Enhancing Treatment Gains in a School-Based Intervention for Children of Divorce Through Skill Training, Parental Involvement, and Transfer Procedures

Arnold L. Stolberg and Jeffrey Mahler

The alarming divorce rate in the United States has placed a severe demand on children's educational and mental health facilities. Among the strategies developed to meet the needs of children of divorce are child-centered groups offered in schools and social service agencies (Grych & Fincham, 1992). The child-centered groups have received substantial attention both because of their practical advantages and because of the increasing body of empirical literature supporting their effectiveness (Kalter, Pickar, & Lesowitz, 1984; Pedro-Carroll & Cowen, 1985; Stolberg & Garrison, 1985). Because most children attend school daily, school-based groups have the advantage of serving the largest number of children. Peers in the group may serve as active intervention elements through the unique health-promoting impact of their social support and shared perspectives and experiences.

A predominant conceptual theme that underlies several school-based prevention strategies (Pedro-Carroll & Cowen, 1985; Stolberg & Garrison, 1985) attempts to mitigate the harmful effects of environmental changes and interparent hostility that often accompany divorce. The processes of change and conflict are significant sources of distress and confusion to children (Stolberg & Anker, 1984) and serve to disrupt children's mastery of important developmental tasks (Wallerstein, 1983). Reduced parental availability, limited financial resources, and altered living circumstances may result in increased feelings of anger and frustration. Interparent hostility and new life demands facing parents often interfere with parenting roles and effectiveness. Stolberg and his colleagues Children's Support Group and the Children of Divorce Intervention Program (CODIP) by Pedro-Carroll and her colleagues respond to these conceptual underpinnings. Anger control, relaxation, and communication skills are taught to help children cope with the stressors associated with divorce. Alternative systems to assist children in the mastery of developmental tasks, such as identity and internal controls are provided.

Program evaluation results support current programs and provide direction for their evolution. The Divorce Adjustment Project (Stolberg & Garrison, 1985) investigated the impact of three interventions on 82 children of divorce whose parents had been separated for 9 to 33 months. Seven- to 13-year-old children were assigned to a children's support group condition, a single parents' support group, to concurrent children's support and single parents' support groups, or to a no-treatment control group. The children's groups provided structured peer support, worked to clarify misunderstandings about the divorce, and taught cognitive-behavioral skills to assist children in coping with divorce-related stressors (e.g., anger control, communication skills) and in mastering developmental tasks that may have been disrupted by the divorce (e.g., impulse control skills, self-definition, social skills). Parents' groups attempted to foster adults' divorce adjustment, provided support, and taught skills to facilitate adult development. Secondary efforts provided information and training to enhance single parenting. Evaluation data suggested that participation in the children's support group alone yielded increased self-esteem immediately after treatment and improved social skills at the 5-month follow-up. Participation in the single parents' support groups resulted in adult adjustment gains in the absence of parenting skill and child adjustment gains. Parent participation, it was concluded, yields immediate benefits to the children only if the intervention is directly aimed at improving parenting competence.
hancing adult adjustment did not yield immediate improvements in parenting competence.

CODIP (Alpert-Gillis, Pedro-Carroll, & Cowen, 1989; Pedro-Carroll & Cowen, 1985) expanded the Children's Support Group program to include younger children and children from economically disadvantaged homes and improved on the format of the program. The structure of the sessions was given a game-like format, thus increasing children's interest and active participation in the program. Comparisons of CODIP (Pedro-Carroll & Cowen, 1985) and the Children's Support Group (Stolberg & Garrison, 1985) procedures and evaluation results indicated a wider range of psychological gains in the former project, perhaps resulting from the more engaging format of CODIP. Teachers rated treatment-group children as displaying fewer shyness, anxiety, and learning problems and greater adaptive assertiveness, peer sociability, rule compliance, and tolerance to frustration than control-group children (Pedro-Carroll & Cowen, 1985). Treatment-group children's self-reported anxiety was significantly reduced, and their parents reported significant increases in overall adjustment.

The influence of participants' age on program content is most clearly seen in the Children of Divorce Developmental Facilitation Group (Kalter et al., 1984). The program is based on the conceptualization that older children experience divorce as a predominantly cognitive experience (Kalter, 1989). Thus, program content was oriented toward dynamic, psychosocial, and sex role issues. Support was provided by peers, reflecting adolescents' normal reliance on peers over parents for emotional assistance. Improvements in boys' aggression and externalizing problems and improvements in all children's sad and insecure feelings were found (Plunkett & Kalter, 1984).

Current evaluation models for prevention programs for children of divorce suffer from four major limitations: (a) Idiosyncratic measures lack requisite demonstrations of validity and reliability (Emery, Hetherington, & Dilalla, 1984); (b) Adjustment gains are typically defined by unidimensional instruments that hamper the assessment of the program's overall impact (Warren & Amara, 1984); (c) Assessment strategies frequently use only one rater of children's adjustment gains, giving limited and perhaps biased views of program benefits; finally, (d) although programs may report statistical improvement of subjects, the clinical relevance of these findings is unclear. Using standardized, multidimensional instruments, that are completed by raters who view children's behaviors in different settings and that include a linkage to clinical dimensions may resolve the aforementioned problems.

Five important directions for modification of interventions for children of divorce are drawn from the previous studies. First, adult involvement should be directed toward parenting skill development to yield immediate, adjustment gains for children. Intentional procedures to transfer therapeutic gains to real-world demands should be integrated into the intervention strategy (Goldstein, 1981). Overlearning and repeated rehearsal (Kanter, 1979), the use of therapeutic homework (Shelton, 1979), maximizing parents' use of "real-life reinforcers" (Nay, 1979), and increasing social support and modifying the social environment (Price, 1979) are relevant examples. Third, the role of support as an active intervention ingredient should be explored. The game-like format of program elements to maximize children's interest is the fourth revision element. Improving evaluation methodology is the fifth direction for revision.

