Journal of Consulting and Clinical Psychology
2003, Vol. 71, No. 2, 364–374

0022-006X/03/$12.00 DOI: 10.1037/0022-006X.71.2.364

Efficacy of the RECAP Intervention Program for Children With Concurrent Internalizing and Externalizing Problems

Bahr Weiss, Vicki Harris, and Thomas Catron
Vanderbilt University

Susan S. Han
Vanderbilt Institute for Public Policy Studies

The authors evaluated the efficacy of RECAP, a psychosocial intervention developed to treat concurrent internalizing and externalizing problems in children. Participants included 93 4th-grade children assigned to the treatment group or a no-treatment control group. The school-based program, which lasts the 9-month academic year, provides individual, group, classroom, teacher, and parent training in the RECAP skills-development curriculum, which was derived from empirically supported treatment programs for nonconcurrent internalizing and externalizing problems. Outcome assessments included parent-, teacher-, self-, and peer reports. A mixed hierarchical linear models analysis indicated that, overall, treatment children's rate of improvement in both internalizing and externalizing problems was significantly greater than that for control participants.

Meta-analyses (e.g., Weisz, Weiss, Han, Granger, & Morton, 1995) suggest that psychological interventions are effective at reducing children's behavioral and emotional problems. However, the large majority of interventions have focused on specific problem domains, ranging from autistic disorder (e.g., Lovaas & Buch, 1997) to somatic complaints (e.g., Larsson, 1995). In contrast, children who seek and receive mental health treatment typically are experiencing multiple problems (Goodman et al., 1997). Similarly, although children at risk for the development of psychopathology often will develop problems in multiple areas (e.g., Laucht, Esser, & Schmidt, 1997), prevention programs tend to focus on specific problem areas such as antisocial behavior (Eddy, Reid, & Fetrow, 2000) or depression (Clarke et al., 1995).

There consequently is a substantial group of children—those who experience problems in multiple areas—for whom specific programs have not been developed. It thus is not surprising that development of intervention programs for comorbid problems has been identified as a priority research area (Kazdin, 1990). The RECAP (Reaching Educators, Children and Parents) program was designed for children experiencing concurrent[1] internalizing and externalizing problems. It is a treatment program in that its primary goal is to reduce the level of children's psychological problems, but it also is a prevention program in that it focuses on preventing development of more serious problems among nonreferred children.

The RECAP program was developed as part of the process of establishing a series of school-based mental health clinics (Catron & Weiss, 1994) during which a need was recognized for an effective program for children with concurrent internalizing and externalizing problems. At that time, there were no programs for such children, nor was there an explicit system for efficiently developing such programs. This lack served as the impetus for developing a general model for integrating multiple treatment programs for use with children with concurrent problems (Weiss, Harris, Catron, & Han, 2003) that, in turn, served as the model for the development of RECAP (Weiss, Catron, Harris, & Han, 2000).

Our model for adapting intervention programs for children experiencing multiple problems is structured around a series of issues to be considered regarding the psychopathology being treated and the interventions being combined (Weiss et al., 2003). These issues include (a) what the dimensions and limits of the comorbidity to be treated are; (b) whether there is an etiological relation between the concurrent psychopathologies; (c) if the concurrent psychopathologies are causally related, whether the sec-

Bahr Weiss, Department of Psychology and Human Development, Vanderbilt University; Vicki Harris and Thomas Catron, Department of Psychiatry, Vanderbilt University; Susan S. Han, Vanderbilt Institute for Public Policy Studies.

This research was supported in part by National Institute of Mental Health Grant RO1-MH54237 and by the Vanderbilt Institute for Public Policy Studies. We thank the following people: Most important, the families and children who participated in the project; the therapists and supervisors who provided the treatment (Lisa Cressler, Tricia Gaulle, Jennifer Gold-Benec, and Frances Nairhos); the teachers and principals of participating school; Tam Phung for suggesting the name RECAP; Kimberly Hoagwood and Jim Zerface for their support and encouragement throughout the project; and Cliff Russell for his facilitation of Vanderbilt Institute for Public Policy Studies' support of the project.

Correspondence concerning this article should be addressed to Bahr Weiss, Box 512 Peabody, Department of Psychology and Human Development, Vanderbilt University, Nashville, Tennessee 37203. E-mail: bahr.weiss@vanderbilt.edu

[1] Various terms have been used to describe individuals who are experiencing mental health problems in multiple areas. One such term frequently used is *comorbidity*, which most precisely has been used to refer to "the simultaneous presence of more than one disorder in the same individual" (Angold & Costello, 1992, p. 31). However, the term also has been used more generally to refer to the tendency for multiple forms of psychopathology to co-occur or to be significantly correlated (e.g., Cole & Carpentieri, 1990), irrespective of formal diagnostic status. In the present article, the term *comorbidity* is used in this broader sense.

ondary problem has gained functional autonomy; (d) whether the psychopathology is different when comorbid versus noncomorbid; (e) how the presence of one form of psychopathology affects treatment of the other form of psychopathology; (f) how the heterogeneity of psychopathology interacts with the structure of treatment; and (g) how to integrate the combined programs (e.g., determining the most appropriate sequence of components, developing a common language across components; Weiss et al., 2003).

RECAP was developed through this model, combining and modifying treatment techniques that had been developed and validated for nonconcurrent internalizing and externalizing problems. The program covered three broad types of treatments believed to show promise as effective child treatments (Kazdin & Weisz, 1998): (a) coping skills training, (b) problem-solving skills training, and (c) parent training. However, although RECAP was derived from empirically supported treatment programs, because of the extensive modifications involved in the integration process, the efficacy of the RECAP program could not be assumed. The primary purpose of the present study was to evaluate the RECAP program's ability to reduce psychopathology and improve the social functioning of children experiencing concurrent internalizing and externalizing problems.

Method

Setting

Three elementary and/or elementary–middle schools serving high-risk populations (i.e., greater than 70% of students were enrolled in the federal free lunch program) were selected for project participation.[2] Only schools without in-school mental health services were selected.

Participants

Selection and enrollment of participants. Mental health screening data, obtained from assessments conducted by the school system at the end of Grade 3, were used as the first step of a participant selection process designed to obtain a sample of children experiencing elevated levels of both internalizing and externalizing problems. The data were provided by the school with identification numbers only (i.e., without names). The screenings consisted of teacher-, peer-, and self-report mental health measures covering both internalizing and externalizing domains of psychopathology (specific measures are described later in the article).

Each child's scores on these variables were standardized to the normative sample for the particular measure. The standardized scores then were combined (a) across the domains of aggression, delinquency, and hyperactivity to produce an externalizing score; (b) across the domains of anxiety, depression, and somatization to produce an internalizing score; and (c) these two scores were averaged to produce an overall psychopathology score, for each informant for each student. Any child at least one standard deviation above the mean on the internalizing, externalizing, and overall psychopathology scores for two of three informants was eligible for project enrollment. These cutoffs were selected because Achenbach (1991a) has found that the best cutoff for discriminating clinically referred from nonreferred children on internalizing and externalizing problems is one standard deviation above the norm group mean. This list of identification numbers was given to the school systems, which matched the numbers with students' names. School personnel contacted the families, informed them about the project, and requested permission to provide the family's name and telephone number to the research project. If a family provided permission, this information was given to the project, and a staff person then telephoned the family, described the project in more detail, obtained verbal consent from interested families, and scheduled a home interview. At this visit, details of the project were reviewed, written informed consent was obtained, and the first home assessment was conducted.

