Sustained Change in Parents Receiving Preventive Interventions for Families With Depression

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Objective: *The purpose of this study was to compare the sustained effects of two cognitive, psychoeducational preventive interventions for families in which a parent had an affective disorder.* *Method:* *Thirty-seven families, in which there was a child between the ages of 8 and 15 years (mean=11.5 years) and at least one parent who had experienced a recent epidsode of affective disorder according to the Research Diagnostic Criteria, were studied 1.5 years after enrollment in the study. The families were randomly assigned to one of two interventions, clinician-facilitated or lecture. The two interventions were similar in content but differed in the degree of involvement of the children and the linking of information to the families' life experiences. Nineteen families participated in the clinician-facilitated intervention, which consisted of six to 10 sessions. Eighteen families were assigned to the lecture condition, which consisted of two lectures attended only by parents. Family members were interviewed both before and after the interventions with diagnostic interviews and semistructured measures designed to assess response to the interventions.* *Results:* *Sustained effects of the interventions were reported 1.5 years after enrollment. The clinician-facilitated intervention was associated with more positive self-reported and assessor-rated changes than the lecture intervention.* *Conclusions:* *These short-term preventive interventions, particularly the clinician-facilitated one, have long-term benefits for families with parental affective disorder.*

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Depression is a public health problem of major proportions. According to recent estimates from the National Comorbidity Study (1), approximately 17% of adults will experience an episode of major depression during their lifetimes. Depression is associated with long-term impairment in at least one-half of those who experience an episode (2). Moreover, depression in an individual has an effect on all family members (3).

There has been increasing awareness of the impact of parental depression on children and adolescents. Recent studies have demonstrated that as many as 50% of the children of parents with serious affective disorders will experience an episode of depression by the end of their adolescence (4, 5). Both genetic (6) and psychosocial (7) influences are involved in the transmission of disorder from parent to child. Given the high incidence of depression and the increased risk of depression among children of parents with affective illness, a number of experts have stressed the need to focus on the prevention of depression in this population, rather than simply on its treatment when it occurs (8, 9).

Research on the prevention of affective disorders in adults has been promising (10). However, few empirical efforts have focused on the prevention of depression in young people. Those that have (11, 12) used high-risk youths who already had elevated scores on self-report measures of depressive symptoms. Thus, these are not primary prevention trials. In addition, these studies have not included participation and evaluation of other family members. Finally, most programs have not provided adequate long-term follow-up (13).

To address the needs of families in which one or both parents suffer from an affective disorder, we developed, administered, and compared two standardized, psychoeducational preventive intervention approaches—clinician-facilitated and lecture/discussion. Because most depressed adults who receive treatment are seen by general practitioners rather than by specialists (14), both interventions were designed to be compatible with a wide range of theoretical orientations and different styles of practice. Both interventions specifically tar-

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geted families in which the children were at increased risk for affective disorders because of their parents' affective illness. The content of these interventions was based directly on risk studies of children of affectively ill parents that identified resiliency-promoting characteristics, including relatedness to others, the capacity to function independently outside the home, and self-understanding (15). Both approaches included ways of identifying and enhancing resiliency in children, and both utilized a future-oriented approach whose goal was long-term change in family functioning.

The clinician-facilitated intervention consisted of six to 10 sessions in which the clinician worked with the family to integrate the life experiences of all family members and to link the family's illness experience to the cognitive information presented. The clinician-facilitated intervention included a family meeting in which the children joined the parents and the clinician in a discussion of affective illness and miscommunications regarding the illness.

In the lecture intervention, similar cognitive information was covered in two lectures, which were delivered in a group format without children present. Although family discussion was encouraged, the cognitive information was not directly linked to the family's individual illness experience. Affective disorder was presented as a family experience, and parents were encouraged to talk to their children about parental illness. However, parents had to decide whether or not to initiate such conversations with their children.

In a pilot study of these interventions, promising results based solely on assessment of parents in a small sample indicated that both interventions were safe and feasible (16), that greater benefits were associated with the clinician-facilitated intervention (17), and that these group effects persisted over time (18). Despite the mandate for postintervention assessment at multiple points over time (8, 9), most studies do not examine intervention effects with follow-up intervals greater than 1 year (19, 20). The design of the present study is to follow families longitudinally, which will allow us to examine sustained effects. This report presents findings from the second follow-up period, 1.5 years after enrollment. Findings from the first follow-up interviews occurring directly after intervention showed that the parents in both groups reported satisfaction with the interventions, but, overall, participants in the clinician-facilitated intervention reported significantly greater benefits (21).