Our study builds on earlier evaluation studies (Stolberg & Garrison, 1985; Pedro-Carroll & Cowen, 1985). Added to existing intervention strategies are therapeutic home workbooks for children and parents and the increased use of game-like activities to engage participants. The workbooks have been integrated into the program to facilitate the transfer of children's therapeutic gains, to increase parent support, and to enhance parenting behaviors specifically along dimensions that are pertinent to their children's divorce adjustment. The relative contributions of peer and parent support on program outcomes is being investigated. The assessment strategy has been expanded to include clinically relevant dimensions of adjustment, rated by individuals who observe the children in different settings.

Method

Subjects and Conditions

Letters describing the intervention program were sent to parents of all children in third through fifth grades in 11 suburban elementary schools. This procedure yielded all of the 103 subjects of separated or divorced parents. Twenty-six intact-family children were recruited separately from participants in a school-based program to prepare children for entrance into one of the county's middle schools and served as a nonstressed, intact-control group. Some of the divorce-group children participated in the middle school preparation program. Sample composition was 55% female (n = 71) and 45% male (n = 58). Subjects ranged in age from 8 to 12 years, with a mean age of 9.8 years. Racial composition of the sample was 86% White and 13% African-American; 1% were of another race. Thirteen percent of the sample were third graders, 29% were fourth graders, and 57% were fifth graders.

Eighty percent of the subjects (n = 103) consisted of children whose parents had been separated or divorced for less than 48 months. Children whose parents had been separated or divorced for more than 4 years or had a history of using mental health services for more than 1 year before participation in the study were excluded. The average time between the initial marital separation and beginning the intervention was 37.26 months. Parents had divorced in 47% of these families, were separated in 32% of the families, and had remarried in 21% of the families. Mothers were custodians in 74% of the cases, and fathers were custodians for 9% of the children. Joint custody was established in 17% of the families. The nonstressed, intact-control group appeared to be a normally distributed group of children along adjustment dimensions.

Preintervention, Child Behavior Checklist (CBCL) means and standard deviations are equivalent to the distributions for the normative samples on the CBCL (M = 50, SD = 10).

Average family income ranged from below $5,000 to over $75,000, with a mean of $26,100. Sixty-two percent of the families earned less than $23,000 annually, and 23% had annual incomes of between $23,000 and $45,000. The remaining 15% of the sample earned annual incomes in excess of $45,000.

Analysis of preintervention, Child Assessment Schedule (CAS) interviews indicated that 58% of the subjects (n = 75) did not meet criteria for diagnosis according to the Diagnostic and Statistical Manual of Mental Disorders (3rd ed.; DSM-III; American Psychiatric Association, 1980), whereas 42% (n = 54) received a clinical diagnosis (see Table 1). Prevalence of diagnosis differed significantly by marital status, with 48% of the children of divorce (n = 50) and 15% of intact-family children (n = 4) receiving a diagnosis, X²(1, N = 129) = 9.38, p < .01.
Table 1
Frequencies of Diagnoses

<table>
<thead>
<tr>
<th>Type of diagnosis</th>
<th>Frequency</th>
<th>% sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attention deficit disorder with hyperactivity</td>
<td>3</td>
<td>2.3</td>
</tr>
<tr>
<td>Attention deficit disorder without hyperactivity</td>
<td>1</td>
<td>0.8</td>
</tr>
<tr>
<td>Separation anxiety disorder</td>
<td>20</td>
<td>15.5</td>
</tr>
<tr>
<td>Overanxious disorder</td>
<td>6</td>
<td>4.7</td>
</tr>
<tr>
<td>Oppositional disorder</td>
<td>6</td>
<td>4.7</td>
</tr>
<tr>
<td>Major depression</td>
<td>2</td>
<td>1.6</td>
</tr>
<tr>
<td>Enuresis</td>
<td>4</td>
<td>3.1</td>
</tr>
<tr>
<td>Dyshymic disorder</td>
<td>5</td>
<td>3.9</td>
</tr>
<tr>
<td>Simple phobia</td>
<td>3</td>
<td>2.3</td>
</tr>
<tr>
<td>Obsessive-compulsive disorder</td>
<td>4</td>
<td>3.1</td>
</tr>
<tr>
<td>No diagnosis</td>
<td>75</td>
<td>58.0</td>
</tr>
</tbody>
</table>

Leaders

Groups were jointly led by doctoral students in clinical psychology and by school guidance counselors and vice principals. Graduate students and school personnel were trained in the administration of program procedures and used procedure manuals to ensure consistency of program procedures across groups. Student co-leaders received weekly supervision.

Program

The comprehensive, 14-week intervention consisted of three major components: support or special topics; skill building; and skills transfer. For consistency of intervention procedures, all program procedures were manualized in the LeadersGuide (Stolberg, Zacharias, & Campplair, 1991). The support or special topics component of the Children's Support Group procedure operated as an independent, eight-session intervention in the support-alone condition and as half of eight of the sessions in the transfer, skills, and support condition and in the skills and support condition. The discussion of specific themes for each session was accomplished through the use of cartoon and pictorial stimulus material, writing newspaper articles, and games developed for the intervention.

The skill building component consisted of part of five sessions dedicated to teaching children to label feelings, to associate them with causal events, and to combine the feelings and events into statements to others. Part of four sessions were devoted to teaching children self-control and problem-solving skills and to helping children apply these skills to divorce-related problems. Children were taught to determine whether problems were solvable and whose responsibility it was to solve them. Anger control was the focus of part of the final two treatment sessions. Three sessions were devoted to introductory and termination activities.