This selection procedure was used, rather than one based on diagnostic criteria, to ensure that children with a range of severity of psychopathology were included in the study. Restricting the sample to participants passing diagnostic criteria would have limited external generalizability (Clark, Watson, & Reynolds, 1995), in that many children and families that need and could benefit from treatment do not meet formal diagnostic criteria (Newman, 2000).

Assignment of participants to condition. Because the RECAP program works intensively with individual classrooms of children, it was not appropriate to have treatment and control group members in the same classroom. Thus, after families were enrolled into the project at the end of Grade 3, each school's principal was given the list of participants, and asked to distribute them randomly across the two treatment and one control classrooms, with participants distributed in equal numbers to each class. At the time of initial assignment, principals were unaware of which classrooms had been selected as treatment classrooms.

Participant characteristics. Because participating schools had an odd number of classrooms, unequal numbers of children were assigned to treatment and control conditions; more children were assigned to the treatment condition than the control condition to provide full caseloads for the clinicians. One hundred thirteen families were contacted, 93 (72%) enrolled in the project (in two cohorts), 62 were assigned to the treatment group and 31 to the control group, and 89 (96%) completed their participation. Two families withdrew from the project because they left the geographical area, and two withdrew voluntarily.

Sixty-three percent of the children were male, with a mean age of 9.7 years. Reflecting the fact that participating schools served predominantly African American neighborhoods (across participating schools, 63% of students were African American), 56% of the sample were African American and 38% were Caucasian. For the primary caregiver, the mean age was 34.5 years and the mean number of years of education was 12.5. The mean family yearly income was $19,360, with 53% of the families headed by a single parent and 28% having two biological parents in the home; the mean number of children in the home was 2.5.

On the basis of norms provided by Achenbach (1991b), we found that 48% of our sample scored in the clinical range for teacher-reported internalizing problems and 54% scored in the clinical range for teacher-reported externalizing problems. In Achenbach's (1991b) Teacher's Report Form (TRF) clinical sample, 50% of the sample was in the clinical range for internalizing problems, and 56% was in the clinical range for externalizing problems. Averaging across the three school-based informants, 19% of our sample had approximately equal levels of internalizing and externalizing problems (internalizing and externalizing scores within 0.25 *SD* of each other), 52% showed higher levels of externalizing than internalizing problems, and 29% showed higher levels of internalizing than externalizing problems. To obtain a qualitative picture of project participants, we asked teachers to furnish descriptive information on the project children. Teachers provided descriptions such as "worries and is depressed, talks excessively and blows up quickly," "oppositional behavior, always wanting to fight, needs a big attitude adjustment," "low self-esteem, lying and cheating, too easily influenced by peers," "not honest, seems too young to have

[2] At the end of the first year of the evaluation portion of the project, one of the teachers in the RECAP condition developed a chronic medical condition. Although able to complete the year, her condition necessitated the project moving to another school for the following year. Thus, although three schools were initially selected for participation in the project, a total of four schools ultimately were involved in the evaluation portion of the project.

a 'don't care' attitude," and "seems depressed, shows aggressive behavior, keeps things 'bottled up' and then can't control anger."

Control and Treatment Groups

Control group. In the present study, a no-treatment control group was used as a comparison group. Control group members were assessed on the same schedule as the treatment group members but received no intervention from the project.

RECAP program. RECAP is a manualized (Weiss, 1998) semistructured skills training program. It is school-based because of the increased access that the school setting provides for mental health treatments (Catron & Weiss, 1994) and because school-based treatments allow the clinician direct access to one of children's most important environments: the school. It lasts the academic year and involves (a) individual sessions with RECAP participants, (b) small group sessions with RECAP participants, (c) classroom groups with the peer group, (d) classroom teachers, and (e) parents. RECAP was derived from the literature about the treatment of noncomorbid internalizing and externalizing problems (e.g., Clarke, Lewinsohn, & Hops, 1990; Kazdin, Siegel, & Bass, 1992; Patterson, 1982; Stark, Rouse, & Livingston, 1991) as well as from literature about causes of comorbidity of internalizing and externalizing problems (e.g., Patterson & Stoolmiller, 1991). Child components focus on (a) social skills (e.g., making friends, avoiding involvement with negative peer behavior), (b) reattribution training (for hostile attributions of others' intentions as well as unrealistic self-appraisals), (c) communication skills, (d) self-monitoring and self-control improvement, (e) affect recognition and expression, and (f) relaxation.

These domains were selected to target factors believed to be responsible for perpetuating children's internalizing and externalizing problems. For instance, social skill deficits were selected as a target because—although the specific deficits may differ as a function of problem type—social skills deficits have been shown to be related to both internalizing and externalizing psychopathology, through their impact on the type of peer reinforcement that children receive, effects on self-confidence, and so forth (cf. Altmann & Gotlib, 1988; Kiesner, Dishion, & Poulin, 2001). Similarly, children with internalizing problems or with externalizing problems both show attributional biases, although children with externalizing problems tend to show hostile attributional biases (Crick & Dodge, 1996), whereas children with internalizing problems tend to attribute negative events to internal, stable, and global causes (Quiggle, Garber, Panak, & Dodge, 1992) or to make self-statements regarding their perceived inability to cope with and uncertainty about the future (Kendall, Chu, Pimentel, & Choudhury, 2000; Safren et al., 2000).

Parent and teacher RECAP components focus on (a) using appropriate praise and punishment, (b) improving adult–child communication, (c) strengthening the adult–child relationship, and (d) supporting the children in their use of RECAP skills (e.g., appropriate expression of affect). Teaching parents to set clearly defined rules, to monitor compliance with these rules, and to implement the rules consistently and fairly is an integral part of parent training programs for externalizing problems (e.g., Wierson & Forehand, 1994). However, clear and consistent rules may also help to reduce negative parent–child interactions, believed to be an antecedent of child depression (Lewinsohn, Rohde, Hops, & Clarke, 1991). Similarly, strengthening parent–child communication and promoting a more authoritative and less authoritarian parenting style may serve not only to reduce externalizing problems (Henggeler & Borduin, 1990) but also to reduce anxiety in children by promoting psychological autonomy in the children and parental acceptance of the child (Siqueland, Kendall, & Steinberg, 1996).

Because participant parents were mostly from lower income backgrounds, several measures were taken to help overcome barriers to participation in the weekly meetings at the school. First, because many families did not have an automobile, the project helped coordinate between families with and without cars. Second, for families for whom this was not possible to arrange, taxi service was provided. Third, because many heads of family were single parents with young children, childcare was provided at the parent meetings; this was used as an opportunity to apply the RECAP program to siblings of the target child, albeit at a lower intensity. Finally, to lessen the formality of the meetings and encourage an atmosphere of collaborative problem solving, snacks were provided and a $20 gift certificate to a local grocery store was raffled off among parents present at the meeting. On average, approximately two thirds to three quarters of parents attended each meeting.

Clinician Training, Supervision, and Maintenance of Treatment Integrity

One master's-level social worker (6 months clinical experience) and two master's-level psychiatric nurses (2 to 4 years clinical experience) served as the RECAP clinicians. Half-time assistants (each working for 1 year) helped with the group and classroom sessions. These individuals consisted of two graduate students in clinical psychology, one graduate student each in special education, a public policy program, and a general master's psychology program; the sixth individual had a bachelor's degree in psychology.

