

# Update on Family Psychoeducation for Schizophrenia

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## Abstract

The Schizophrenia Patient Outcomes Research Team and others have previously included family psychoeducation and family support in best practices guidelines and treatment recommendations for persons with schizophrenia. In this article we review in detail 15 new studies on family interventions to consider issues around the implementation of family interventions in current practice. The data supporting the efficacy of family psychoeducation remain compelling. Such programs should remain as part of best practices guidelines and treatment recommendations. However, assessment of the appropriateness of family psychoeducation for a particular patient and family should consider (1) the interest of the family and patient; (2) the extent and quality of family and patient involvement; (3) the presence of patient outcomes that clinicians, family members, and patients can identify as goals; and (4) whether the patient and family would choose family psychoeducation instead of alternatives available in the agency to achieve outcomes identified.

**Keywords:** Efficacy, family, family support, psychoeducation, schizophrenia.

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Families of people with schizophrenia often provide considerable support to their ill relatives and experience considerable burdens (and some benefits) as a result (Leff 1994; Cochrane et al. 1997). Many people with schizophrenia rely on relatives for emotional support, instrumental and financial assistance, housing, and advocacy. Therefore, the quality of their relationships greatly influences family and client well-being and outcomes.

Psychosocial interventions for the families of persons with schizophrenia have been developed by mental health providers to offer information and support to optimize these outcomes. The rigor of randomized controlled trials of family psychoeducation and the consistency of their

findings have formed the rationale for including family services in all current best practices treatment guidelines for persons with schizophrenia (Dixon 1999).

Among these, the treatment recommendations developed by the Schizophrenia Patient Outcomes Research Team (PORT) strongly endorsed the value of family psychoeducation (Lehman et al. 1998a). The supporting evidence for the following PORT recommendations was outlined in a review of family psychoeducation prepared by PORT investigators (Dixon and Lehman 1995). These recommendations include the following:

1. Patients who have ongoing contact with their families should be offered a family psychosocial intervention that spans at least 9 months and provides a combination of education about illness, family support, crisis intervention, and problem-solving skills training. Such interventions should also be offered to nonfamily caregivers. (Lehman et al. 1998a, p. 8)
2. Family interventions should not be restricted to patients whose families are identified as having high levels of “expressed emotion” (criticism, hostility, overinvolvement). (Lehman et al. 1998a, p. 8)
3. Family therapies based on the premise that family dysfunction is the etiology of the patient’s schizophrenic disorder should *not* be used. (Lehman et al. 1998a, p. 8)

In spite of the PORT’s endorsement of family psychoeducation, many questions remain unanswered. To what extent is family psychoeducation effective under usual practice conditions rather than just controlled research conditions? Who benefits most from family psychoeducation? Are there contraindications? This review will extend the original PORT appraisal, emphasizing studies published in the last 3–4 years. Because this recent

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research has also revealed the negligible extent to which these models have been implemented in actual practice, we will also summarize current knowledge about implementation and the other models that have arisen to address the unmet needs of families in the real world. We will conclude with a set of tentative observations or hypotheses about the role of family members in treatment planning.

## Efficacy of Family Psychoeducation

Psychoeducation interventions offered to family members of people with schizophrenia have been developed with increasing sophistication over the past 20 years. Although the specific elements and construction of the various programs differ, successful programs share several characteristics: (1) they regard schizophrenia as an illness; (2) they are professionally created and led; (3) they are offered as part of an overall treatment package that includes medication; (4) they enlist family members as therapeutic agents, not “patients”; (5) they focus on patient outcomes, although family outcomes are important; and (6) they do *not* include traditional family therapies which presume that behavior and communication within the family play a key etiological role in the development of schizophrenia. Family psychoeducation programs offer varying combinations of information about mental illness, practical and emotional support, skill development in problem solving, and crisis management. They may be conducted with individual families or multifamily groups and may take place in the home, in clinical settings, or in other locations. They also vary in length, timing with regard to phase of illness, and whether or not the person with schizophrenia is included in the family intervention.