In summary, the transfer, skills, and support condition and the skills-and-support condition were composed of two initial sessions that were devoted to introductory activities. Half of the next eight sessions were devoted to support or special topics activities. The other half of these sessions focused on teaching children about feelings and self-control techniques. Self-control and anger control procedures were taught in all of the next three sessions. The final session was devoted to termination activities.

The skills transfer component comprised a combined KidsBook and ParentsBook (Stolberg et al., 1991) and a series of four parent workshops. The KidsBook is an activity and homework book that helps children prepare for upcoming sessions, provided practice opportunities for skills learned in the group, and encouraged parent–child communication. Through drawing and writing exercises, the KidsBook encouraged children to examine their thoughts, feelings, and behaviors related to divorce and to evaluate their progress. Material in the KidsBook corresponded to the sequencing and content of the in-school sessions.

The ParentsBook encouraged parents to be involved in their child's experience with the transfer, skills, and support condition. It directed parents to encourage the use of skills learned and to initiate the discussion of important divorce-related topics. It recommended procedures to address issues that may have affected the parent–child relationship and suggested ways in which parents could give support and understanding to their child. Material in the ParentsBook corresponds to the sequencing and content of the in-school sessions and KidsBook activities.

Treatment groups were configured in three ways: transfer, skills, and support; skills and support; and support alone. The session content of the two skills and support groups included three meetings entirely devoted to introductory or termination activities. Eight sessions were equally divided into skill-building and support activities. The remaining three sessions focused on skill-building exercises alone. The skills transfer components supplemented the skills-and-support activities in transfer, skills, and support. The support-alone groups devoted three sessions to combined introductory or termination activities and support activities and all of the remaining five sessions to support activities.

Random assignment of schools to conditions yielded a transfer, skills, and support group (n = 29); a skills and support group (n = 28); a support-alone group (n = 23); and a divorce, no-treatment control group (n = 23). The intact, no-treatment control group comprised 26 children. Because the project spanned 3 years, many schools participated in several intervention phases. Participating schools were randomly assigned to treatment condition each semester. Thus, one school may have offered different intervention configurations at different times. Once schools had agreed to participate during a semester, children were recruited. Children’s acceptance into their school’s assigned intervention was based only on their family’s willingness to participate in all aspects of the intervention and evaluation.

Within each of the divorce intervention cells, five intervention groups of 5 to 8 children were held. Because of parents' wishes not to participate in the research component of the project, a few groups included children who did not complete evaluation instruments. The total number of nonresearch subjects was less than 5. The additive effect of stepwise increases in intervention elements on adjustment was assessed by adding the skills activities to the support program, yielding the skills and support condition, and by adding the transfer procedures to the later intervention to produce the transfer skills, and support intervention inclusion of the divorce, no-treatment control group facilitated determining the effects of time on the adjustment of children of divorce. Comparisons with the intact, no-treatment control group enabled us to determine how close to nonstressed peers the children of divorce were after treatment.

Measures

Measures of child adjustment were divided into four clusters: affect, cognition, behavior in the home, and behavior in the school. The affect cluster comprised the State-Trait Anxiety Inventory for Children (STAI-C; Spielberger, 1973) and the Children's Depression Inventory. The Self-Perception Profiles (SPP) scales made up the cognition cluster. The cluster for behavior in the home included the CBCL scales (Activities, Social, School, Internalize, Externalize, and the standardized, total pathology score Sum t). Six of the Teacher's Rating Form scales (Academics, Adaptive Functioning, Happy, Learning, Internalize, Externalize, Sum t) constituted the cluster for behavior in the school.

Children's Depression Inventory (CDI). The CDI (Kovacs, 1981) is a 27-item self-report rating scale that assesses affective, behavioral, social, attitudinal, and vegetative symptoms of depression in children.
Children select one self-rating from a group of three, ranging from normal to clinically significant symptoms that best describes his or her experience over the past 2 weeks. The measure has established norms for both clinical and normal populations (Kovač, 1981; Smucker, Craighead, Craighead, & Green, 1986). Internal consistency estimated by coefficient alpha was .84 and 3-week test-retest reliability with fifth graders ranged between .74 and .77 (Smucker et al., 1986). Validity studies support its usefulness in discriminating between emotionally distressed and normal children (Saylor, Finch, Spirito, & Bennett, 1984).

STAI-C. The STAI-C (Spielberger, 1973) is composed of two 20-item scales measuring the child's level of state and trait anxiety. Children select the statement that best describes how they usually feel. The measure has norms for elementary school children. Six-week test-retest reliability coefficients for A-Trait scale were .65 for boys and .71 for girls. Evidence for concurrent validity of A-Trait scale was based on its .75 correlation with the Children's Manifest Anxiety Scale (Spielberger, 1973).

SPP. The SPP (Harter, 1983) is a 36-item scale designed to assess perceived competence in six areas of children's self-concept: cognitive competence, athletic competence, social acceptance, physical appearance, conduct and behavior, and general self-worth. Children rate each self-description on a 4-point scale. Psychometric data suggest that the measure is appropriate for boys and girls in Grades 3 through 9 and for group administration. Factor analysis supports the validity of the subscales across ages. Test-retest reliabilities ranged from .69 to .87 (Harter, 1983).

Child Assessment Schedule (CAS). The CAS (Hodges, Kline, Stern, McKnew, & Cytryn, 1982) is a standardized diagnostic interview for children designed to be administered by interviewers with experience in childhood psychopathology. It is designed for use with children aged 7 to 12 years old and yields a DSM-III diagnosis. The interview is divided into three sections: content area questions, onset and duration questions, and interviewer observational judgments. The completed interview yields both diagnostic information and a total psychopathological index.