Initial training involved reading the RECAP manuals and related materials and then participating in 2 daylong training sessions. These sessions focused on discussing the (a) conceptual and clinical background of RECAP, (b) rationale and importance of staying within the framework, (c) forms of flexibility acceptable within the model, and (d) how to handle clinical issues within the context of the model. Following the training sessions, the RECAP clinicians spent 4 months practicing implementation in schools not involved in the evaluation.

Clinical personnel received 1.5 hr of group supervision per week, focused on (a) resolving clinical issues and (b) maintaining treatment integrity. Individual supervision was provided as necessary. Treatment sessions were audiotaped (with participant consent), and supervisors reviewed audiotaped sessions as necessary. Supervision was provided by Bahr Weiss, the primary developer of the program, and by a second doctoral-level psychologist also involved in development of the program.

Treatment integrity was maintained by audiotaping sessions. Each week one session from each school was randomly selected and coded by a research assistant for the extent to which the session objectives, as stated in the treatment manual, were achieved. Ratings feedback was provided to the clinician and the supervisors within 1 week of the taping. If ratings dropped below 80%, the issue of treatment integrity was addressed in supervision.

Assessment

The first assessment was the mental health screening conducted by the school system at the end of Grade 3; this included teacher-, peer-, and self-reports. Results were used to identify participants but not as an outcome assessment. The baseline outcome assessment occurred near the beginning of treatment, just prior to (for parent report) or shortly after the beginning (for teacher-, peer-, and self-report) of the school year; this assessment included teachers, parents, peers, and self-reports. Abbreviated assessments were conducted twice during the school year for teacher- and self-reported psychopathology and once for peer- and parent-report psychopathology. Approximately 1 month before the end of the school year, all four informants received posttreatment assessments, and approximately 1 year later, follow-up assessments were conducted for the parents, teachers, and children. Peers were not assessed at follow-up because participants at that time were in 13 different schools, which would have presented logistical difficulties for a peer assessment.

Psychopathology

Parent report of child. As part of the outcome and follow-up assessments, parents completed the Child Behavior Checklist (CBCL; Achen-

bach, 1991a), a broadband measure of children's behavioral and emotional problems. The CBCL contains 118 problem items rated on a 0–2 scale and produces two broadband subscales (Internalizing and Externalizing Problems) as well as several narrowband subscales. The CBCL scales have an average 1-week test–retest reliability of .89 and a correlation of .81 with the Quay and Peterson (1983) Revised Behavior Problem Checklist (Achenbach, 1991a).

Parent self-report. Parents reported on their own symptoms by completing the Brief Symptom Inventory (BSI; Derogatis & Melisaratos, 1983). The BSI is a self-report questionnaire measuring psychopathology, and it contains a variety of problems and complaints. Following the recommendation of Boulet and Boss (1991), we used the General Severity Index (GSI; Derogatis & Melisaratos, 1983) as an indicator of general psychopathology, as BSI subscales may lack discriminant validity. The GSI has a retest reliability of .90 (Derogatis & Melisaratos, 1983) and an average correlation of .46 with the Minnesota Multiphasic Personality Inventory (Hathaway & McKinley, 1983) clinical scales (Boulet & Boss, 1991).

Teacher report of child. For the outcome and follow-up assessments, teachers completed the TRF for each child in the study. The TRF is a teacher version of the CBCL and, like the CBCL, contains 118 problem items rated on a 0–2 scale. It also produces two broadband and eight narrowband subscales. The TRF scales have an average correlation of .83 with the Conners's Revised Teacher Rating Scale (Goyette, Conners, & Ulrich, 1978) and 4-month retest reliability of .66 (Achenbach, 1991b).

For the mental health screening teachers completed the Teacher Behavior Questionnaire (TBQ; Catron & Weiss, 1994). The TBQ contains 25 items rated on a 1–4 scale and was chosen for the screening because the TRF was too long for use in a screening in which one teacher was responsible for providing data for up to 30 children. The TBQ produces two broadband (Internalizing and Externalizing Problems) and six narrowband subscales. TBQ scales had an average 6-month retest reliability of .64 and an average correlation of .81 with comparable TRF (Achenbach, 1991b) scales in the present sample.

Peer report of child. The Peer-Report Measure of Internalizing and Externalizing Behavior (PMIEB; Weiss, Harris, & Catron, 2002) was used to obtain peer reports of psychopathology. The PMIEB, which produces two broadband (Internalizing and Externalizing Problems) and six narrowband subscales, contains 22 behavioral descriptors. PMIEB nominations for each descriptor are summed for each child, standardized within classroom, and then summed to create the peer report scales. Across the subscales, the average 6-month retest reliability of the PMIEB is .65 and the average correlation with the TRF scales is .42 (Weiss, Catron, & Harris, 1996), which is typical of teacher:peer correlations (Achenbach, McConaughy, & Howell, 1987).

Child self-report. For the outcome and follow-up assessments, children completed the Youth Self-Report Form (YSR; Achenbach, 1991c). The YSR is a child-report version of the CBCL and, like the CBCL, contains 118 problem items rated on a 0–2 scale. It also produces two broadband and eight narrowband subscales. The Internalizing and Externalizing YSR scales have an average 1-week retest reliability of .80 and correlate .40 and .44, respectively, with comparable parent-report CBCL Internalizing and Externalizing subscales (Achenbach, 1991a).

For the mental health screening, self-reports of anxiety and depression were obtained using the Trait version of the State–Trait Anxiety Inventory for Children (Spielberger, 1973) and the Vanderbilt Depression Inventory (Weiss & Garber, 1993); self-reports of aggression, delinquency, and somatization were obtained using the Child School Behavior Questionnaire (Catron & Weiss, 1994). The State–Trait Anxiety Inventory for Children contains 20 items rated on a 0–2 scale, has a retest reliability of .81 (Spielberger, 1973), and a correlation of .50 with the Revised Children's Manifest Anxiety Scale (Hodges, 1990); the Vanderbilt Depression Inventory contains 26 items rated on a 1–4 scale, has a 1-week retest reliability of .62 (Weiss & Catron, 1994), and correlates .71 with the Children's Depression Inventory (Kovacs, 1985); the Child School Behavior Questionnaire contains 15 items adapted from the TBQ, has an average correlation of .83 with comparable YSR items and an average 6-month retest reliability of .62 (Harris, Weiss, & Catron, 1995).

Adaptive Functioning

Academic grades (grade point average; GPA) and school attendance records were collected for the grading period during which the assessment was conducted; grades were averaged across academic subjects. At baseline, for comparison purposes the average grade and attendance records for each participating classroom (excluding project participants) were obtained from the school without identifying information. At the beginning of treatment, GPA for nonparticipants was 85.5 ($SD = 7.6$) on a 0–100 scale, and the mean number of days absent (for the 6-week grading period) for nonparticipants was 1.6 ($SD = 2.1$). GPA for participants at baseline (80.8) was slightly more than 0.50 *SD* lower than that of the nonparticipants, but the number of days absent (1.4) was within 0.10 *SD* of that for the nonparticipants. Peer relationship data (i.e., sociometric ratings of liking and disliking; e.g., Cole & Carpentieri, 1990) were collected in conjunction with the PMIEB peer assessment. For similar reasons as for the PMIEB, these data were not collected at the follow-up assessment.