The construct of “expressed emotion” (EE) has been important to the development of family psychoeducation interventions. Literature suggests that people with schizophrenia living with family members who exhibit high levels of EE (critical comments, hostility, and overinvolvement) are more likely to relapse (Koenigsberg and Handley 1986; Scazufca and Kuipers 1998). This association may be linked to the difficulty persons with schizophrenia have in processing complex emotions and in sustaining attention in emotionally charged environments. The concept itself has been criticized, and family members have expressed experiencing the EE literature as a resurrection of the family-blaming theories of the 1950s (Lefley 1992). Nonetheless, it is important to note that expressed emotion theory underlies many professionally created family psychoeducation programs. Many of these specifically target only “high EE” families.

The extensive 1995 schizophrenia PORT review of randomized clinical trials, in concert with other reviews

of family psychoeducation, concluded that “there is a consistent and robust effect of family interventions in delaying, if not preventing, relapse” (Dixon and Lehman 1995, p. 639). The relapse effect tended to vary according to the length and content of the programs. Other outcomes were supported by more modest evidence in the studies available when the PORT review was conducted: family psychoeducation may improve the patient’s functioning—either directly or through fostering skill development—by delaying disruptive relapses (Falloon et al. 1982; Falloon and Pederson 1985; Tarrier et al. 1988, 1989). The cost of family psychoeducation can be offset by reductions in hospitalization and other service use (McFarlane et al. 1995). The work of Falloon and of Zastowny et al. (1992) also indicated possible benefits of such programs to family well-being. The review also concluded that brief education alone shows inferior results compared to interventions that also incorporate engagement, support, and skill-building components.

## Literature Update

Recent articles pertaining to family psychoeducation were located with a Medline search using the keywords “family and schizophrenia and (interventions or education).” The search encompassed articles published between 1994 and 1998 and identified 103 articles. After screening out those that did not have schizophrenia and family intervention as their primary focus, the subset of these articles that reported randomized controlled trials or other rigorous evaluations of family psychoeducation interventions ( $n = 16$ ) are reported below (table 1). These studies do not merely attempt to replicate an already strong empirical data base supporting family psychoeducation. Rather, they build upon this previous work in a variety of ways: Family psychoeducation is tested with participants from a wider range of cultural groups than previously, and with the relatives of recent-onset patients as opposed to solely those of “chronic” patients. Family psychoeducation is compared with more sophisticated individual therapy models than previously available. Also, the recent studies focus on a wider range of outcomes, compare different family intervention strategies, and have more extended followup than previous studies.

**Studies Conducted With Relatives From a Variety of Cultural Groups.** Mingyuan et al. 1993 studied 3,092 patients diagnosed with schizophrenia and their family members from five cities in China: 2,076 were assigned the group psychoeducation condition; 1,016 were assigned to routine services and were controls. The intervention was provided in the context of primary-care-

**Table 1. Summary of controlled family intervention trials**

Study	Participants	Intervention	Control condition	Results
<b>Studies conducted with relatives from a variety of cultural groups</b>				
Mingyuan et al. 1993	3,092 people with schizophrenia and their families; 5 cities in China, randomly assigned	Group psychoeducation: 10 lectures and 3 group discussions, over 12 mos + usual services	Usual services provided by primary care clinic	Significantly better outcomes for relapse, symptoms, functional status, treatment compliance
Xiong et al. 1994	63 people with schizophrenia and cohabiting family in urban China, randomly assigned	Patient and family education, including 2–3 monthly meetings with clinician, then + multifamily group, home visits, tapering off at 12 mos as patient stabilizes	Usual services provided by primary care clinic	Fewer and shorter relapses, more employment at 12 and 18 mos, relatives report significantly less burden, less expensive
Xiang et al. 1994	69 people with schizophrenia + 8 people with affective psychoses and family in 3 rural communities in China, randomly assigned	Workshops, home visits, discussions, public information, mixed group, and single family over 4 mos + medication monitoring	Medication and monitoring only	Significantly improved mental status, work function, treatment compliance, and reduced disruptive behavior; reduced neglect and abuse of ill relative by family
Zhang et al. 1994	Relatives and 78 men with schizophrenia after first hospitalization in urban China, randomly assigned	Family group and individual family counseling monthly over 18 mos; families with similar problems grouped together + usual services	Usual services provided by primary care clinic	Significantly less likely to have been hospitalized, strong additive effect of consistent medication use
Telles et al. 1995	42 Spanish-speaking people with schizophrenia and families, very low income, 90% new immigrants to Los Angeles, randomly assigned	1 yr Falloon's BFM (a very structured education, communication skills, and problem-solving program, including patient) + standard case management	Standard case management	Patients with lowest acculturation score = more likely relapse (with BFM); no increased risk for patients with "higher" acculturation scores (all were quite low)