Studies have demonstrated interrater reliability of the CAS with kappas ranging from .47 to .71, indicating moderate-to-good rater agreement. Evidence for the validity of the CAS includes concordance with the Schedule of Affective Disorders and Schizophrenia for School-Age Children (K-SADS) interview (Hodges, McKnew, Burbach, & Roeuck, 1987) and correlations with overall psychiatric ratings ranging between .82 to .87 (Verhulst, Berden, & Sanders-Woudstra, 1985). Interrater reliability estimates calculated for the current study yielded Cohen's kappa values ranging from .51 to .91, with an overall mean of .78.

Child Behavior Checklist-Parent Form (CBCL). The CBCL (Achenbach & Edelbrock, 1983) contains 118 items, for which parents rate frequency of occurrence on a 3-point scale. The measure yields normed scores on nine problem behavior scales for each sex, a normed total pathology scale; two broad-band second-order factors (Externalizing and Internalizing) and three social competence scales. Higher scores are keyed to frequency of the behavior and reflect either greater prosocial skills or maladaptive behavior. The t scores on internalizing, externalizing, and total pathology (Sum t) scales and the four prosocial scales were used in this study. Two-month test-retest coefficients for boys aged 6–11 averaged .74 for behavior scales (Achenbach & Edelbrock, 1986). Teacher–teacher agreement was .57.

Procedure

Teacher, parent, and child pretreatment ratings of all children were collected 1 to 2 weeks before the beginning of the programs. Testing of the children and their parents was done in groups of about 20. Teachers completed their ratings during the school day. Project staff who were unaware of the subjects' group assignment administered the CASs at the school during the school day. Posttesting of all children was performed at the conclusion of the intervention. Follow-up data were collected 1 year after completion of the intervention. Teachers and parents were not informed of the multiple formats of the intervention and were, thus, not apprised of the unique aspects of the group to which their children had been assigned. Teachers may have been aware of the larger evaluation project because of their school's involvement with the program.

Results

Following recent trends in outcome research methodology, analyses were divided into two major groupings to provide outcome and normative evaluations of program impact (Kendall & Grove, 1988). The outcome analyses questioned whether treatment had produced any enduring changes through comparisons of groups of children of divorce in treatment and nontreatment control conditions. The normative analyses compared the status of the treatment groups at postassessment and follow-up assessment periods with that of a normative control group of nonstressed, intact-family peers.

Outcome data were clustered into four dimensions: affect, cognition, behavior in the home, and behavior in the school to provide information on the specific levels of program impact (Kendall & Norton-Ford, 1982; Strupp & Hadley, 1977). In the first step of the outcome analyses, we calculated eight sets of repeated measures, multivariate analyses of variance (MANOVAs) using either measures of affect (CDL, STAI-C: Trait, STAI-C:State), cognition (the six SPP scales, CAS-Total Pathology), behavior in the home (CBCL), or behavior in the school (TRF) as dependent measures and time (either pre-postassessment [pre-post] or pre- to postassessment and postassessment to follow-up [pre-post–follow-up]) and divorce group membership as the independent variable. Analyses were conducted separately for pre-post and pre-post–follow-up data because of the reduction in power resulting from subject attrition at follow-up. When the MANOVAs were significant, repeated measures (ANOVAs) and Duncan's multiple range tests were used as post hoc tests. Comparisons reported are significant at p < .05.

In the second step of the outcome analyses, divorce-group children were rated either as having moderate-to-severe adjustment problems or as relatively symptomfree, using pre-intervention TRF and CBCL Sum t scores. We then calculated two sets of two chi-square coefficients, first using the sample of children with adjustment problems and then using the sample that was symptomfree. The four levels of divorce groups and the presence or absence of adjustment problems at posttesting constituted the categorization variables. The analyses were re-
interventions for children of divorce

repeated with follow-up adjustment ratings. The calculations using
the sample of children with adjustment problems at pretesting
yielded information on which interventions most helped in
reducing adjustment problems. Analyses of well-adjusted chil-
dren provided some understanding of the deleterious effects of
an intervention.

For the normative comparisons, a series of four MANOVAs
were conducted. Affect, cognition, behavior in the home, and
behavior in the school clusters at postassessment and then fol-
low-up were used as dependent measures, and four of the child
groups, excluding the divorce controls, served as the indepen-
dent variable. This analysis provided social validation of pro-
gram impact and helped to determine similarities between chil-
dren of divorce and their nonstressed peers after treatment
(Kazdin, 1977).

Table 2 presents preassessment, postassessment, and follow-
up group means and standard deviations for each of the study’s
dependent variables, MANOVA Fs for the Group X Time in-
teractions for pre-post and pre-post-follow-up repeated mea-
ures analyses, and ANOVA Fs for the Group X Time interac-
tions for the pre-post comparisons. Repeated measures
MANOVAs calculated on pre-post data yielded significant
Group X Time interactions for the affect cluster, F(3, 95) =
1.76, p < .05, and the behavior in the home cluster, F(3, 90) =
1.75, p < .05. Repeated measures ANOVAs calculated on the
individual affect scales identified a significant Group X Time
interaction for the STAI-C: Trait measure, F(3, 95) = 3.68, p <
.01. Significant univariate Fs for the Group X Time interac-
tions were found for the scales of behavior in the home: Internaliz-
ing, F(3, 90) = 4.50, p < .005; Externalizing, F(3, 90) = 6.20, p <
.001; and Sum t, F(3, 90) = 6.12, p < .001. Duncan’s multiple
range tests calculated on pre-post change scores for the previous
four variables indicated that the greatest decreases in Interna-
zizing scores (M = 8.23), Externalizing scores (M = 8.54), and
Sum t scores (M = 9.42) were found in the skills and support
condition. These decreases were significantly greater than those
found in the transfer, skills, and support condition (Externaliz-
ing [M = 2.63] and Sum t scores [M = 3.42]), in the support-
alone condition (Internalizing [M = .09], Externalizing [M =
.22], and Sum t scores [M = .23]), and in the divorce controls
(Internalizing [M = 2.05], Externalizing [M = .82], and Sum t
scores [M = 1.59]). Decreases in trait anxiety were greatest in
the transfer, skills, and support condition (M = 6.50), compared
with STAI-C: Trait scores in the skills and support condition (M
= 2.48) and the support-alone condition (M = 1.87).

