

Difficulty in Implementing a Family Intervention for Bipolar Disorder: The Predictive Role of Patient and Family Attributes*

MARTHA C. TOMPSON, Ph.D.†
MARGARET M. REA, Ph.D.‡
MICHAEL J. GOLDSTEIN, Ph.D.‡
DAVID J. MIKLOWITZ, Ph.D.§
AMY G. WEISMAN, Ph.D.#

Family affect was examined as a predictor of difficulty implementing a 9-month, manual-based, psychoeducational family therapy for recently manic bipolar patients. Prior to therapy, family members were administered measures to assess both their expressed emotion and affective behavior during a family interaction task. Following family treatment, both therapists and independent observers rated the

overall difficulty of treating the family, and therapists also rated each participant's problem behaviors during treatment, in the areas of affect, communication, and resistance. Therapists regarded affective problems among relatives and resistance among patients as central in determining the overall difficulty of treating the family. Relatives' critical behavior toward patients during the pretreatment interaction task predicted both independent observers' ratings of overall treatment difficulty and therapists' perceptions of relatives' affective problems during treatment. Moreover, patients' residual symptoms predicted independent observers' ratings of overall difficulty and therapists' perceptions of patients' resistance to the family intervention. Results suggest that difficulties in conducting a manual-based family intervention can be predicted from systematic, pretreatment family and clinical assessment.

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† Assistant Professor. Send correspondence to Dr. Tompson at the Department of Psychology, Boston University, 64 Cummington Street, Boston MA 02215-2407; e-mail: mtompson@bu.edu.

‡ Department of Psychology, University of California, Los Angeles.

§ Department of Psychology, University of Colorado, Boulder.

Department of Psychology, University of Massachusetts-Boston.

MEASURES of the family emotional climate have been found to be associated with the course of severe

psychiatric disorders. Expressed Emotion (EE), a measure of critical, hostile, and/or emotionally overinvolved attitudes on the part of family members toward a psychiatrically ill patient (as expressed during a clinical interview), has been found to be a potent, prospective predictor of relapse in individuals with schizophrenia (for reviews, see Butzlaff & Hooley, 1998; Hooley, 1995; Miklowitz, 1994; Parker & Hadzi-Pavlovic, 1990). EE in families has also been found to predict relapse among individuals with bipolar disorder (Miklowitz, Goldstein, Nuechterlein, et al., 1988) and major depression (Hooley, Orley, & Teasdale, 1986; Okasha, Akabawi, Snyder, et al., 1994; Vaughn & Leff, 1976a).

Related research has suggested that EE attitudes may provide an index of ongoing family transactional patterns since they tend to be associated with family members' behavior in direct family interactions. Studies of relatives' affective style (AS) behaviors (including specific and global criticisms, intrusive statements, guilt inducing statements, and supportive statements) during problem-focused family discussions indicate that high-EE relatives demonstrate more negative interactional behavior than low-EE relatives. Further, relatives who are high-EE based on criticism tend to make more critical comments, and relatives who are high-EE based on emotional overinvolvement tend to make more intrusive or "mind-reading" statements (Miklowitz, Goldstein, Doane, et al., 1989; Miklowitz, Goldstein, Falloon, & Doane, 1984; Strachan, Leff, Goldstein, et al., 1986). Additionally, level of relatives' AS (negative vs. benign) has been found to predict relapses during a 9-month followup among patients with schizophrenia (Doane, Falloon, Goldstein, & Mintz, 1985; Doane, Goldstein, Miklowitz, & Falloon, 1986) and bipolar disorder (Miklowitz et al., 1988).

Because family affect predicts the course of psychiatric disorders, it seems likely that family treatment would be a helpful adjunct to medications in modifying the morbidity of these conditions. Indeed, studies have examined the efficacy of a psychoeducational family treatment approach for schizophrenia (Falloon, Boyd, McGill, et al., 1985; Hogarty, Anderson, Reiss, et al., 1986; Leff, Berkowitz, Shavit, et al., 1989; Leff, Kuipers, Berkowitz, et al., 1982; Randolph, Eth, Glynn, & Paz, 1994), and, to a more limited extent, bipolar disorder (Clarkin, Carpenter, Hull, et al., 1998; Glick, Clarkin, Spencer, et al., 1985; Simoneau, Miklowitz, Richards, et al., in press). Overall, these interventions have focused on providing psychoeducation about the disorder and on building communication and problem-solving skills in a family context.

Despite the success and popularity of family treatment approaches and the continued interest in the role of family factors in psychiatric disorders, few researchers have examined how the family affective climate may have an impact upon the process of family treatment. Doane, Hill, and Diamond (1991) examined predictors of difficulty in family treatment in a study of families of severely disturbed young adults, including participants with schizophrenia, affective disorders, and personality disorders. They found that "disconnected" families, characterized by poor attachment bonds between the parents and their offspring (as rated from pretreatment individual speech samples with the parents) and a highly critical emotional environment (as measured in direct, pretreatment family interaction tasks using the Affective Style coding system), presented a particularly potent challenge to the family therapist. Likewise, families in which high-EE members tend to show intrusiveness and/or high criticism when

in face-to-face contact with an ill patient (that is, high levels of negative AS), and in which patients are correspondingly critical of their family members (Strachan, Finegold, Goldstein, et al., 1989), would be expected to provide substantial challenges to the treating clinician.