The central hypothesis of this project is that it is necessary for families to link cognitive information to family life experiences in order for sustained changes in behavior and attitudes to occur. We hypothesized that parents receiving both interventions would report sustained effects, but that parents participating in the clinician-facilitated intervention would report more significant changes in illness-related behavior and attitudes because of the closer linking of the cognitive information to family life experiences. We further hypothesized that effects would be observed across family members.

METHOD

Families were recruited from a large prepaid health maintenance organization in the Boston area. Dual- and single-parent families were invited to participate 1) if they had at least one child between the ages of 8 and 15 years who had never been treated for an episode of affective disorder and 2) if at least one parent had experienced an episode of an affective disorder in the 18 months before contact. Exclusion criteria included current parental substance abuse, a history of parental schizophrenia, current severe marital crisis, or other life crises (e.g., hospitalization) that would prevent the family from focusing on the future. Families currently in marital or family therapy more often than twice per month were also excluded. Youngsters were excluded if their parents reported that they had ever been affectively ill or were in regular psychotherapy, but they were not excluded if they had other diagnoses (e.g., learning disabilities). Individual treatment of the identified patient or spouse was permissible. Written informed consent was obtained from all family members after the assessment and intervention procedures had been fully explained. Written informed consent was obtained from both parent and child for each child's participation.

A balanced block randomization procedure with blocks of four (22), separated by family type (single- or dual-parent), was used to ensure that there were equal numbers of families participating in each intervention. This article reports on data gathered from families who completed the initial assessment battery (time 1), participated in the intervention, were assessed after the intervention (time 2), and then were assessed approximately 8 months after completion of the time 2 assessment (time 3).

The first 37 families (29 dual-parent and eight single-parent) to complete initial assessment, intervention participation, and the first two postintervention assessments were included in this study group. Nineteen families (including four single-parent families) were randomly assigned to the clinician-facilitated intervention, and 18 families (including four single-parent families) were randomly assigned to the lecture intervention. In all of the single-parent families, the mother was the head of household. Of the family members assessed immediately after participation in the intervention (time 2), only two parents did not complete assessments at time 3. The study group was predominantly composed of white, middle-class (Hollingshead-Redlich levels 2 and 3 [23]) families. The mean number of children per family was 2.1 (range=1–4), the fathers' mean age was 44.3 years (SD=4.2), and the mothers' mean age was 41.1 years (SD=5.0). Twenty-eight of the 37 identified patients were the mothers in their families, and the distribution was similar in both intervention groups. The mean cumulative duration of affective disorder in the identified patients in the 5 years preceding initial assessment was 124.2 weeks (SD=89.9). During the interval between time 1 and time 3, 21 identified patients and one nonidentified patient experienced an episode of major depressive disorder. All but six of the identified patients met the criteria for an episode of an affective illness. One of the identified patients was hospitalized in the interval, 92% were involved in some form of mental health therapy, and 89% used some type of medication for treatment of mood. The mean duration of the affective episodes in the interval from time 1 to time 3 was 29.2 weeks (SD=24.4). There were no differences between groups in the numbers experiencing an affective episode or in the duration of the affective episodes.

Statistical tests performed on baseline values indicated that the families in the clinician-facilitated intervention did not differ from the families in the lecture intervention. Among the parents and children, there were no differences between groups in age, gender, or social class. There were no differences between groups in parents' number of episodes of affective disorder in the past 5 years, worst reported functioning over the past 18 months, number of suicide attempts, number of diagnoses per subject, and number of psychiatric hospitalizations in the past 5 years. The only significant difference between groups at baseline was in mean Beck inventory scores for the parents who were nonidentified patients (mean=2.1, SD=1.9, in the clinician-facilitated group; mean=6.2, SD=15.8, in the lecture group; $t=2.44$, $df=14.3$, $p<0.05$).

Interventions

Detailed descriptions of the two interventions, including guidelines for consistency of delivery, have been previously presented (16, 17). The clinician-facilitated intervention took place in six to 10 sessions

TABLE 1. Ratings by Parents With Affective Disorders of the Helpfulness of a Clinician-Facilitated Intervention and a Lecture Intervention for Their Families