Analyses of pre-post-follow-up data yielded significant
Group X Time interaction effects in the repeated measures
MANOVAs on the behavior in the home cluster, F(3, 65) = 2.07,
p < .001 (see Table 2). We did not find significant interaction
effects for the affect cluster, F(3, 80) = 1.45, ns; cognition clus-
ter, F(3, 40) = 1.14, ns; and behavior in the school cluster, F(3,
57) = 0.74, ns. Significant univariate Fs for the Group X Time
interactions were found for individual behavior in the home
scales: Internalizing, F(3, 65) = 8.46, p < .001; Externalizing,
F(3, 65) = 4.12, p < .01; and Sum t, F(3, 65) = 8.24, p < .001.
Duncan’s multiple-range tests calculated on the four preas-
seessment-to-follow-up change scores indicated that the greatest
improvements were in the transfer, skills, and support condition
Internalizing scores (M = 7.63), Externalizing scores (M =
8.31), and Sum t scores (M = 8.88) and in the skills and support
condition Externalizing scores (M = 7.77) and Sum t scores (M
= 8.54), compared with the scales for divorce controls: Interna-
zizing (M = .32), Externalizing (M = 1.64), and sum t (M =
1.86).

In the second stage of outcome evaluations, divorce-group
children were rated either as having adjustment problems at
program entry or as well-adjusted. Moderate-to-severe adjust-
ment problems at program entry were operationalized by either
TRF Sum t scores or CBCL Sum t scores greater than or equal
to 60 (n = 66). Children with pre-intervention TRF Sum t and
CBCL Sum t scores less than 60 (n = 37) were considered to be
relatively symptomfree. Divorce group and adjustment ratings
at posttesting were used as categorization variables in chi-
square analyses on the sample with adjustment problems, yield-
ing significant differences in adjustment ratings by group post-
treatment, χ²(3, N = 60) = 8.70, p < .05. Eight of 21 children
in the skills and support condition displayed clinically significant
signs of improvement, whereas only 2 of 20 children in transfer,
skills, and support, 2 of 11 children in support alone, and none
of the children in divorce controls showed similar clinical im-
provement (see Table 3). Chi-squares on the same subgroups
and categorizations found significant differences in adjustment
ratings by group at follow-up, χ²(3, N = 41) = 11.46, p < .01.
Four of 11 skills and support children and 7 of 10 support-alone
children displayed improvements in adjustment, whereas none
of the divorce controls and 3 of 14 transfer, skills, and support
children showed such gains.

Investigations of children rated relatively well-adjusted be-
tween treatment yielded significant differences in posttreatment
adjustment patterns, χ²(3, N = 32) = 7.61, p < .05. Four of
9 children in the support-alone condition displayed clinically
significant adjustment problems, whereas only 2 of 7 children
in the transfer, skills, and support condition and 2 of 6 children
in the skills and support condition showed deteriorated func-
tioning. Again, no changes in adjustment were noted in chil-
dren in the divorce controls condition. No significant differ-
ences in adjustment ratings by group preintervention to follow-
up treatment were found for this initially well-adjusted group,
χ²(3, N = 21) = 3.86, ns; perhaps because only 1 child in
each of the skill-building conditions met the initial adjustment
criteria. Interestingly, 5 of 7 support-alone children displayed
significant deteriorations in adjustment from pre-intervention
to follow-up.

MANOVAs calculated in the normative evaluation indicated
no significant posttesting differences in affect, F(9, 339) = 1.05,
ns; cognition, F(21, 156) = 1.40, ns; or behavior in the home,
F(21, 258) = 1.51, ns, of children of divorce in the treatment
groups and intact-family controls. A significant model effect
was found for the behavior in the school cluster at posttesting,
F(21, 216) = 1.96, p < .01. See Table 2 for group means and
standard deviations. After treatment, teachers rated children of
divorce as being more poorly adjusted than their intact-family
peers on the three TRF pathology subscales: Sum t, F(3, 81) =
4.45, p < .01; Internalizing, F(3, 81) = 4.81, p < .01; and
Externalizing, F(3, 81) = 3.89, p < .01. MANOVAs were also
calculated with follow-up scores as the dependent measures. No
significant differences were found between treatment-group
children and their intact-family peers in affect, F(9, 282) = 0.97,
Table 2

Group Means and Standard Deviations and Multivariate and Univariate F Ratios for Group × Time Interactions

<table>
<thead>
<tr>
<th></th>
<th>Transfer, skills, &amp; support</th>
<th>Skills &amp; support</th>
<th>Support</th>
<th>Divorce controls</th>
<th>Intact-family controls</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre (n = 29)</td>
<td>Post (n = 28)</td>
<td>Follow-up (n = 25)</td>
<td>Pre (n = 28)</td>
<td>Post (n = 27)</td>
</tr>
<tr>
<td>M and SD of scale</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cognitive cluster MANOVA: Pre vs. post, F(3, 51) = 1.04; pre vs. post vs. follow-up, F(3, 40) = 1.14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Self-Perception Profile