Consumer Perspective

Parents in the treatment group answered a consumer satisfaction survey at posttreatment and follow-up assessments. This measure contains 16 items that assess various aspects of parents' satisfaction with the program as well as their global perceptions of their child's improvement in the academic and mental health domains attributable to the program. Ratings are on a 1 to 5 scale, with 5 representing more satisfaction or change attributed to the program. On the basis of the results of an exploratory factor analysis that indicated the presence of a single general factor, the consumer satisfaction items were combined to produce an overall satisfaction score.

Procedure

During home interviews research assistants read the measures to parents, who received $50 per assessment. During school assessments, peer nomination and self-report measures were read to the children in classroom groups. Research assistants circulated through the room to ensure that children did not have difficulty completing the measures. Teachers completed their forms after school and received $20–$40 depending on the number of project children (1–5) for whom they were providing data.

Results

Group Comparability at Baseline

To determine whether they differed at baseline, we compared treatment and control groups on the demographic variables, primary dependent variables, and rate of project dropout. One-way analyses of variance were used for continuous data and chi-square tests were used for categorical data, except for 2×2 tables, in which Fisher's exact test was used. Of the 18 variables, the groups differed significantly at baseline on one variable: family income, $F(1, 84) = 4.29$, $p < .05$, with treatment group parents reporting higher incomes than control group parents ($21,480 vs. $14,720, respectively, $SD = \$14{,}050$). Consequently, we tested whether income was related to treatment outcome; for self-reports of externalizing problems only, income showed a significant ($p < .05$) positive relation to treatment outcome. Therefore, when we tested

the effect of treatment on self-reported externalizing problems, we conducted a second analysis including income as a covariate.

Overview of Outcome Analyses

A mixed models approach to hierarchical linear models (HLM; Bryk & Raudenbush, 1992) was used. School served as the blocking factor for the random coefficients matrix, group was a fixed between-subjects effect, and time was a random coefficient. The time factor consisted of one baseline assessment, one or two midtreatment assessments, the posttreatment assessment, and the follow-up assessment. The main effect for time represented the extent to which the combined groups' rate of change differed from zero. The Group × Time interaction represented the extent to which the two groups' rates of change differed. We analyzed the effects of several potential moderators, selected on the basis of findings of child psychotherapy meta-analyses as well as on a review of factors related to attrition from child therapy (Weisz & Weiss, 1993). Potential moderators included the following: child age, gender, and ethnic background; extent of comorbidity and severity of the child's problem; and level of parental psychopathology, education, and income.

Child Psychopathology

Because different informants may report different amounts of change (e.g., Casey & Berman, 1985), the four different informants' internalizing and externalizing scores were analyzed separately. To aid in interpretation of significant effects, we structured parameter estimates involving time so as to represent the amount of change (in T-score units) per year (Willet, Singer, & Martin, 1998). This was accomplished by setting values for the time points to the time in years they represented from the beginning of treatment. Thus, if $\beta_{\text{Time}} = -1.90$, then on average children showed a decrease of 1.90 T-score points (0.19 *SD*) per year on the dependent variable.

Table 1 provides means and standard deviations for the outcome measures across the various time points.[3] For teacher-, self-, and parent-reports of internalizing psychopathology and for peer- and self-reports of externalizing psychopathology, the Time × Group parameter was significant. As Table 2 indicates, the size of the treatment effect ranged from about 0.25 *SD* difference in the rate of change in internalizing psychopathology per year for the treatment and control groups (for the parent report) to over 0.50 *SD* difference in the rate of change in externalizing problems per year for the treatment and control groups (for the peer report). When we controlled for the effect of family income (on which the treatment and control groups differed at Time 1) in the analyses focusing on self-reported externalizing psychopathology, the *t* decreased very slightly (from 2.40 to 2.38), but the significance level did not change.

Potential moderators. For teacher- and self-report, the three-way interactions involving initial problem level were nonsignificant for both internalizing and externalizing problems. For parent report, the three-way interaction was nonsignificant for externalizing problems but significant, $F(1, 163) = 4.25$, $p < .05$, for internalizing problems. To interpret this interaction, we used the approach recommended by Cohen and Cohen (1983) for describing interactions involving continuous variables. We computed β_{Time} in the equation $\text{CBCL}_{\text{Internalizing}} = \text{Time } \beta_{\text{Time,}}$ at three levels of initial problem level (one standard deviation below the mean, the mean, and one standard deviation above the mean) separately for the control group and the RECAP group. As Table 3 indicates, at low levels of initial problems the rate of change in CBCL internalizing problems for the control and RECAP groups was within 0.03 *SD* change per year of each other, but at high levels of initial problems the RECAP group was improving at a rate more than 0.50 *SD* per year greater than that of the control group. Thus, this significant interaction reflected increasing treatment efficacy on parent-report internalizing problems with increasing initial problem levels.

For peer report, the three-way interaction involving initial problem levels was not significant for internalizing problems, but it was significant, $F(1, 75) = 9.05$, $p < .005$, for externalizing problems. As Table 3 indicates, at low levels of initial problems there was about a one standard deviation per year difference in the rate of change for the control and RECAP groups, with the control group's functioning deteriorating and the RECAP group's functioning remaining essentially unchanged. As initial problem level increased, the difference in rate of change between the two groups decreased. Thus, this significant interaction reflected decreasing treatment efficacy on peer-report externalizing problems with increasing initial problem levels.

We next tested whether the extent of comorbidity moderated the effect of treatment. This was accomplished by including in our HLM models, when the dependent variable was externalizing problems, the interaction between externalizing problems and the child's baseline score for internalizing problems (and vice versa). None of the eight interactions was significant, indicating that the effect of treatment did not differ significantly as a function of the balance (comorbidity) of problems. That is, children who were relatively high in externalizing problems relative to their level of internalizing problems responded the same to treatment as children who were relatively high in internalizing problems relative to their level of externalizing problems. Similarly, the moderating effects for parent psychopathology (parent-report BSI–GSI score at Time 1), parent education, parent income, and child ethnic group (African American vs. Caucasian) also were nonsignificant for all eight tests, indicating that the effect of treatment did not differ as a function of level of parent psychopathology, parent education, parent income, or child ethnic group.

Of the eight tests of the effect of gender as a moderator of the effect of treatment, one (self-reported externalizing problems) was significant, $F(1, 243) = 7.18$, $p < .01$. We found that for self-reported externalizing problems, the effect of treatment was nonsignificant for females and significant, $t(152) = 4.49$, $p < .0001$, for males, with the males in the treatment group showing about two thirds of a standard deviation greater rate of improvement per

[3] Although the CBCL, TRF, and YSR can be scored so as to produce *t* scores, for two reasons our analyses were based on the raw scores, and raw scores are reported in Table 1. First, conversion of CBCL raw scores to *t* scores involves nonlinear transformations at the extremes, with an unknown and uncontrolled effect on the analyses. Second, because our moderator analyses included gender, use of the *t* scores would be inappropriate because CBCL *t* scores control for gender.