Studies examining the relationship between measures of the family affective climate and difficulties in implementing family treatment have important theoretical and practical implications. First, if the EE measure or its corollary in family interaction tasks (AS) are indeed valid indices of family affect, they would be expected to predict affective problems among patients or relatives during family treatment. Second, if measures of family affect are related to the subsequent behavior of patients or close relatives during family treatment, these measures may provide therapists important information to assist them in planning interventions.

Given the high rates of both relapse (Prien, Kupfer, Mansky, et al., 1984; Small, Klapper, Kellams, et al., 1988) and medication noncompliance (Jamison, Gerner, & Goodwin, 1979; Prien et al., 1984; Shaw, 1986) among bipolar patients, the role of the family environment in outcome (Miklowitz et al., 1988), and beginning evidence of the efficacy of a family treatment approach (Clarkin et al., 1998; Glick et al., 1985; Simoneau et al., in press), it becomes important to understand factors impacting the delivery of family interventions in this population. This study examined the relationship between (a) independent observers' and therapists' ratings of difficulty in implementing family treatment for patients with bipolar disorder and (b) pretreatment measures of relatives' emotional *attitudes* (EE), relatives' affective *behaviors* (AS) during family interactions, and patients' residual symptoms.

METHOD

Participants

Participants in this study ($N = 26$) were drawn from a larger sample ($N = 53$) of patients involved in a project examining the efficacy of a family psychoeducational intervention in combination with mood-stabilizing medications for bipolar disorder. Patients in the larger study were recruited from the inpatient services of three large hospitals in the Los Angeles area. Criteria for inclusion in the study were (a) a diagnosis of bipolar disorder, manic type by the Diagnostic and Statistical Manual of Mental Disorders—Third Edition, Revised (DSM-III-R; American Psychiatric Association, 1987) based on information from the Structured Clinical Interview for the DSM-III-R (SCID; Spitzer, Williams, Gibbon, & First, 1990); (b) age 18 to 45; (c) competency to give informed consent; (d) currently taking mood-regulating medications; and (e) availability of at least one close family member to participate with the patient. Subjects were excluded if they showed evidence of organic central nervous system impairment or chronic alcohol or substance abuse/dependence.

Following discharge from the hospital, subjects were randomly assigned to individual patient management ($n = 25$) or family psychoeducational treatment ($n = 28$). Of the 28 family treatment cases, two did not have therapist ratings and were dropped from the present study. The remaining 26 patients ranged from 18 to 46 years of age ($M = 26.15$; $SD = 6.7$), and had on average 14 years ($SD = 2.0$) of education. Sixty-five percent of subjects were Caucasian ($n = 17$), 27% ($n = 7$) were African American, and 8% ($n = 2$) were Asian-American. The majority (62%; $n = 16$) had experienced only one episode of mania, whereas 38% ($n = 10$) had a history of multiple episodes. Sixty-nine

percent of patients ($n = 18$) had only one relative participating on a regular basis, and 31% ($n = 8$) had multiple relatives participating (for example, mother and father). Relatives ($n = 33$) included 12 mothers, 13 fathers, 5 spouses, an aunt, a cousin, and a grandmother.

Procedures

Treatment Protocol

All patients in the larger study received individual medication management sessions with a staff psychiatrist for one year. Both medication management and family treatment sessions took place weekly for the first 3 months of participation, every other week for the second 3 months of the study, and monthly thereafter. Family sessions were scheduled for a total of 9 months and medication management sessions took place for one year. Patients in family treatment had two cotherapists, whereas those in individual patient management had one case manager/therapist. At the end of the year, participants were referred to treatment providers in the community and considerable effort was made to assist in this transition.

The psychoeducational family intervention—family-focused psychoeducational treatment (Miklowitz & Goldstein, 1997)—was modeled after Falloon's behavioral family management approach for patients with schizophrenia (Falloon, Boyd, & McGill, 1984). Sessions were conducted with individual family units and included all participating relatives in that family and the patient. Treatment included three primary components: psychoeducation about bipolar disorder, communication training, and problem-solving training. Allocation of time to each component depended on the individual family's needs. Usually, the psychoeducation component occupied from two to seven sessions, and included information about the symptoms, course, causes, and treatment of bipolar disorder.