	Rating at Time 2[a]						Rating at Time 3[b]					
	Clinician-Facilitated Intervention		Lecture Intervention		Analysis		Clinician-Facilitated Intervention		Lecture Intervention		Analysis	
Variable	Mean	SD	Mean	SD	F	df	Mean	SD	Mean	SD	F	df
Increased understanding of causes and symptoms of depression[c]	4.0	1.9	3.1	1.7	6.58*	1, 62	5.0	1.9	3.4	1.9	12.33***	1, 62
Increased understanding of own feelings regarding the illness	5.3	1.5	2.8	2.0	36.51***	1, 55	5.7	1.6	2.9	1.9	40.78***	1, 55
Increased supportiveness of spouse	5.2	1.5	3.1	2.0	21.70***	1, 55	5.2	1.6	3.0	1.9	22.34***	1, 55
Improved communication with oldest child in study	4.5	1.7	2.9	2.1	14.89***	1, 60	4.5	1.6	2.7	1.7	21.43***	1, 60
Improved understanding of oldest child in study	5.5	0.9	2.8	2.1	19.98***	1, 37	5.6	1.1	2.4	1.7	22.14***	1, 37
Satisfaction with factual material presented in intervention	5.7	1.5	4.1	2.0	14.63***	1, 60	5.7	1.7	4.0	1.8	17.28***	1, 60
Overall satisfaction with intervention	6.1	1.2	3.8	1.7	45.10***	1, 61	6.0	1.1	3.8	1.6	42.07***	1, 61
Intervention helped												
With child-related concerns	4.9	1.3	3.2	1.8	22.69***	1, 50	4.8	1.6	3.3	1.9	9.13**	1, 50
With illness-related concerns	4.8	1.7	2.9	1.9	11.21**	1, 47	4.6	1.7	3.0	1.6	11.42**	1, 47
With marriage-related concerns	5.5	1.1	1.5	0.9	69.06***	1, 17	4.7	2.2	2.5	2.0	3.91	1, 17

[a]At the end of the intervention.
[b]Approximately 8 months after the time 2 assessment.
[c]Significant effect of time (F=13.2, df=1, 55, p<0.001).
*p<0.05. **p<0.01. ***p<0.001.

(mean=7.7, SD=1.3). The majority of the meetings were with the parents; the child(ren) had one individual meeting with the clinician and participated in a family meeting. A refresher meeting between the parents (and children, if requested) and the clinician was held 6 months after the final intervention session for all families participating in this intervention.

Lectures were conducted in small groups of parents only and provided a forum for discussion. Efforts were made to schedule the lectures when the families could participate, and if they were unable to participate, videotapes were shown, with consultation available. Families receiving the lecture intervention were encouraged to contact the lecturer at any time, both immediately after attending lectures and subsequently, if they had questions or needed referral information. Approximately 33% of these families did contact the project in the interval between initial assessment and time 3, requesting either referral information or answers to illness-related questions.

Measures

Parental psychopathology. At time 1, the Schedule for Affective Disorders and Schizophrenia—Lifetime Version (SADS-L) (24), a semistructured interview for diagnosing affective disorders and other psychopathology on the basis of the Research Diagnostic Criteria (25), was administered to both parents. The SADS-L was modified to include only affective disorders, anxiety disorders, schizophrenia, unspecified functional psychosis, drug abuse, and alcoholism. Assessment of episodes in the interval between time 1 and time 3 was accomplished with the use of the Streamlined Longitudinal Interval Continuation Evaluation, a modified version of the Longitudinal Interval Follow-up Evaluation (26).

Self-reported symptoms of depression. At each assessment point, parents completed the Beck Depression Inventory (27), a 21-item self-rating measure used for assessing severity of depressive symptoms.

Demographic information. Family composition, socioeconomic status (Hollingshead-Redlich index), and other demographic data were obtained from the fathers at the initial assessment (in single-parent families, mothers provided this information).

Impact of the disorder and the intervention. A semistructured interview that contains a series of open-ended questions and rating scales was administered to each parent before and after the intervention. It was developed by this project to provide information on the following:

1. Perceived benefit of the intervention (subjects' ratings). Ratings of the degree to which the intervention helped with targeted areas of family functioning and of overall satisfaction with the project were obtained during the semistructured interview at postintervention assessment points. Parents made ratings on seven 7-point Likert-type scales. This measure attained excellent internal consistency (Cronbach's alpha=0.90) according to standards for reliability testing (28).

2. Parental concerns. At time 1 parents were asked to describe their greatest concerns about the illness and to rate how upsetting each concern was on a 7-point Likert-type scale. At all postintervention assessments, time 1 concerns were rated for current degree of upset, and parents also were asked to rate the degree to which the intervention was helpful in addressing these concerns.

3. Changes in illness-related behavior and attitudes. Interviewers used information from both pre- and postintervention administrations of the semistructured interview to identify specific changes in illness-related behavior and attitudes. To score positively, it was necessary that the parent both report change and attribute this change to the intervention. All scoring was done by trained raters, and each rating was reviewed by a master rater (P.C.R.). The development of these scales and the reliability of the measure have been previously presented (17, 21).