<table>
<thead>
<tr>
<th></th>
<th>Scholastic</th>
<th>Social</th>
<th>Athletic</th>
<th>Physical Appearance</th>
<th>Behavior Conduct</th>
<th>General Self-Worth</th>
<th>Child Assessment Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>M</td>
<td>M</td>
<td>M</td>
<td>M</td>
</tr>
<tr>
<td></td>
<td>15.47</td>
<td>3.52</td>
<td>16.10</td>
<td>4.40</td>
<td>15.77</td>
<td>4.67</td>
<td>15.37</td>
</tr>
<tr>
<td></td>
<td>17.00</td>
<td>3.91</td>
<td>18.46</td>
<td>4.15</td>
<td>17.89</td>
<td>5.28</td>
<td>17.86</td>
</tr>
<tr>
<td></td>
<td>16.50</td>
<td>4.01</td>
<td>18.96</td>
<td>3.95</td>
<td>17.58</td>
<td>3.77</td>
<td>18.00</td>
</tr>
<tr>
<td></td>
<td>16.66</td>
<td>4.03</td>
<td>17.14</td>
<td>4.54</td>
<td>17.42</td>
<td>3.33</td>
<td>18.00</td>
</tr>
<tr>
<td></td>
<td>18.41</td>
<td>3.03</td>
<td>19.33</td>
<td>3.04</td>
<td>17.11</td>
<td>4.63</td>
<td>18.71</td>
</tr>
<tr>
<td></td>
<td>18.95</td>
<td>3.72</td>
<td>20.52</td>
<td>4.03</td>
<td>18.00</td>
<td>4.32</td>
<td>17.19</td>
</tr>
<tr>
<td></td>
<td>18.50</td>
<td>4.65</td>
<td>19.95</td>
<td>4.43</td>
<td>18.42</td>
<td>4.32</td>
<td>18.36</td>
</tr>
<tr>
<td></td>
<td>18.91</td>
<td>4.39</td>
<td>19.55</td>
<td>3.92</td>
<td>17.73</td>
<td>3.49</td>
<td>18.76</td>
</tr>
<tr>
<td></td>
<td>17.90</td>
<td>3.69</td>
<td>19.55</td>
<td>3.98</td>
<td>17.29</td>
<td>4.95</td>
<td>19.65</td>
</tr>
<tr>
<td>Divorce controls</td>
<td>19.30</td>
<td>2.85</td>
<td>19.95</td>
<td>3.21</td>
<td>19.48</td>
<td>4.35</td>
<td>20.09</td>
</tr>
<tr>
<td></td>
<td>19.77</td>
<td>2.78</td>
<td>19.86</td>
<td>3.95</td>
<td>19.86</td>
<td>4.16</td>
<td>19.55</td>
</tr>
<tr>
<td></td>
<td>18.27</td>
<td>4.91</td>
<td>19.86</td>
<td>4.52</td>
<td>19.09</td>
<td>4.95</td>
<td>17.37</td>
</tr>
<tr>
<td></td>
<td>18.57</td>
<td>3.05</td>
<td>19.39</td>
<td>3.69</td>
<td>17.37</td>
<td>3.85</td>
<td>18.55</td>
</tr>
<tr>
<td></td>
<td>18.74</td>
<td>3.92</td>
<td>18.60</td>
<td>2.49</td>
<td>18.60</td>
<td>3.85</td>
<td>18.60</td>
</tr>
</tbody>
</table>

Affect cluster MANOVA: Pre vs. post, F(3, 95) = 1.76; pre vs. post vs. follow-up, F(3, 80) = 1.45

State-Trait Anxiety Inventory for Children

<table>
<thead>
<tr>
<th></th>
<th>State</th>
<th>Trait</th>
<th>Children's Depression Inventory</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td></td>
<td>30.09</td>
<td>7.13</td>
<td>10.06</td>
</tr>
<tr>
<td></td>
<td>28.77</td>
<td>5.24</td>
<td>6.10</td>
</tr>
<tr>
<td></td>
<td>29.00</td>
<td>5.35</td>
<td>6.96</td>
</tr>
<tr>
<td></td>
<td>31.86</td>
<td>9.86</td>
<td>11.41</td>
</tr>
<tr>
<td></td>
<td>29.32</td>
<td>5.93</td>
<td>7.56</td>
</tr>
<tr>
<td></td>
<td>28.43</td>
<td>7.08</td>
<td>6.62</td>
</tr>
<tr>
<td></td>
<td>27.13</td>
<td>4.46</td>
<td>8.96</td>
</tr>
<tr>
<td></td>
<td>27.48</td>
<td>4.02</td>
<td>5.14</td>
</tr>
<tr>
<td></td>
<td>27.24</td>
<td>4.40</td>
<td>5.95</td>
</tr>
<tr>
<td></td>
<td>29.65</td>
<td>7.26</td>
<td>6.13</td>
</tr>
<tr>
<td>Divorce controls</td>
<td>26.59</td>
<td>4.09</td>
<td>3.00</td>
</tr>
<tr>
<td></td>
<td>26.55</td>
<td>6.43</td>
<td>7.13</td>
</tr>
<tr>
<td></td>
<td>27.47</td>
<td>5.43</td>
<td>6.10</td>
</tr>
<tr>
<td></td>
<td>28.61</td>
<td>4.38</td>
<td>5.16</td>
</tr>
<tr>
<td></td>
<td>27.13</td>
<td>5.40</td>
<td>0.23</td>
</tr>
</tbody>
</table>