Table 1
Means and Standard Deviations for Outcome Measures

Measure and treatment group	Baseline		Midtreatment 1		Midtreatment 2		Posttreatment		Follow-up	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Parent internalizing										
Control condition	13.6	8.0	10.1	9.7			9.4	9.6	13.6	12.4
RECAP condition	12.8	10.0	10.4	10.6			9.0	10.4	7.4	8.2
Parent externalizing										
Control condition	17.9	8.1	14.4	8.7			13.7	8.5	15.0	9.1
RECAP condition	19.6	9.9	14.7	9.7			15.0	10.2	14.8	11.8
Teacher internalizing										
Control condition	9.2	6.9	11.9	7.2	13.5	10.8	11.1	7.6	12.7	8.4
RECAP condition	11.1	11.1	12.4	11.3	14.6	10.7	12.5	12.1	7.6	6.3
Teacher externalizing										
Control condition	19.6	8.9	19.0	8.2	20.7	8.1	23.9	12.2	23.1	7.6
RECAP condition	18.1	9.4	21.3	9.9	23.2	10.3	23.1	11.5	18.5	10.0
Self-report internalizing										
Control condition	24.4	9.7	23.7	8.7	26.8	6.9	25.7	11.0	25.9	10.1
RECAP condition	25.3	11.5	20.8	7.3	19.8	6.4	21.2	12.3	17.1	10.1
Self-report externalizing										
Control condition	20.2	10.9	21.4	8.5	23.8	10.0	21.7	9.5	21.9	8.3
RECAP condition	20.1	10.8	19.8	9.0	21.1	8.9	18.3	10.8	15.2	10.3
Peer internalizing										
Control condition	1.2	7.7	0.4	8.6			0.3	8.1	82.3	10.1
RECAP condition	1.4	10.1	0.6	10.9			0.4	11.5	82.4	8.9
Peer externalizing										
Control condition	0.0	7.6	2.8	7.5			4.0	6.8	1.5	2.9
RECAP condition	2.3	10.1	2.0	11.3			1.0	11.5	1.4	2.4
Negative sociometric										
Control condition	0.2	0.8	0.6	0.9			0.6	1.2		
RECAP condition	0.7	1.2	0.3	1.2			0.3	1.3		
Positive sociometric										
Control condition	−0.1	0.9	−0.1	0.9			−0.1	0.9		
RECAP condition	−0.2	0.9	−0.1	1.0			−0.1	1.0		
Grade point average										
Control condition	80.7	8.7					84.8	6.8		
RECAP condition	80.8	8.3					82.0	7.6		
Days absent										
Control condition	1.7	2.2					1.9	2.3		
RECAP condition	1.3	1.7					1.4	2.5		

Note. For all variables, including Child Behavior Checklist (CBCL) scores, raw scores are reported. This is because conversion of CBCL raw scores to *t* scores involves nonlinear transformations and because CBCL *t* scores control for gender, which was one of the variables assessed as a potential moderator of treatment effects. RECAP = Reaching Educators, Children, and Parents Program.

year than the males in the control group ($\beta_{\text{Time}} = -0.4$ for the treatment group, $\beta_{\text{Time}} = 0.3$ for the control group).

Correlated change. We next tested whether change across time within internalizing problems was correlated with change across time in externalizing problems. Toward this end, for each participant, we computed the correlation across time between internalizing and externalizing problems, separately for each of the four informants, producing four correlation coefficients for each participant. These four coefficients were then transformed to *z* scores and tested in mixed model analyses to determine whether the mean coefficient differed significantly from zero. For three of the four informants, the test of the intercept (i.e., the test of whether the mean *z*-transformed correlation coefficient differed from zero) was significant ($p < .05$), with the mean *r* (untransformed) for teacher report equaling .39, for self-report equaling .44, and for parent report equaling .51. For peer report, the effect was nonsignificant. Thus, for parent-, teacher-, and self-reports, children who showed change in one domain of psychopathology tended also to show change (in the same direction) in the other psychopathology domain.

Clinical significance tests. We conducted two sets of clinical significance tests, following the recommendations of Jacobson, Roberts, Berns, and McGlinchey (1999). We first computed the percentage of treatment group participants who had shown clinically significant change; that is, who at the final assessment were statistically closer to the normative rather than dysfunctional population mean. This was done for variables for which there were normative data (i.e., the psychopathology data). Second, we computed the Reliable Change Index (RCI; Jacobson et al., 1999), which measures whether change from baseline to the final outcome assessment is reliable. Because RECAP can be conceptualized as a prevention as well as a treatment program (and thus

Table 2
Outcome Significance Tests, Parameter Estimates, and Clinical Significance Analyses

Measure, outcome domain, and informant	$t(df)$	β_c	β_R	CS	RCI_c	RCI_R
Internalizing						
Teacher	2.50 (239)**	2.93	−2.89	.65	−1.09	1.84
Self	3.11 (243)***	0.57	−4.01	.55	−0.10	4.99
Peer	−0.57 (75)	−2.22	−0.79	.65	1.65	0.62
Parent	2.41 (163)**	−0.36	−2.87	.78	0.29	5.32
Externalizing						
Teacher	1.72 (239)*	2.65	−0.86	.50	−1.76	−0.43
Self	2.40 (243)**	−0.79	−3.13	.53	−0.45	2.96
Peer	2.59 (75)**	4.30	−1.22	.55	−2.14	1.10
Parent	0.26 (163)	−1.77	−2.07	.63	2.36	4.47
Positive sociometric	−0.62 (75)	0.00	0.14	—	0.22	−0.93
Negative sociometric	2.78 (75)***	3.77	−4.11	—	−1.62	2.11
Grades	0.10 (71)	0.57	0.46	—	−0.25	−0.80
Attendance	−0.32 (71)	−0.09	−0.05	—	0.90	0.87

Note. β_c is the parameter estimate for change for the control group in T-score (1/10 standard deviation) points of change per year; β_R is the parameter estimate for the RECAP group. Positive parameter estimates represent increases in psychopathology or sociometric ratings; negative parameter estimates represent decreases in these constructs. CS (clinical significance test) is the proportion of treatment group participants statistically closer to the mean of the normative rather than the dysfunctional group. RCl_c (Reliable Change Index for the control group) with an absolute value of greater than 1.96 indicates reliable change. RCI_R = Reliable Change Index for the RECAP group; RECAP = Reaching Educators, Children, and Parents Program.
* $p < .05$. ** $p < .01$. *** $p < .005$.

significant group effects may reflect prevention of deterioration in the treatment group relative to the control group), we computed the RCI separately for both the treatment and control groups.

As Table 2 indicates, the percentage of children considered to be in the normal range of functioning vis-à-vis psychopathology at the follow-up assessment ranged from .50 to .78. Using a cutoff of ±1.96 recommended by Jacobson et al. (1999) to indicate reliable change, we found 5 of 12 dependent variables showed reliable change (in the positive direction) in the treatment group, whereas 2 of 12 dependent variables showed reliable change (in the negative direction) in the control group.

Adaptive Functioning Data

We first analyzed treatment effects on grades, with average grade at each time point as the dependent variable. Effects for time as well as Group × Time were nonsignificant, indicating that for both the treatment and control groups change in grades across time was nonsignificant. We similarly analyzed school attendance, with the number of days absent during the grading period as the dependent variable. Effects for time as well as Group × Time were again nonsignificant, indicating that change in attendance across time was nonsignificant for both groups. Finally, we analyzed the positive and negative sociometric ratings. For positive ratings, the Group × Time interaction was not significant. For the negative ratings, there was a significant Group × Time interaction. As Table 2 indicates, the control group's negative sociometric ratings increased at about 0.33 *SD* per year, whereas the treatment group's ratings decreased about 0.50 *SD* per year.