The time 1 assessments were completed before random assignment to the interventions. The time 3 assessments occurred approximately 1 year and 5 months after time 1 (mean=73.7 weeks, SD=17.1). The length of time between time 1 and time 3 was not significantly different for the two groups.

Statistical Analyses

Comparisons of the two intervention groups on the baseline diagnostic variables and the self-report measures were made with the t test or chi-square statistic, depending on whether the measure was a continuous or a categorical scale. Multiple three-factor repeated measures analyses of variance (ANOVAs) (group by gender by identified patient status) were performed to test the main effects and interactions of these independent variables on the primary outcome measures, including the summary behavior and attitude scores, the global ratings of change, the ratings of upset and helpfulness with concerns, and the Likert-type ratings of the impact of the interventions across time. Because family members cannot be assumed to be independent in their ratings, these ANOVAs were also performed separately for the identified patients and the nonidentified patients and for the mothers and fathers.

TABLE 2. Assessors' Ratings of Effects of a Clinician-Facilitated Intervention and a Lecture Intervention for Parents With Affective Disorders and Their Families

	Rating at Time 2[a]					Rating at Time 3[b]				
	Clinician-Facilitated Intervention		Lecture Intervention		Analysis:	Clinician-Facilitated Intervention		Lecture Intervention		Analysis:
Variable	Mean	SD	Mean	SD	F (df=1, 63)	Mean	SD	Mean	SD	F (df=1, 63)
Change										
In behavior	3.8	1.9	2.2	2.2	10.70*	4.1	1.9	2.1	1.9	18.40**
In attitude	7.1	2.6	4.2	2.6	21.35**	6.8	2.4	3.9	2.2	24.53**
Total	10.9	3.7	6.5	4.4	19.82**	10.9	3.9	6.0	3.7	26.20**
Global benefits	5.1	1.2	2.9	1.5	41.77**	5.2	1.3	2.9	1.4	44.03**
Self-understanding	3.5	1.5	2.2	1.4	19.13**	3.7	1.6	2.2	1.3	16.75**
Focus on children	4.6	1.3	2.9	1.4	23.28**	4.9	1.2	2.8	1.6	36.10**

[a]At the end of the intervention.
[b]Approximately 8 months after the time 2 assessment.
*p<0.01. **p<0.001.

RESULTS

For all seven variables related to subjects' perceptions of the benefit of the interventions, ANOVAs showed that participants in the clinician-facilitated intervention experienced greater changes (e.g., increased understanding of their own or their spouse's illness or increased understanding of their children) at both time 2 and time 3 (table 1). This was true whether the analysis used the whole group, the identified patients, the nonidentified patients, the men, or the women. Differences between groups also were evident when comparisons were made between mothers from dual-parent and single-parent households. There was a single main effect of time, showing that participants, regardless of group membership, reported increased understanding of the causes and symptoms of depression from time 2 to time 3.

Parents reported a variety of concerns at time 1: 43% had concerns about their children; 39% had concerns about the affective disorder and its general impact; 15% reported concerns involving marital issues; and 3% reported other concerns. Because the number of families reporting other concerns was very small, these concerns were not further analyzed. At baseline there were no significant differences between groups in the amount of upset for each category of concern. At time 2, families in the lecture group reported more upset about child-related concerns (mean rating=3.2, SD=1.8; for the clinician-facilitated group, mean=2.5, SD=1.5; $F=5.45$, df=1, 51, $p<0.05$). At time 3, there were no significant differences in upset for any of the concerns. There was a significant decline in upset from time 1 to time 3 for all three concern categories; however, there were no significant group differences in decline of upset across time. In addition, at both time 2 and time 3, participants in the clinician-facilitated intervention reported significantly greater levels of helpfulness of the intervention in addressing all of these concerns than did the lecture participants, except for concerns about marital issues at time 3 (table 1).

There were significant differences between groups in the total number of reported changes, as well as in a number of specific behavior and attitude changes at time 2 and time 3. The participants in the clinician-facilitated intervention evidenced more changes than the lecture participants (table 2). In general, scores were higher for the participants in the clinician-facilitated condition than for the participants in the lecture condition regardless of the subset examined. This was also true when comparisons were made between mothers from dual- and single-parent households. The repeated measures ANOVAs also showed significant differences between groups in all three areas of global benefit at time 2 and time 3 (table 2); at both time points the clinician-facilitated group had significantly higher ratings on change in focus on children, change in self-understanding, and global benefit from participating in the intervention. There were no significant effects of time on any of these scores.