(table continues)
### Child Behavior Checklist

| Activities       | Pre M (n=29) | Pre SD | Post M (n=28) | Post SD | Follow-up M (n=24) | Follow-up SD | Support Pre M (n=23) | Support Pre SD | Support Post M (n=22) | Support Post SD | Support Follow-up M (n=21) | Support Follow-up SD | Divorce Controls Pre M (n=23) | Divorce Controls Pre SD | Divorce Controls Post M (n=22) | Divorce Controls Post SD | Divorce Controls Follow-up M (n=21) | Divorce Controls Follow-up SD | Intact-family controls Pre M (n=26) | Intact-family controls Pre SD | Intact-family controls Post M (n=26) | Intact-family controls Post SD | Intact-family controls Follow-up M (n=21) | Intact-family controls Follow-up SD | F* |
|------------------|-------------|--------|---------------|---------|--------------------|--------------|-----------------------|-----------------|------------------------|------------------|-------------------------------|---------------------|--------------------------|------------------|--------------------------|------------------|--------------------------|------------------|--------------------------|------------------|--------------------------|------------------|
| M and SD of scale |             |        |               |         |                    |              |                       |                 |                        |                  |                               |                     |                          |                  |                          |                  |                          |                  |                          |                  |                          |                  |                          |                  |
| **Behavior-in-the-home cluster MANOVA:** Pre vs. post, $F(3, 90) = 1.75^*$; pre vs. post vs. follow-up, $F(3, 65) = 2.07^{***}$ |
| **Teacher's Rating Form** |
| **Academics**     |             |        |               |         |                    |              |                       |                 |                        |                  |                               |                     |                          |                  |                          |                  |                          |                  |                          |                  |                          |                  |                          |                  |
| M and SD of scale |             |        |               |         |                    |              |                       |                 |                        |                  |                               |                     |                          |                  |                          |                  |                          |                  |                          |                  |                          |                  |                          |                  |
| **Adaptive Function** |
| M and SD of scale |             |        |               |         |                    |              |                       |                 |                        |                  |                               |                     |                          |                  |                          |                  |                          |                  |                          |                  |                          |                  |                          |                  |
| **Happy**         |             |        |               |         |                    |              |                       |                 |                        |                  |                               |                     |                          |                  |                          |                  |                          |                  |                          |                  |                          |                  |                          |                  |
| M and SD of scale |             |        |               |         |                    |              |                       |                 |                        |                  |                               |                     |                          |                  |                          |                  |                          |                  |                          |                  |                          |                  |                          |                  |
| **Learning**      |             |        |               |         |                    |              |                       |                 |                        |                  |                               |                     |                          |                  |                          |                  |                          |                  |                          |                  |                          |                  |                          |                  |
| M and SD of scale |             |        |               |         |                    |              |                       |                 |                        |                  |                               |                     |                          |                  |                          |                  |                          |                  |                          |                  |                          |                  |                          |                  |
| **Internalizing** |             |        |               |         |                    |              |                       |                 |                        |                  |                               |                     |                          |                  |                          |                  |                          |                  |                          |                  |                          |                  |                          |                  |
| M and SD of scale |             |        |               |         |                    |              |                       |                 |                        |                  |                               |                     |                          |                  |                          |                  |                          |                  |                          |                  |                          |                  |                          |                  |
| **Externalizing** |             |        |               |         |                    |              |                       |                 |                        |                  |                               |                     |                          |                  |                          |                  |                          |                  |                          |                  |                          |                  |                          |                  |
| M and SD of scale |             |        |               |         |                    |              |                       |                 |                        |                  |                               |                     |                          |                  |                          |                  |                          |                  |                          |                  |                          |                  |                          |                  |

Note: MANOVA = multivariate analysis of variance. Pre = pretest; post = posttest. *Fs pertain to divorce groups only. The degrees of freedom for the cognitive cluster are smaller than those for the other adjustment clusters because of missing data on the Child Assessment Schedule at post and follow-up testing. *df = 3 and 95. **df = 3 and 90. *p < .05. **p < .01. ***p < .001.
Table 3

 Frequencies of Posttreatment and Follow-Up Normative Adjustment Ratings

<table>
<thead>
<tr>
<th>Group</th>
<th>Posttreatment ratings</th>
<th>Follow-up ratings</th>
<th>No adjustment problems at pretesting</th>
<th>Posttreatment ratings</th>
<th>Follow-up ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Same f %</td>
<td>Improved f %</td>
<td>Same f %</td>
<td>Improved f %</td>
<td>Same f %</td>
</tr>
<tr>
<td>Transfers, skills, and support</td>
<td>18 90 2 10 20</td>
<td>11 78 3 21 14</td>
<td>5 71 2 29 7</td>
<td>0 0 1 100 1</td>
<td></td>
</tr>
<tr>
<td>Skills and support</td>
<td>13 62 8 38 21</td>
<td>7 64 4 36 11</td>
<td>4 66 2 33 6</td>
<td>1 100 0 0 1</td>
<td></td>
</tr>
<tr>
<td>Support</td>
<td>9 82 2 18 11</td>
<td>3 30 7 70 10</td>
<td>5 55 4 45 9</td>
<td>2 29 5 71 7</td>
<td></td>
</tr>
<tr>
<td>Divorce control</td>
<td>8 100 0 0 8</td>
<td>6 100 0 0 6</td>
<td>10 100 0 0 10</td>
<td>83 2 17 12</td>
<td></td>
</tr>
</tbody>
</table>

\( \chi^2(3, N = 60) = 8.70, p < .05 \)  \( \chi^2(3, N = 41) = 11.46, p < .01 \)  \( \chi^2(3, N = 32) = 7.61, p < .05 \)  \( \chi^2(3, N = 21) = 3.86, ns \)

ns; cognition, F(21, 120) = 1.06, ns; behavior in the home, F(21, 150) = 0.63, ns; or behavior in the school, F(21, 162) = 0.97, ns.