Information was presented within a stress-vulnerability framework, and careful attention was paid to risk factors (e.g., drug use, poor sleep patterns) and protective factors (e.g., medication compliance, social support) that influence outcome in bipolar disorder. Second, family members were taught communication skills, including listening skills, giving one another both positive and negative feedback, and making positive requests for change in one another's behavior. Communication training included role-playing, rehearsal, and homework assignments that required patients and family members to work on the skills between sessions. Third, family members learned problem-solving techniques, including identification of specific problems, brainstorming about solutions, and evaluation and implementation of self-selected solutions. Although topics in the problem-solving component were geared toward each family's specific concerns, all families completed a "relapse drill" in which they developed a relapse prevention plan should the patient's symptoms return. Finally, crisis intervention was available to families on an as-needed basis. For additional information on these techniques, see Goldstein and Miklowitz (1995), and Miklowitz and Goldstein (1997).

Measures

Overview: Shortly after referral to the study, following the patient's acute manic episode, patients and family members engaged in a number of assessment procedures. During the first session with the patient (usually during inpatient treatment), he/she was administered (a) the Structured Clinical Interview for the DSM-III-R (SCID; Spitzer et al., 1990), and (b) the 24-item Brief Psychiatric Rating Scale (BPRS; Lukoff, Nuechterlein, & Ventura, 1986). Any additional information needed for diagnostic purposes was obtained through chart reviews

and/or information from the relatives. All SCID diagnostic assessments were conducted by one interviewer who was trained by the Diagnostic and Psychopathology Unit of the UCLA Intervention Research Center for Major Mental Illnesses. The interviewer received rigorous training in administration and scoring of diagnostic interviews and participated in biannual fidelity checks to prevent rater drift (Ventura, Liberman, Green, et al., 1998). To assess diagnostic reliability of the study interviewer, two statistics were calculated. First, kappa statistics compared the presence or absence of each symptom or critical SCID item. The minimum standards of acceptable symptom agreement were an overall kappa of .75, kappa specificity of .75, and sensitivity of .75. Second, kappas were calculated to reflect interrater reliability in the differential diagnosis of mood disorder vs. schizophrenia and schizoaffective disorder (overall kappa of .88, sensitivity of .88, and specificity of .88).

Soon after this initial assessment (usually within 1–2 weeks), participating family members met with project staff members and were administered the Camberwell Family Interview (CFI; Vaughn & Leff, 1976b), a measure of EE. Approximately one week later, patients and family members returned for a family interactional assessment in which participants discussed two family problem-topics while the experimenters observed. Patients were administered another BPRS at this time to assess symptoms since hospital discharge. Each of these measures is described below.

Brief Psychiatric Rating Scale (BPRS): The BPRS was used as a measure of patients' residual symptoms at baseline. BPRS interviews were conducted by raters who were blind to treatment condition. Cluster scores, each of which combined several subscales on the BPRS, were calcu-

lated. The clusters were defined as follows: (a) Positive Symptoms: unusual thought content, suspiciousness, bizarre behavior, grandiosity, hallucinations, hostility, and elevated mood; (b) Depression: depression, anxiety, suicidality, guilt, self-neglect, and somatic concern; (c) Mania: excitement, motor hyperactivity, tension, conceptual disorganization, and distractibility; (d) Negative Symptoms: blunted affect, motor retardation, emotional withdrawal, and uncooperativeness. In order to provide comparability between these clusters, scores were calculated as the mean of the items in each respective cluster. A total BPRS score was also calculated by averaging the patient's scores on all of the 24 BPRS items. Intraclass correlation coefficients across all BPRS items were computed between each rater and a criterion rater on a minimum of 9 interviews, and ranged from 0.83 to 0.93.

Camberwell Family Interview (CFI): The CFI was used to assess relatives' EE. The CFI is a semi-structured interview in which relatives are asked to discuss the symptom behavior of the ill relative and its effects on the family environment in the 3 months prior to the interview. It includes sections on the development of the current episode, time spent with the patient, psychiatric history, and current psychosocial functioning.

The coding system for the CFI includes five categories: (a) number of critical comments; (b) hostility (a 0–3 rating); (c) emotional overinvolvement (a 0–5 rating of marked overprotectiveness, overconcern, or self-sacrificing behavior); (d) the number of positive remarks; and (e) a rating of warmth (0–5). A relative may be rated as high-EE in two ways: (a) on the basis of criticism, either if he/she shows hostility or makes 6 or more criticisms, and (b) on the basis of emotional overinvolvement (EOI), if he/she has a rating of 4 or greater on this subscale.

All CFI coding was completed by a trained rater who was blind to treatment condition. For reliability purposes, an additional rater coded 11 CFI protocols. Adequate reliability was obtained for ratings of high versus low EE (agreement = 91%; kappa = 0.79); for low vs. high criticism (percent agreement = 91%, kappa = 0.81); and for low vs. high EOI (percent agreement = 82%, kappa = 0.61).

Family Interaction Task: A structured family interaction task was employed to assess family member interactional behavior. Patients and their parents participated in this assessment task approximately one week after administration of the CFI and one to 2 weeks following hospital discharge. These included two 10-minute, face-to-face problem-solving discussions, from which the relatives' Affective Style (AS) was coded. These problem-solving discussions concerned issues of importance to the family, one of which was specified by the patient and one by a relative. (For a detailed description of these interaction procedures, refer to Doane, West, Goldstein, et al., 1981). Along with EE, AS was examined as a risk factor in the course of the patients' treatments.