DISCUSSION

This study was designed to examine the relative efficacy and sustained effects of two preventive intervention programs that target the offspring of adults with affective disorders, who are at increased risk for developing childhood depression and other disorders. The study represents the first phase of a systematic attempt at primary prevention for children without affective symptoms. Consistent with our hypotheses, parents reported sustained benefit from both interventions, changes in illness-related attitudes and behavior, and satisfaction with the interventions. As predicted, approximately 1.5 years after families were enrolled in the study, the clinician-facilitated intervention was associated with more self-reported and assessor-rated positive changes than the lecture intervention. Harmful effects resulting from participation in the project were neither reported nor observed in either group. It is notable that although there were no group differences in

the amount of upset associated with specific concerns at time 3, the parents in the clinician-facilitated group reported receiving significantly more help from that intervention with their specific concerns. The fact that the degree of upset did not decline significantly over time indicates the ongoing concern of these parents about the influence of the affective illness. At the same time, the clinician-facilitated intervention specifically provided new ways to deal with parental concerns.

This investigation demonstrates the value of cognitive, psychoeducational family-based interventions in decreasing the impact of parental affective illness on families. Cognitive-behavioral efforts have been effective in preventing adult depression (10), and family-based efforts have proven effective in the treatment of adult psychopathology (29). Cognitive-behavioral approaches to the prevention of depression in symptomatic adolescents have also yielded promising results (11). However, to date, these approaches have not been combined to target the prevention of psychopathology in children of affectively ill parents. Results from this research suggest that such a combination may help families lessen the impact of parental affective illness.

Unlike the studies that target only the ill individual, this investigation examined the effects of the interventions on both spouses who were ill and those who were not and on men and women separately. Our general findings that similar results emerged regardless of the subgroup examined demonstrates the impact of the interventions on families and the consistent differences between the two approaches. Some differences were observed that highlight the value of assessing each family member individually. For example, our results indicated that in both intervention groups, spouses who were not ill reported significantly increased understanding of the ill spouse's feelings, as well as increased emotional closeness in the marital relationship. Similarly, ill participants in both interventions reported that their spouses had gained an increased understanding of their illness experiences as a result of participating in the project. These parallel findings suggest that prevention programs may have different effects on family members; such findings would be obscured by assessing only a single member of each family.

This work demonstrates that sustained effects from relatively short clinical interventions, with follow-up, are possible. These interventions were designed to be compatible with the practices of those who treat adults with affective disorders, and they emphasize the impact clinicians may have on family functioning when parents' salient concerns (i.e., their worries about their children) are addressed and specific strategies of response are presented. Key elements of these successful interventions include 1) combining information about difficulties and diagnoses that children might have with ways of enhancing resiliency, 2) understanding and addressing the concerns that parents with severe mental illness have about their parenting, 3) involving children in family discussions about parental affective illness, and 4) reaching parents when their children are not acutely ill.

Both interventions are compatible with a wide range of practices, although the clinician-facilitated approach is likely to be most easily adapted for those who treat depressed adults. Furthermore, the clinician-facilitated approach shows greater effects across the different assessment domains of self-rated reports, rater-generated reports, and the different individuals assessed. This suggests that although information is communicated by both approaches, the translation of the information into changes in attitudes and behavior within the family is much more likely in the clinician-facilitated approach.

In terms of the limitations of this study, the assessment process may have contributed to intervention effects. Moreover, differences between groups may reflect the fact that the clinician-facilitated intervention involved the children more directly than did the lecture intervention and involved more contact with clinical staff. Both of these factors may represent nonspecific rather than specific effects of treatment (12).

It is equally important to note the strengths of this study. It was designed with the explicit criteria for conducting prevention trials, as recently defined by national commissions (8, 9), in mind. The study tested a clear hypothesis directly relevant to clinical care, that is, that there would be greater change when cognitive information was directly linked to the individual life experiences of the family. In view of the evidence that even well-conducted treatments for depression do not have sustained effects (30), the finding of persistent effects and persistent group differences is particularly important. This is a striking finding given that the risk factor (i.e., serious parental affective illness) continued to be present during the interval between time 1 and time 3, since numerous episodes of illness occurred in the parents. The findings to date suggest the value of linking cognitive material to a family's life experiences and actually involving children in discussions regarding parental illness. In conclusion, this study establishes that cognitive, psychoeducational resiliency-based interventions directed to families are safe and feasible and can have important long-term effects.

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