Table 3
Parameter Estimates for Significant Three-Way Interactions Involving Continuous Variables

Outcome domain, informant, and moderator	β_C	β_R
Internalizing: parent report		
Initial problem level		
Low	−0.6	−0.8
Medium	−0.1	−2.9
High	0.4	−5.0
Externalizing: peer report		
Initial problem level		
Low	11.4	0.9
Medium	3.1	−0.9
High	−5.1	−2.7

Note. Parameter estimates represent the number of T-score (1/10 standard deviation) points of change per year, for the control ($_C$) or the RECAP ($_R$) group. RECAP = Reaching Educators, Children, and Parents Program.

Consumer Satisfaction

These analyses focused on the treatment group, assessing (a) overall level of satisfaction with the program, (b) the relation between satisfaction and the CBCL at posttreatment and follow-up, and (c) the relation between satisfaction and rate of change in the CBCL. On a scale of 1 (*very dissatisfied*) to 5 (*very satisfied*), the mean response on the satisfaction questionnaire was 4.6 (*SD* = 0.69) at posttreatment and 4.5 (*SD* = 0.60) at follow-up. Although consumer satisfaction was negatively correlated with the CBCL at posttreatment and follow-up, these correlations were not significant. The relation between the rate of change in the CBCL scores and satisfaction also was not significant.

Discussion

Findings of the present study provide initial support for the efficacy of the RECAP program as well as more generally for the validity of our model (Weiss et al., 2003) for combining treatment programs for concurrent forms of psychopathology. Looking at the

treatment effects in Table 2, it is evident that RECAP's effects sometimes represented a treatment effect (i.e., an amelioration of psychopathology in the treatment group, as for self-reported internalizing problems), sometimes a preventative effect (i.e., prevention of deterioration of functioning in the treatment group, as for peer-reported externalizing problem), and sometimes both (as for teacher-reported internalizing problems). Thus, it is important to consider that the target of comparison (the control group) was not necessarily stable and that a significant treatment effect may reflect essentially no change in symptomatology in the treatment group.

This interpretation is borne out by the results of our clinical significance tests. For instance, in the case of peer-reported externalizing problems, although we found a significant effect for treatment, the treatment group failed to show reliable change (i.e., the RCI was less than 1.96); however, the control group did show reliable change but as an increase in psychopathology. This indicates that the significant treatment effect represents a prevention effect. It also is worth noting that for some of our statistically significant effects, a significant proportion of participants' functioning was still considered outside the normative range at the follow-up. For example, although peer-rated externalizing problems showed a statistically significant treatment effect, almost half of the participants' (45%) functioning could still be considered in the disordered range (i.e., statistically closer to the mean of the dysfunctional group than of the normative group). As some authors have noted (e.g., Kazdin, 1990; Kendall, Marrs-Garcia, Nath, & Sheldrick, 1999), however, it may not always be realistic to expect participants or treatment clients to score in the normal range at the end of treatment. We believe that that may be the case with our sample. Many of our participants, by design, came from low-income families who lived in high-crime neighborhoods where violence was not an uncommon occurrence. Thus, to expect that all or nearly all participants would show normative levels of internalizing and externalizing problems may not be realistic for any treatment program.

Nonetheless, the fact that a not insubstantial proportion of participants were not functioning in the normal range at the final assessment, as well as the nonsignificant treatment effects for some of our outcome variables, does suggest that there is room to improve the efficacy of the RECAP program. Toward this end, it may be useful to consider the reasons underlying nonsignificance for some of our variables. In regard to parent-reported externalizing problems, one possible explanation for the lack of significant treatment effect is that parents did not view child aggression, a central component of externalizing problems, as something needing to be reduced. Many of our participant families came from disadvantaged neighborhoods where street violence was a relatively common occurrence. During RECAP parent-group meetings, a number of parents indicated that they were supportive of their children being aggressive to reduce the likelihood that their children would be targeted as easy victims. This observation is consistent with evidence (e.g., Dodge, Petit, & Bates, 1994) suggesting that for some parents living in violence-prone neighborhoods, child aggression at times unfortunately may be viewed as an acceptable or necessary option. Thus, parents in our sample may not have seen their child's aggression as a problem that might be beneficial to change (at least in the school setting) but rather as a necessary adaptive strategy.

Although we found a significant treatment effect for negative sociometric status, the effect of treatment was nonsignificant for positive sociometric status. It is possible that a reduction in peers' negative attitudes toward problematic children must precede the development of positive relationships and that problematic children must first remove their label of being disliked children and only then are able to win friendships. Thus, treatment was able to decrease negative peer nominations, but perhaps sufficient time had not elapsed after reducing negative sociometric status for treatment children to increase the number of their friendships.

We also failed to find significant treatment effects for grades and attendance. In contrast to psychopathology and peer relationships, the RECAP program does not directly target academic achievement and attendance problems. However, because there is some evidence that psychopathology is related to children's academic achievement and school attendance (e.g., Juvonen, Nishina, & Graham, 2000), we included these variables in our outcome evaluation to determine whether the treatment program might indirectly affect them through reductions in psychopathology and improvements in adult–child relationships. It did not, perhaps because there were many causes of attendance and academic achievement problems other than psychopathology (e.g., Petrill & Wilkerson, 2000).

It is interesting to note that despite the fact that consumer satisfaction was high, it was unrelated to parent ratings of child psychopathology. This suggests that the high level of satisfaction with the program was not a function of or a response to the program's actual effectiveness. This finding is consistent with findings from a variety of different interventions that have indicated that consumer satisfaction is not related to more "objective" indices of the effects of treatment (e.g., Lambert, Salzer, & Bickman, 1998; Weiss, Catron, Harris, & Phung, 1999).

The question might be raised as to whether it would be appropriate to include children who were not experiencing both internalizing and externalizing problems in the RECAP program. Because only children who were experiencing problems in both areas were included in this study, this question cannot be addressed directly. However, the fact that the interaction between initial level of internalizing problems and the initial level of externalizing problems was not significantly related to the effect of treatment suggests that the program might be effective for children with nonconcurrent problems, although the restricted range of our sample (in regard to children with nonconcurrent problems) limits our ability to draw a firm conclusion about this. That being said, our clinical experiences with the program suggest two points of caution in this regard. First, the application of this program to children with nonconcurrent problems would be inefficient. For instance, if anger control techniques were used with children who did not have problems controlling their anger (as one might expect of a child not exhibiting externalizing behavior), then it would be inefficient to have the children involved in such activities. Second, we would anticipate that there would be potential difficulties in conducting small groups that included externalizing-only children and internalizing-only children. Internalizing-only children might be seen as easy targets for teasing and the like by the externalizing-only children, and this might in turn inhibit the internalizing-only children in the group. Although these conflicts would have the potential to serve as useful material to process in the group, the inclusion of internalizing-only and externalizing-only children to-

gether in this type of small peer group might be counterproductive and less efficient, at least for this age group of older elementary-school children (i.e., Grade 4).

However, the classroom component of the RECAP program might be beneficial to students irrespective of problem type(s) and/or severity. Although the present study was not designed to evaluate separate program components (i.e., parent training, small peer group, individual, classroom), our experience with the RECAP classroom component suggests that the classroom lessons, which promote a broad range of skills, were useful in aiding the teacher to clarify classroom rules, consequences, and expectations, which in turn reinforced a broad range of prosocial skills in the students. This effect might be particularly true for younger children who, irrespective of whether they were exhibiting concurrent internalizing and externalizing problems, were at a relatively early developmental stage where learning a broad range of social skills would be adaptive.