Relatives' levels of AS were rated based on the manner in which relatives' interacted verbally with patients during the interaction task. Five types of behaviors were targeted: (a) "benign" or situation-specific, circumscribed criticisms (e.g., "You don't do a very good job of keeping your room clean"); (b) "harsh" or generalized, personal criticisms (e.g., "You are an uncaring, selfish person"); (c) guilt-inducing statements (e.g., "Your problems really are a strain on me"); (d) intrusive statements in which the relative suggests intimate knowledge of the patient's unexpressed thoughts or feelings (e.g., "You're not really angry; you're really upset"); and (e) supportive statements (e.g., "You've really been helpful to me"). A relative was

classified as having negative AS for each interaction if he/she made either one harsh criticism, one guilt-inducing statement, or 6 or more intrusive statements (after Doane et al., 1981). AS profiles for each relative were defined across the two 10-minute interactions as follows: (a) benign—not rated as negative in either interaction; (b) mixed—rated as negative in only one of the interactions; (c) negative—received negative ratings in both interactions. AS was coded by a trained rater who was blind to the patients' treatment conditions. Reliability was assessed on 12 randomly selected transcripts, which were coded by an additional rater. Reliability for AS profiles (benign vs. mixed vs. negative) was adequate, as indicated by a kappa of 0.84; individual codes also demonstrated good interrater agreement, with kappas ranging from 0.86 (for intrusive statements) to 1.0 (for guilt-inducing statements). Given the limited number of families in this study, for the purposes of analyses we compared benign AS to mixed/negative AS in this sample.

Independent observers' ratings of family treatment difficulty: Independent observers made ratings of overall family treatment difficulty as part of a study evaluating therapist competency and adherence in implementing the family treatment for bipolar disorder (for additional information, see Weisman, Okazaki, Gregory, et al., 1998). For the present study, this measure served as a validity check on therapists' ratings of overall family difficulty. Briefly, independent observers made their ratings of family difficulty based on viewing three videotaped sessions for each family. The three sessions viewed included the first session for each of the three components of the family treatment—psychoeducation, communication, and problem-solving. Ratings were made on a scale ranging from 1 (very cooperative and not difficult) to 7 (extremely

difficult and/or uncooperative). This rating of difficulty reflected the degree to which families cooperated with the treatment team in completing assignments, participating in skills-training exercises, and understanding and incorporating new didactic material. Interrater reliability for these observers' ratings was evaluated on a subset of 9 families and was good ($ICC = 0.84$). Therapists' adherence to the treatment model was also rated by independent observers using multiple scales. Overall, these ratings indicated high levels of adherence for participating therapists, and adherence was unrelated to the overall family difficulty rating (Weisman et al., 1998).

Family Therapist Questionnaire (FTQ): The FTQ, which was developed for this study, was completed by each family clinician following completion of the 9-months of family treatment. The FTQ was designed to evaluate therapists' experience with families during treatment and obtain their rating of the difficulties encountered in implementing the family treatment. First, therapists were asked to make five 4-point ratings about the overall difficulty in treating each family, difficulty implementing each of the phases of treatment (education, communication training, and problem-solving), and difficulty in establishing a therapeutic alliance. Second, therapists were asked to complete thirty-seven 3-point scales about the frequency of difficult behavior on the part of the patient during treatment. These included 9 items designed to assess affective difficulties (e.g., "blamed other family members for his/her difficulties"); 9 items to assess communication difficulties (e.g., "when patient spoke, he/she was difficult to follow"); and 19 items to assess resistance to the treatment (e.g., "he/she was hostile/resistant to the process of treatment"). Finally, for each participating family member, therapists completed thirty-five

3-point scales rating the frequency of difficult behavior during the treatment. As with the scales for the patients, these included items tapping affective difficulties (9 items), communication difficulties (9 items), and resistance to treatment (17 items). Items in each of the categories were summed; thus, each family member received a score for each of the three categories. The family clinicians were blind to the EE, and AS ratings of the families whom they treated.

Reliability of the scales was assessed in two ways. First, to assess internal reliability, Cronbach's alphas were calculated based on the items in the three categories (for patients and relatives, respectively) and were as follows: affective problems ($\text{Alpha} = 0.81; 0.81$), communication problems ($\text{Alpha} = 0.83; 0.82$), and resistance ($0.80; 0.76$). Second, interrater reliability was calculated. In a subsample of families ($n = 11$) who had ratings from two family therapists, intraclass correlation coefficients indicating agreement between these two clinicians were calculated and averaged 0.78 for the 4-point scales measuring the overall difficulty of treating the family as a whole, and 0.75 for the ratings of individual family member problems.

For the families with two clinicians completing the questionnaire we entered into our data analyses ratings from one of the two clinicians (chosen at random) rather than averaging their scores. This procedure, we felt, produced data that was more comparable to that obtained from families where ratings were available from only one treating clinician.