Discussion

This study identified effective intervention components and promising elements in need of revision. Participation in the skill-building component yielded significant, additive gains beyond those displayed by the divorce controls. The skills and support condition yielded the most immediate gains, specifically in reductions in internalizing and externalizing behavior and total pathology in the home. Supplementing skill-building interventions with transfer procedures and structured, parental involvement resulted in immediate improvements in children’s self-ratings of reduced trait anxiety but delayed the report of behavioral gains in the home until the 1-year follow-up. At follow-up, the adjustment associated with both of these conditions was greater than that found in the divorce controls. The adjustment patterns of the two skill-building conditions were neither significantly different from each other nor different from the adjustment patterns of the support-only condition. Furthermore, children in the skills and support condition displayed greater improvements in clinical symptomatology than children in all other conditions at posttesting. The skills and support intervention resulted in reductions in clinical symptomatology in 8 of 21 children at posttesting, in contrast to similar clinical improvements in only 2 of 20 children in the transfer, skills, and support condition, 2 of 11 children in the support-only condition, and in none of the children in the divorce controls in the same time span. Children in the support-only condition displayed greater improvements in clinical symptomatology at follow-up than children in all other conditions. Rates of deteriorated adjustment should be given little attention because of the small sample sizes. Normative evaluations of the intervention suggest that children’s affective and cognitive adjustment and behaviors in the home equalled those of their nonstressed peers from intact homes immediately posttreatment. Functioning in all domains was comparable for intervention and nonstressed controls at the 1-year follow-up.

The addition of transfer procedures and structured parental involvement to skill building and supportive interventions for children of divorce yielded improvements in self-rated, trait anxiety. Self-rated gains were not reported in any other treatment condition. One year posttreatment, children from the transfer, skills, and support condition reported fewer pathological symptoms and were rated by their parents as displaying significantly fewer pathological symptoms than children from no-treatment controls. A similar pattern of immediate, internally rated gains, and delayed, external ratings of improvement was reported by Stolberg and Garrison (1985), who concluded that time to practice learned skills was needed before others noticed gains in behavior.

The absence of parental involvement in the skills and support condition may have inflated parents’ ratings of additive gains in their children in part reflecting a lower threshold for viewing their children as psychologically healthy. Parents in the Transfer, skills, and support condition were intimately involved with the details of the intervention through books and workshops and were directed to engage their children in discussions of feelings about the divorce and its related events. These parents had detailed information about their children’s internal states. Their subsequent appraisal of that adjustment may have reflected what they learned from their children. Contrasts of the patterns of parent-reported gains in the two conditions without parent involvement, the support-alone groups, and the skills and support groups, speak against the exclusive operation of an halo effect in the reported adjustment gains in the later group.

Significant increments in additive gains did not result from the addition of the transfer procedures. Although affective distress was reduced in the all-components intervention, the procedures may have resulted in delays in additive benefits to the children. Because substantial empirical support for the inclusion of parenting and transfer elements in program procedures can be drawn from the literature (Cherlin et al., 1991; Ellwood & Stolberg, in press; Goldstein, 1981; Kanfer, 1979; Stolberg & Bush, 1985), it is essential to understand the failure of the procedures to yield incremental benefits.

Two problems may account for the failure of the transfer ve-
Interventions for Children of Divorce

Justine gains have yet to be documented. Third, attention to the imposing 250 pages of the document and the 10 pages of Shure (1988), the work of others helped to make the Children's based interventions, including drug abuse prevention and sex interventions. First, designing and evaluating individual pro-

In contrast, children from high-functioning homes display greater gains when parents are integrated into the transfer procedures.

Support-alone interventions yielded a variable pattern of improvements over the project's three observation periods. The greatest impact of this condition was found in the adjustment of children who entered the intervention with clinically significant problems. Reductions in clinical symptomatology at follow-up were greater for this group than for all other conditions. No differences were found at either postassessment or follow-up testing in the affective, cognitive, and behavioral adjustment of children in the support-alone condition, compared with those in the divorce controls. Children in the support-alone condition displayed adjustment patterns that were not significantly different from their peers in the transfer, skills, and support and the skills and support conditions at follow-up. The limited impact of this condition may be a result of the reduced amount of treatment time to children. The skill-building conditions involved 43% more therapeutic contact (14 sessions), whereas the support-alone condition comprised 8 sessions.

Broader implications spring from this intervention research (Grych & Fincham, 1992). First, this is a treatment program, not prevention. Almost 50% of the treatment sample in this study displayed behaviors rated as clinically significant. Parents in this and other studies were separated for many years before the interventions were offered (Pedro-Carroll & Cowen, 1985; Kalter et al., 1984). Second, the relationship between the theoretical model (which serves as the intervention's foundation) and processes fostered in the interventions (e.g., homework completion and skill application) hypothesized to promote adjustive gains has yet to be documented. Third, attention to significant family processes facing divorcing families, such as hostility, must be added to the current strategy. Finally, age-related variations in patterns of parent and peer support, in children's cognitive sophistication, and in the developmental tasks to be mastered must be considered when expanding the populations to be served by these structured interventions.

Three findings from this study may be applied to other school-based intervention strategies yielding benefits to all such interventions. First, designing and evaluating individual program components may facilitate their export to other school-based interventions, including drug abuse prevention and sex education. As with the work of Finch and Kendall (1979) and Shure (1988), the work of others helped to make the Children's Support Group procedure more effective. The importance of cognitive–behavioral skill building as a key ingredient of the program design is the second general application principle. Substantial outcome gains resulted from teaching skills to help children master developmental tasks hindered by divorce. Finally, developing defined roles for parents in ameliorating the adverse effects of family problems is supported both by data and by common sense. Further exploration and refinement of procedures is required. Schools are faced with the immense burdens of meeting educational, health, mental health, and child-care demands of children and their families. One can only conclude that, in the absence of substantial increases in staff and financial support, weekly interventions can never be as effective as continuous intervention by parents throughout the child's waking hours.

References


Received February 28, 1992
Revision received October 5, 1992
Accepted May 3, 1993