Several caveats should be highlighted. First, it is important to consider the implications of how our sample was selected. Rather than using a clinically referred or diagnostically identified sample, we used a procedure designed to identify children with elevated levels of both internalizing and externalizing problems so that our sample would have a range of severity of psychopathology and broader generalizability to children who might benefit from treatment. We believe that our results support the use of this strategy. The percentage of children whose teacher-reported problems were in the borderline clinical range in our sample was close to that reported for the clinical sample used to develop the TRF, thus indicating that the children in our sample were experiencing relatively serious problems. In addition, only two of eight psychopathology variables showed a significant relation between initial problem level and the size of the effect of treatment, and the directions of the effects of initial problem level for these two variables were opposite each other. We believe that this also supports our selection of children with a range of severity of psychopathology, in that children across the range of severity of psychopathology appeared to benefit from the treatment.

It also should be noted that although families were enrolled for project participation rather than recruited from a clinic, in many ways our enrollment process was similar to the normal child referral process. For many families, the referral process begins with teachers or principals encouraging the family to seek treatment and suggesting referral options for the families to pursue (e.g., Godfrey, 1995), which is similar to our project enrollment process.

Because of RECAP's classroom component, it was not possible to use true random assignment to condition. Although principals were asked to randomly divide participants across the different classrooms, it is possible that they assigned the children who were more likely to improve on their own, independent of treatment, to the treatment classrooms. If this were the case, then what appear to have been effects of treatment actually would represent the ability of the principals to predict who would improve, independent of treatment. Several of our findings argue against this possibility. First, the treatment and control groups differed on only 1 of 18 variables (parent income) at pretreatment. Second, this one variable was related to treatment outcome for only one dependent variable, and controlling for parent income did not change the results of this analysis. Thus, if principals were able to predict which children would improve, they would have had to have been using information other than the child's behavioral or demographic characteristics, and it is not clear of what this information would have consisted.

It also should be noted that our control group was a no-treatment control group. Thus, it is not clear the extent to which treatment effects were simply a function of the attention that the children received during the program versus being due to the hypothesized mediators.

It is important to note that RECAP was developed for a specific purpose and a specific target population. It is school based so as to increase access to mental health treatments for children who typically do not receive services (Catron & Weiss, 1994). Given the centrality of its classroom and teacher components, it might prove difficult or impossible to adapt RECAP for use in a clinic, although our findings do provide initial support for its efficacy as a school-based program targeting both internalizing and externalizing problems. However, as Chambless and Hollon (1998) have noted, a single evaluation does not establish the efficacy of a treatment program; rather, a number of other criteria also must be satisfied. Perhaps most significant of these in the present case is the need for multiple evaluations, including those conducted by individuals without a vested interest or investigator allegiance toward the program.

References

Achenbach, T. M. (1991a). *Manual for the Child Behavior Checklist/4–18 and 1991 Profile*. Burlington, VT: University of Vermont Department of Psychiatry.

Achenbach, T. M. (1991b). *Manual for the Teacher's Report Form and 1991 Profile*. Burlington, VT: University of Vermont Department of Psychiatry.

Achenbach, T. M. (1991c). *Manual for the Youth Self-Report Form and 1991 Profile*. Burlington, VT: University of Vermont Department of Psychiatry.

Achenbach, T. M., McConaughy, S. H., & Howell, C. T. (1987). Child/adolescent behavioral and emotional problems: Implications of cross-informant consistency. *Psychological Bulletin, 101,* 213–232.

Altmann, E. O., & Gotlib, I. H. (1988). The social behavior of depressed children: An observational study. *Journal of Abnormal Child Psychology, 16,* 29–44.

Angold, A., & Costello, E. J. (1992). Comorbidity in children and adolescents with depression. *Child and Adolescent Psychiatric Clinics of North America, 1,* 31–51.

Boulet, J., & Boss, M. W. (1991). Reliability and validity of the Brief Symptom Inventory. *Psychological Assessment, 3,* 433–437.

Bryk, A. S., & Raudenbush, S. W. (1992). *Hierarchical linear models: Applications and data analysis methods.* Newbury Park, CA: Sage.

Casey, R. J., & Berman J. S. (1985). The outcome of psychotherapy with children. *Psychological Bulletin, 98,* 388–400.

Catron, T., & Weiss, B. (1994). The Vanderbilt School-Based Counseling Program. *Journal of Emotional and Behavioral Disorders, 2,* 247–253.

Chambless, D. L., & Hollon, S. D. (1998). Defining empirically supported therapies. *Journal of Consulting and Clinical Psychology, 66,* 7–18.

Clark, L. A., Watson, D., & Reynolds, S. (1995). Diagnosis and classification of psychopathology: Challenges to the current system and future directions. *Annual Review of Psychology, 46,* 121–153.

Clarke, G., Hawkins, W., Murphy, M., Sheerer, L., Lewinsohn, P., & Seeley, J. (1995). Targeted prevention of unipolar depressive disorder in an at-risk sample of high school adolescents: A randomized trial of a group cognitive intervention. *Journal of the American Academy of Child and Adolescent Psychiatry, 34,* 312–321.

Clarke, G., Lewinsohn, P., & Hops, H. (1990). *Adolescent coping with depression course*. Eugene, OR: Castalia.

Cohen, J., & Cohen, P. (1983). *Applied multiple regression/correlation analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.

Cole, D. A., & Carpentieri, S. (1990). Social status and the comorbidity of child depression and conduct disorder. *Journal of Consulting and Clinical Psychology, 58*, 748–757.

Crick, N. R., & Dodge, K. A. (1996). Social information-processing mechanisms on reactive and proactive aggression. *Child Development, 67*, 993–1002.

Derogatis, L. R., & Melisaratos, N. (1983). The Brief Symptom Inventory: An introductory report. *Psychological Medicine, 13*, 595–605.

Dodge, K. A., Petit, G. S., & Bates, J. E. (1994). Socialization mediators of the relation between socioeconomic status and child conduct problems. *Child Development, 65*, 649–665.

Eddy, J. M., Reid, J. B., & Fetrow, R. A. (2000). An elementary school-based prevention program targeting modifiable antecedents of youth delinquency and violence: Linking the Interests of Families and Teachers (LIFT). *Journal of Emotional and Behavioral Disorders, 8*, 165–176.

Godfrey, J. M. (1995). Pathways to a child mental health service. *Child Care, Health and Development, 21*, 223–232.

Goodman, S. H., Lahey, B. B., Fielding, B., Dulcan, M., Narrow, W., & Regier, D. (1997). Representativeness of clinical samples of youths with mental disorders: A preliminary population-based study. *Journal of Abnormal Psychology, 106*, 3–14.

Goyette, C. H., Conners, C. K., & Ulrich, R. F. (1978). Normative data on the revised Conners Parent and Teacher Rating Scales. *Journal of Abnormal Child Psychology, 6*, 221–236.

Harris, V., Weiss, B., & Catron, T. (1995). *The Child School Behavior Questionnaire.* Unpublished manuscript, Vanderbilt University, Nashville, TN.

Hathaway, S. R., & McKinley, J. C. (1983). *The Minnesota Multiphasic Personality Inventory Manual.* New York: Psychological Corporation.

Henggeler, S. W., & Borduin, C. M. (1990). *Family therapy and beyond: A multisystemic approach to treating the behavior problems of children and adolescents*. Belmont, CA: Brooks/Cole.

Hodges, K. (1990). Depression and anxiety in children: A comparison of self-report questionnaires to clinical interview. *Psychological Assessment, 2*, 376–381.