RESULTS

Overview

The following questions were addressed in this study: (a) What are the interrelationships between pretreatment measures of relatives' emotional attitudes (EE) and their interactional behavior

(AS)?; (b) how are problems demonstrated by patients and their relatives during treatment—*affective problems, communication problems, and resistance*—related to both therapists' and independent observers' ratings of the overall difficulty in treating the family as a unit?; (c) do pretreatment measures of relatives' EE and AS predict both therapists' and independent observers' perceptions of the overall difficulty in treating families?; and (d) do pretreatment measures of EE and AS predict therapists' ratings of individual family members' problems during family treatment? (See Figure below for a display of the relationships, which we examined, between pretreatment measures and ratings of difficulty in implementing family treatment.)

Interrelationships

Pretreatment Family Assessments—EE and AS: Prior studies have indicated a strong association between EE and AS, and therefore this relationship was examined in this sample prior to conducting

additional analyses. A chi-square analysis was performed to determine the degree of association between relatives' EE (high vs. low) and relatives' AS (benign vs. negative). In this analysis, the EE status of the relative with the highest level of criticism or emotional overinvolvement was used to define the family's EE status; and in families where only one relative participated, that relative's EE status defined the family's EE status. Similarly, in families with more than one relative participating, if even one relative was rated as having a negative-AS profile, the family was defined as having a negative-AS profile. Thus, each family was included as a unit in this analysis. However, the data were also analyzed using the individual relatives' scores. For this analysis, the number of cases included equals the number of relatives for whom complete data was available ($n = 33$). Family EE status was not significantly related to family AS profile, $\chi^2(1) = 0.07$, ns. Analyses of individual relatives' scores yielded equivalent findings, $\chi^2(1) =$

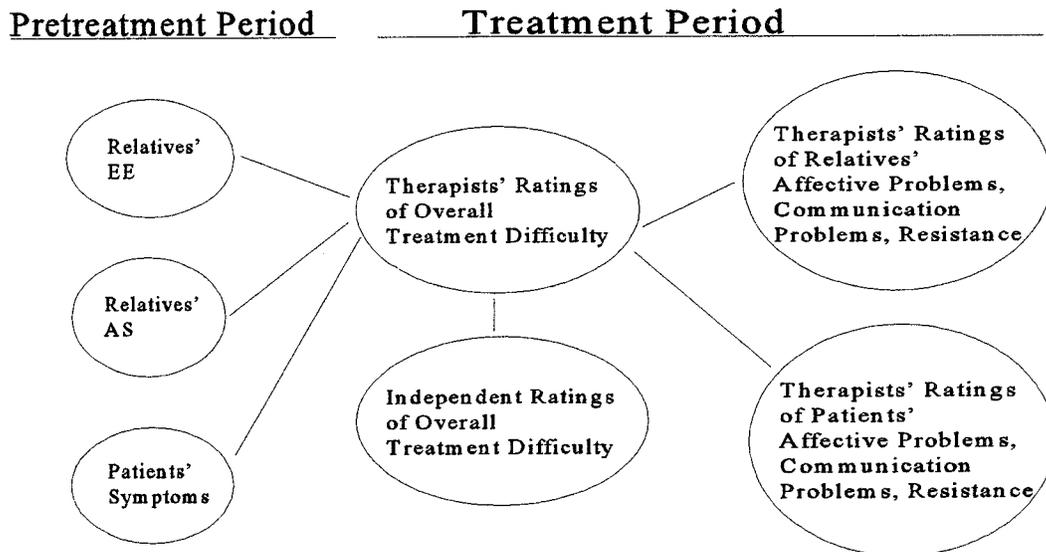


FIGURE. Pretreatment measures examined as predictors of difficulty in implementing family treatment for bipolar disorder.

0.40, ns. Thus, our pretreatment family measures appear unrelated in this sample.

Difficulty in treating family as a unit—Individual family member problems: To examine the structure of the family therapists' questionnaire, correlational analyses were conducted to evaluate the associations between therapists' ratings of individual family member problems in treatment— affective problems, communication problems, and resistance (both for patients and their relatives)—and therapists' ratings of overall difficulty in treating the family as a unit. Given the extremely high correlations between the 4-point ratings of overall difficulty and ratings of difficulty in education, communication training, problem-solving, and therapeutic alliance (ranging from 0.75 to 0.91), analyses were limited to the rating of overall difficulty in implementing the family treatment. Five families (19%) were rated as "very easy" to treat; four (16%) were rated as "reasonably easy"; twelve (46%) were rated as "somewhat difficult"; and five (19%) were judged to be "very difficult." As seen in the following Table, therapists' ratings of overall difficulty in treating the family as a unit were strongly correlated with patients' resistance, affective and communication problems, and with relatives' resistance, affective and communication problems. Ratings on the

three scales of individual family member problems were correlated within both patients and relatives.

