in combination with psychosocial interventions, with depressed youth is only beginning to be understood. Some studies have found a benefit of combined psychotherapy treatment to be more effective than medication alone (Clarke et al., 2005; TADS Team, 2004), whereas others have not (Goodyer et al., 2007; Melvin et al., 2006), and the risk of youth using antidepressants is

uncertain. Clearly, more well-designed, randomized controlled trials of these interventions are needed to not only understand for whom these interventions may be efficacious but also to understand under what conditions such interventions can be safely applied (Cheung, Emslie, & Mayes, 2005).

Recommendations for Best Practice

This review identifies a number of specific treatment programs and theoretical and modality approaches that are efficacious in the treatment of depressed youth. However, no single intervention has emerged as the most beneficial, and effectiveness trials and examinations of mediators and moderators of treatment are only beginning to emerge. CBT for children and CBT and IPT for adolescents appear to be the most promising to base an intervention on, but this review also reveals that other treatments may be effective and deserve consideration. To identify the most appropriate approach for a specific youth and his or her family and to establish the youth's baseline level of functioning to help monitor treatment progress, treatment should begin with a thorough evaluation of a youth's functioning. The evaluation should include information from multiple informants; provide a comprehensive view of the patient's strengths and weaknesses; and incorporate assessment tools appropriate for the youth's developmental stage and, if possible, gender and cultural background.

Strengths and deficit areas identified by the evaluation will help determine the most appropriate treatment approach. For instance, if a depressed youth is found to have dysfunctional thinking patterns, a therapist would begin with a CBT intervention that teaches the patient to identify negative beliefs, evaluate the evidence for them, and generate more realistic alternatives. At the conclusion of the CBT course of treatment, a re-evaluation of the youth's functioning would determine whether treatment can be terminated, whether a repeated course or a booster session of the CBT-based intervention is needed, or whether another deficit area (e.g., interpersonal) is present that should be addressed through a different intervention activity (e.g., IPT-based improved communication intervention). Interventions should be applied sequentially and re-evaluation of the patient's needs should be done at each stage of treatment. In the selection of intervention components, therapists should consider how to capitalize on a youth's interests and areas of strength to support and enhance treatment impact and increase the likelihood of engagement. For instance, a youth with strong language and reading skills may find the use of a journal and readings that supplement session by session CBT exercises appealing and beneficial. Because depressed youth may benefit from antidepressant medication, either alone or

when provided in combination with psychosocial treatments (TADS Team, 2004), the possible benefit and role of medication should be part of the initial and ongoing evaluation of progress. Medications should be considered in cases of moderate or severe depression (National Institute for Health and Clinical Excellence, 2005). If medications are provided, monitoring of functioning in accord with FDA recommendations is necessary.

At each stage of intervention, therapists should maintain the integrity of the treatment manual of the evidence-based intervention they selected. However, because of the reality of individual differences, therapists need to tailor the approach (e.g., frequency of sessions, speed/intensity of session) to the needs and treatment progress of the child, family, or group. Also, the modality that an intervention is conducted (e.g., group vs. individual, inclusion of parent component) would depend on a number of factors (e.g., age of the patient, treatment setting). Parental and/or entire family involvement may be essential to support the generalization of treatment effects for young people and to effectively treat depressed youth with particular cultural backgrounds (Tharp, 1991) even if not part of the original intervention protocol. Sensitivity to such issues may occur at simply the assessment phase (Rossello & Bernal, 1996, 1999) or be integrated into specific treatment approaches (Yu & Seligman, 2002). Unfortunately, any of these modifications may negatively impact the demonstrated efficacy of the intervention, and research is limited with regard to how to implement programs found to be efficacious with fidelity to support the generalization of positive outcomes to a new treatment group or setting. Therapists should consult recommendations presented by a number of researchers and clinicians regarding making such adjustments (Bernal & Scharron-del-Rio, 2001; Nagayama-Hall & Okazaki, 2002; Tharp, 1991). As the development and evaluation of psychosocial treatments for depressed youth progress forward, attention must be given to how evidence-based interventions can be implemented successfully while allowing for variations in service delivery processes, level of therapist training, contextual factors, and individual needs of patients (Fagan & Mihalic, 2003; Filene, Lutzker, Hecht, & Silovsky, 2005).

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