Jacobson, N. S., Roberts, L. J., Berns, S. B., & McGlinchey, J. B. (1999). Methods for defining and determining the clinical significance of treatment effects: Description, application, and alternatives. *Journal of Consulting and Clinical Psychology, 67*, 300–307.

Juvonen, J., Nishina, A., & Graham, S. (2000). Peer harassment, psychological adjustment, and school functioning in early adolescence. *Journal of Educational Psychology, 92*, 349–359.

Kazdin, A. E. (1990). Psychotherapy for children and adolescents. In M. R. Rosenzweig & L. W. Porter (Eds.), *Annual review of psychology* (Vol. 41, pp. 21–54). Palo Alto, CA: Annual Reviews.

Kazdin, A. E., Siegel, T. C., & Bass, D. (1992). Cognitive problem-solving skills training and parent management training in the treatment of antisocial behavior in children. *Journal of Consulting and Clinical Psychology, 60*, 733–747.

Kazdin, A. E., & Weisz, J. R. (1998). Identifying and developing empirically supported child and adolescent treatments. *Journal of Consulting and Clinical Psychology, 66*, 19–36.

Kendall, P. C., Chu, B. C., Pimentel, S. S., & Choudhury, M. (2000). Treating anxiety disorders in youth. In P. C. Kendall (Ed.), *Child and adolescent therapy: Cognitive behavioral procedures* (2nd ed., pp. 235–287). New York: Guilford Press.

Kendall, P. C., Marrs-Garcia, A., Nath, S. R., & Sheldrick, R. C. (1999). Normative comparisons for the evaluation of clinical significance. *Journal of Consulting and Clinical Psychology, 67*, 285–299.

Kiesner, J., Dishion, T. J., & Poulin, F. (2001). A reinforcement model of conduct problems in children and adolescents: Advances in theory and intervention. In J. Hill & B. Maughan (Eds.), *Conduct disorders in childhood and adolescence* (pp. 264–291). New York: Cambridge University Press.

Kovacs, M. (1985). The Children's Depression Inventory (CDI). *Psychopharmacology Bulletin, 21*, 995–998.

Lambert, W., Salzer, M. S., & Bickman, L. (1998). Clinical outcome, consumer satisfaction, and ad hoc ratings of improvement in children's mental health. *Journal of Consulting and Clinical Psychology, 66*, 270–279.

Larsson, B. (1995). School-based treatment of recurrent headaches in adolescents. In J. L. Wallander & L. J. Siegel (Eds.), *Adolescent health problems: Behavioral perspectives* (pp. 248–264). New York: Guilford Press.

Laucht, M., Esser, G., & Schmidt, M. H. (1997). Developmental outcome of infants born with biological and psychosocial risks. *Journal of Child Psychology and Psychiatry, 38*, 843–853.

Lewinsohn, P., Rohde, P., Hops, H., & Clarke, G. (1991). *Adolescent coping with depression course*. Eugene, OR: Castalia.

Lovaas, O. I. & Buch, G. (1997). Intensive behavioral intervention with young children with autism. In N. N. Singh (Ed.), *Prevention and treatment of severe behavior problems: Models and methods in developmental disabilities* (pp. 61–86). Pacific Grove, CA: Brooks/Cole.

Newman, M. G. (2000). Recommendations for a cost-offset model of psychotherapy allocation using generalized anxiety disorder as an example. *Journal of Consulting and Clinical Psychology, 68*, 549–555.

Patterson, G. R. (1982). *Coercive family process*. Eugene, OR: Castalia.

Patterson, G. R., & Stoolmiller, M. (1991). Replications of a dual failure model for boys' depressed mood. *Journal of Consulting and Clinical Psychology, 59*, 491–498.

Petrill, S. A., & Wilkerson, B. (2000). Intelligence and achievement: A behavioral genetic perspective. *Educational Psychology Review, 12*, 185–199.

Quay, H. C., & Peterson, D. R. (1983). *Interim manual for the Revised Behavior Problem Checklist*. Coral Gables, FL: University of Miami.

Quiggle, N. L., Garber, J., Panak, W. F., & Dodge, K. A. (1992). Social information processing patterns in depressed and aggressive children. *Child Development, 63*, 1305–1320.

Safren, S. A., Heimberg, R. G., Lerner, J., Henin, A., Warman, M., & Kendall, P. C. (2000). Differentiating anxious and depressive self-statements: Combined factor structure of the Anxious Self Statements Questionnaire and the Automatic Thoughts Questionnaire Revised. *Cognitive Therapy and Research, 24*, 327–344.

Siqueland, L., Kendall, P. C., & Steinberg, L. (1996). Anxiety in children: Perceived family environments and observed family interaction. *Journal of Clinical Child Psychology, 25*, 225–237.

Spielberger, C. D. (1973). *Manual for the State–Trait Anxiety Inventory for Children*. Palo Alto, CA: Consulting Psychologists Press.

Stark, K. D., Rouse, L. W., & Livingston, R. (1991). Treatment of depression during childhood and adolescence: Cognitive–behavioral procedures for the individual and family. In P. C. Kendall (Ed.), *Child and adolescent therapy: Cognitive–behavioral procedures* (pp. 165–206). New York: Guilford Press.

Weiss, B. (1998). *RECAP manuals*. Unpublished manuscript, Vanderbilt University, Nashville, TN.

Weiss, B., & Catron, T. (1994). The specificity of comorbidity of aggression and depression in children. *Journal of Abnormal Child Psychology, 22*, 389–401.

Weiss, B., Catron, T., & Harris, V. (1996). *The Peer-Report Measure of Internalizing and Externalizing Behavior*. Pittsburgh, PA: Behavioral Measurement Database Services.

Weiss, B., Catron, T., Harris, V., & Han, S. (2000, October). *Effectiveness of an intervention program for children with concurrent internalizing*

and externalizing problems. Paper presented at the Kansas Conference in Clinical Child Psychology, University of Kansas, Lawrence.

Weiss, B., Catron, T., Harris, V., & Phung, T. (1999). The effectiveness of traditional child psychotherapy. *Journal of Consulting and Clinical Psychology, 67*, 82–94.

Weiss, B., & Garber, J. (1993). *The Vanderbilt Depression Inventory*. Unpublished manuscript, Vanderbilt University, Nashville, TN.

Weiss, B., Harris, V., & Catron, T. (2002). Development and initial validation of the Peer-Report Measure of Internalizing and Externalizing Behavior. *Journal of Abnormal Child Psychology, 30,* 285–294.

Weiss, B., Harris, V., Catron, T., & Han, S. S. (2003). *Adapting manualized intervention programs for children with comorbid problems*. Manuscript submitted for publication.

Weisz, J. R., & Weiss, B. (1993). *Effects of child and adolescent psychotherapy: What we know and what we need to know*. New York: Sage.

Weisz, J. R., Weiss, B., Han, S. S., Granger, D. A. & Morton, T. (1995). Effects of psychotherapy with children and adolescents revisited: A meta-analysis of treatment outcome studies. *Psychological Bulletin, 117*, 450–468.

Wierson, M., & Forehand, R. (1994). Parent behavioral training for child noncompliance: Rationale, concepts, and effectiveness. *Current Directions in Psychological Science, 3*, 146–150.

Willett, J. B., Singer, J. D., & Martin, N. C. (1998). The design and analysis of longitudinal studies of development in context: Statistical models and methodological recommendations. *Development and Psychopathology, 10*, 395–426.

Received March 30, 2001
Revision received April 22, 2002
Accepted April 26, 2002 ■