Family therapists' rating of overall treatment difficulty were highly correlated with independent observers' judgments of overall treatment difficulty ($r = 0.68, p < .01$). However, the independent observers' ratings of overall treatment difficulty were significantly associated with the therapists' ratings of *patients'* treatment problems but not with therapists' ratings of *relatives'* treatment problems. (See Table for these results.)

Predicting Treatment Difficulty

Analyses of variance (ANOVAs) were conducted to examine the association between pretreatment family measures—relatives' EE (high vs. low) and AS (negative/mixed vs. benign)—and *independent observers'* ratings of overall difficulty in treating the family as a unit. Because we expected a priori that high-EE or negative-AS families would be more difficult to treat than low-EE or benign-AS families, a priori hypotheses were evaluated using one-tailed tests. These analyses revealed no significant association between independent ratings of treatment difficulty and family EE ($F[1,24] = 0.66, ns$). However, the independent observers gave higher ratings of family

TABLE
Intercorrelations between Subscales of the Family Treatment Questionnaire and Independent Ratings of Treatment Difficulty (N = 26)

Subscale	1.	2.	3.	4.	5.	6.	7.
Independent Rating of Difficulty	.68**	.35	.21	.31	.59**	.53**	.65**
Therapists' Ratings:							
1. Overall Treatment Difficulty		.63**	.54**	.49*	.60**	.59**	.60**
2. Relatives' affective problems		—	.54**	.71**	.49*	.45*	.34
3. Relatives' communication problems			—	.71**	.49*	.34	.26
4. Relatives' resistance				—	.35	.34	.21
5. Patients' affective problems					—	.50**	.66**
6. Patients' communication problems						—	.69**
7. Patients' resistance							—

** $p < .01$; * $p < .05$.

difficulty for families that were rated negative on pretreatment AS measures ($n = 18$, $M = 2.7$) than for families that were rated benign on pretreatment AS measures ($n = 8$, $M = 1.7$; $F[1,24] = 4.09$, $p = .05$).

Two additional ANOVAS were conducted to examine the association between *therapists' ratings* of treatment difficulty and the pretreatment EE and AS measures. These analyses revealed no significant relationships between therapists' ratings of overall difficulty in treating the family as a unit and either relatives' EE ($F[1,24] = 0.10$, ns) or relatives' AS profile ($F[1,24] = 0.86$, ns). In sum, neither pretreatment measures of EE or AS were adequate predictors of the therapists' perceived overall difficulty in treating the family as a unit.

We further identified potential correlates of overall difficulty in treating the family as a unit by examining the relationship between the BPRS symptom ratings, completed on the day of the pretreatment family interaction procedure, and subsequent treatment problems. We conducted correlational analyses between the four clusters on the BPRS (positive symptoms, depression, mania, and negative symptoms) and both the independent observers' and the therapists' ratings of overall treatment difficulty. Independent observers' ratings of overall treatment difficulty were moderately correlated with patients' mania ($r = 0.48$, $p < .05$) and psychosis ($r = 0.40$, $p < .05$) scores, but not with depression ($r = 0.03$, ns) or negative symptoms ($r = 0.11$, ns). However, these analyses revealed no significant associations between therapists' overall ratings of difficulty and psychotic, depressive, manic, or negative symptoms (for all, $p > .10$).

Predicting Individual Problems

Although we did not find a relationship between pretreatment family measures and the therapists' overall difficulty in

treating the family, we examined these questions more closely by investigating the relationship between our pretreatment measures of family member affect (EE, AS) and the therapists' ratings of more specific treatment problems—*affective problems, communication problems, and resistance*—in both patients and family members. We hypothesized that relatives' attitudes (EE) and pretreatment behavior (AS) would predict affective problems and resistance during treatment, both for patients and the relatives themselves. First we describe the predictions for relatives and then for patients.

Relatives' Treatment Problems

A priori predictions were tested using univariate ANOVAs to assess the relationship of EE and AS to relatives' treatment problems. Whereas our prior analyses used an average family score, relatives' own treatment problems could be examined at the individual level in these analyses. Thus, scores for 33 relatives are included here. ANOVAs were conducted to examine the relationships between EE (high vs low) and relatives' affective problems, communication problems, and resistance. This univariate test revealed no significant associations between EE and affective problems, communication problems, or resistance (for all, $p > .10$). However, relatives' displaying a negative AS profile were perceived by therapists as showing significantly more affective problems in treatment ($n = 21$; $M = 15.52$, $SD = 4.26$) than those relatives showing a benign AS profile ($n = 12$; $M = 12.92$, $SD = 2.39$; $F[1,31] = 3.78$, $p < .05$). Those with negative AS profiles also showed more resistance to the family treatment ($n = 21$, $M = 23.81$, $SD = 5.90$) than those with benign AS profile ($n = 12$, $M = 20.25$, $SD = 3.77$; $F[1,31] = 3.52$, $p < .05$). The two AS groups did not differ in communication problems in treatment ($F[1,31] = 0.71$, ns).

As previously described, ratings of affective style include the behaviors of benign criticisms, harsh criticisms, guilt inductions, intrusive statements, and supportive statements during family interactions. In an effort to improve prediction of affective problems and resistance to treatment, two step-wise multiple regression analyses were conducted. Number of benign-AS criticisms, presence vs. absence of harsh criticisms, presence vs. absence of guilt inductions, number of intrusive statements, and number of supportive statements were entered as predictors of (a) relatives' affective problems in treatment and (b) relatives' resistance to treatment. In predicting relatives' affective problems, only the presence of a harsh criticism during the interaction entered the equation, accounting for 34% of the variance in therapists' ratings of relatives' affective problems during treatment ($F[1,31] = 15.78, p < .001$). Similarly, the presence of a harsh criticism accounted for 18.6% of the variance in therapists' ratings of relatives' resistance during treatment ($F[1,31] = 7.07, p < .05$). Other AS codes did not significantly improve prediction of either relatives' affective problems or resistance to treatment.

Patients' Treatment Problems

First, we examined the relationship between the BPRS symptom ratings completed on the day of the pretreatment family interaction procedure and patients' subsequent treatment problems. We conducted correlational analyses between the four clusters on the BPRS (psychotic symptoms, depression, mania, and negative symptoms) and patient problems during treatment (affective, communication, and resistance). These analyses revealed significant associations only between (a) baseline positive symptoms and therapists' subsequent ratings of patients' resistance during family treatment ($r = 0.43, p < .05$), and (b) manic symp-

toms and therapists' ratings of patient communication problems during treatment ($r = 0.42, p < .05$). There were no other significant associations between symptoms and patients' problems during the treatment.

As with the relatives' data, a priori predictions were tested using univariate ANOVAs. Three ANOVAs were conducted to examine the relationship between relatives' EE status and patients' treatment problems. Patients with high-EE relatives were rated by therapists' as being more resistant to treatment ($n = 14; M = 28.6; SD = 5.7$) than patients with low-EE relatives ($n = 12; M = 23.7; SD = 6.5; F[1,24] = 4.25; p = .05$). In addition, patients with high-EE relatives had marginally higher ratings for communication problems during family treatment ($n = 14; M = 16.1; SD = 4.1$) than patients with low-EE relatives ($n = 12; M = 13.4; SD = 4.1; F[1,24] = 2.91; p = .10$). There were no differences in ratings of patients' affective problems as a function of relatives' EE status ($F[1,24] = 1.75, ns$). Given the significant association between therapists' rating of patients' resistance during family treatment and baseline psychotic symptoms, a step-wise multiple regression analyses was conducted to control for baseline psychotic symptoms. Results of this analysis indicated that when controlling for psychotic symptoms, family EE status did not significantly improve prediction of patients' resistance to treatment.

Separate ANOVAs examined the association of relatives' AS (benign vs. negative) to the three types of patient problems during treatment. There was a trend for patients with negative or mixed AS relatives to be rated as having more affective problems during treatment ($n = 18; M = 16.1; SD = 4.4$) than patients with benign AS relatives ($n = 8; M = 12.8; SD = 2.8; F[1,24] = 3.96, p < .06$). Relatives' AS was not associated with ratings

of patients' communication problems nor patients' resistance during treatment (for all $p > .10$).

DISCUSSION

Research consistently indicates that aspects of the intrafamilial emotional climate are associated with outcome in major psychiatric disorders (Butzlaff & Hooley, 1998; Miklowitz et al., 1988). Although this research has been pivotal in the development of sophisticated family treatment strategies, little work has examined how the family climate affects the implementation of family intervention approaches. In addressing this issue, we explored whether pretreatment measures of the family emotional climate—specifically, relatives' expressed emotion (from interviews with relatives) and relatives' affective style (during family interactions)—could predict both therapists' and independent observers' perceptions of the ease or difficulty of implementing a psychoeducational family intervention for patients with bipolar disorder.

First, pretreatment measures of relatives' attitudes (EE) and their behavior while interacting with the patient (AS) were unrelated in a sample of bipolar patients and their families. However, studies showing an association between EE and AS have primarily included samples of patients with schizophrenia (Miklowitz et al., 1984; Miklowitz et al., 1989; Strachan et al., 1986). Miklowitz and colleagues (1988), in examining a sample of bipolar patients, found no such relationship. It should be noted that while the CFI is administered to the relative during the patient's hospitalization for mania, the AS data are derived from family interactions following the patient's discharge from the inpatient setting. Thus, there is a difference in the time of administration of these methods. In addition, patients with bipolar disorder often show much greater

changes in clinical state than do patients with schizophrenia. Patients with bipolar disorder often remit more clearly or, alternatively, frequently "switch" into depression following a mania. Thus, changes in clinical state may underlie the different reactions from family members during the CFI and the family interaction. In sum, the lack of association between AS and EE measures in this sample may result from differences both in the time of their administration and in the clinical state of the patient. Future research may be useful in illuminating the relationship between current clinical state and family attitudes and behavior. For the purposes of this study, these two measures can be considered different "lenses" through which to view family functioning during the manic episode and post-episode period.

Second, according to independent observers and therapists, families present differing challenges during the course of treatment. Therapists' perceptions of overall difficulty in implementing a family-focused intervention with bipolar patients are associated with a number of difficulties at the individual family member level, including problems with affect, communication, and resistance. The finding that implementation of the intervention was rated as "difficult" to "very difficult" for the majority of families underscores the challenges inherent in treatment with this population. Independent observers' perceptions appeared to be more influenced by patients' behavior and less by relatives' behavior than did the family therapists' perceptions; additionally, the independent observers' ratings were more highly associated with patients' symptomatology, particularly manic and psychotic symptoms. It should be noted that the therapists' ratings were based on impressions built throughout the course of treatment, whereas the independent observers made their ratings based on observing only three

sessions of the family treatment. Perhaps in rating the family as "difficult," the independent observers were more influenced by the salience of patients' behavior, particularly evidence of psychotic and manic symptoms, than were family therapists, for whom a greater range of family-related information was available.

Third, neither our pretreatment measures of the intrafamilial environment nor patients' baseline symptomatology predicted therapists' ratings of overall difficulty in treating the family as a unit. However, it is important to note that therapists' perceptions of difficulty in treating the family may be influenced by the behavior of many participating family members, making it unlikely that pretreatment measures specific to any one family member may account for such a molar rating. Interestingly, whereas therapists' ratings of patients' resistance and communication problems during treatment were modestly associated with pretreatment measures of patients' symptoms, these symptoms were not related to therapists' overall rating of difficulty in treating the family as a unit. Perhaps therapists working with this population are likely to anticipate such symptoms, viewing them as a natural part of the course of the illness and not as negative factors impacting delivery of the treatment. In contrast, the independent observers' ratings of family difficulty were predicted by family's pretreatment affective style ratings. Families in which even one member was rated as high-AS during the pretreatment interactions were rated as more difficult by the independent observers than families in which all members were low-AS.

Fourth, surprisingly, pretreatment measures of relatives' attitudes (EE) were not predictive of therapists' perceptions of relatives' behavior during the course of treatment. However, ratings of relatives' behavior while interacting with the patient (AS)

prior to beginning the intervention predicted therapists' perceptions of subsequent affective problems and resistance in these relatives during treatment implementation. This finding suggests that, in order to discover what difficulties relatives may exhibit during treatment, it may not be as useful to ask them about their attitudes regarding the patient as it would be to obtain an actual sample of their interactional behavior. The strongest predictor of relatives' treatment difficulties was the tendency to use the most destructive forms of communication, particularly harsh/personal criticisms. Thus, it was not the presence of disagreements and criticism per se, but their form, that predicted problems in treatment. Indeed, during the course of treatment, conflicts over focused issues provide therapists and families the necessary opportunities to practice and implement communication-skills and problem-solving training. In particular, encouraging family members to practice the use of specific, focused, negative feedback may be particularly important with more difficult families.

Fifth, therapists' ratings of patient treatment problems were predicted by only two variables—relatives' pretreatment attitudes (EE) and residual psychotic symptomatology at baseline (BPRS). However, psychotic symptoms was clearly the stronger predictor, and family EE did not add to the prediction of patients' resistance after controlling for psychotic symptoms. Resistance was operationalized as preference for another form of treatment, hostility toward therapists, pessimism during the treatment, difficulty in forming a therapeutic alliance, personality problems, and difficulty engaging in role-plays and communication training. In sum, patients manifesting psychotic symptoms, even at a mild to moderate level at this point, showed more resistance during the 9-month program than those who were

initially in better states of remission. This suggests that resistance among patients may not be an enduring feature of the patients' behavior, but rather is influenced to some degree by their clinical state.

Some limitations of this study should be noted. First, the sample size is small ($N = 26$). Given the limited number of cases examined, the results are preliminary and therefore deserve replication. Second, all patients were diagnosed with bipolar disorder and, consequently, results may not generalize to family interventions for patients with different psychiatric problems. Finally, a number of factors that may impact upon treatment implementation were not addressed in this present study, including the presence of comorbid personality and substance abuse disorders, response to medications, and symptoms during the course of treatment.

In conclusion, results of the present study suggest that information about relatives' affective style at the outset of family treatment may provide a tool with which to anticipate treatment difficulty and relatives' behavior during the treatment itself. Negative affective style in relatives, particularly the use of harsh criticisms, is associated with both independent ratings of overall family treatment difficulty and therapists' perceptions of relatives' affective problems and resistance during treatment. Patients' residual psychotic symptoms predict overall treatment difficulty and therapists' perceptions of patients' resistance to treatment. These findings suggest that structured assessments of family members' interactional behavior and clinical assessment of patients' symptoms at the outset of treatment may provide useful information for planning appropriate family interventions. Developing treatment strategies for the most difficult families, and understanding how these strategies may affect patients' clinical and

functional outcomes, are important directions for future research.

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