Table 1. Summary of controlled family intervention trials—Continued

Study	Participants	Intervention	Control condition	Results
<b>Studies involving relatives of new-onset patients</b>				
Linszen et al. 1996	76 adolescents with recent-onset schizophrenia from across the Netherlands and families, randomly assigned	Behavioral family intervention = family meetings with clinician + family education meetings during index hospitalization + biweekly to monthly individual illness management sessions for patients over 1 yr	Same family education meetings during index hospitalization + same individual illness management sessions	Low symptoms and hospitalization in <i>both</i> groups compared with usual rates, but in intervention condition, patients from "low EE" families had slightly <i>higher</i> relapse rate
Nugter et al. 1997	52 people with recent-onset schizophrenia and families in the Netherlands, randomly assigned	18 family sessions over 12 mos using Falloon's behavioral family model + 2 family education sessions while patient hospitalized + usual outpatient care	2 family education sessions while patient hospitalized + usual outpatient care	No difference between conditions for family EE levels or patient relapse
Rund et al. 1994	24 adolescents with schizophrenia and families in Norway; 12 intervention, 12 matched (not random) control	3-phase family treatment: engagement, problem solving, maintenance, over 2 yrs + usual care	Usual services provided by inpatient and outpatient facilities	Significantly lower number of patients with 2 relapses in family treatment; less expensive
<b>Comparison of family psychoeducation with individual therapy developed for schizophrenia</b>				
Hogarty et al. 1997	151 people with schizophrenia and families in Pittsburgh, PA, across 4 conditions in 2 randomized trials	1. Personal relapse prevention therapy 2. Family psychoeducation 3. Personal relapse prevention + family psychoeducation	General supportive therapy	No positive, significant effects for family psychoeducation compared with #1 or #3
<b>Studies testing less intensive or briefer family education models</b>				
Schooler et al. 1997	313 people with schizophrenia or schizoaffective disorder and families from 5 sites across	Medication conditions (crossed with family conditions): 1. Group family	Family conditions: 1. Group family	Low relapse across both family conditions, comparable to other

Table 1. Summary of controlled family intervention trials—Continued

Study	Participants	Intervention	Control condition	Results
	the U.S., randomly assigned to a 3x2 design; 3 medication conditions and 2 family conditions	Moderate dose Low dose Targeted early in symptom exacerbation	psycho-education monthly 2. #1 + monthly home visits for communication, problem solving (not control)	family intervention studies; moderate medication dose gave best results, across family both conditions; no significant interactions
Szmukler et al. 1996	"Principal caregiver" of 63 people with schizophrenia in Victoria, Australia, randomly assigned	6 individual weekly in-home counseling sessions w/o patient, focusing on schizophrenia education and problem solving	Single 2-hr informational presentation about schizophrenia	Significant reported improvement in relationship and understanding; no effects shown for better caregiving or reduced burden
Solomon et al. 1996, 1998	183 relatives of people with schizophrenia on the U.S. east coast, randomly assigned to 3 conditions	6–15 hrs individualized consultation over 3 mos 10 2-hr weekly multifamily group psychoeducational meetings  Both included usual services.	Wait list, usual services	No difference across conditions for extent of family contact with mental health staff; some significant increase of family member self-efficacy re ill relative
McFarlane et al. 1996	68 people with schizophrenia receiving ACT and families in Maine, randomly assigned	Ongoing multifamily psychoeducation groups + ACT, over 2 yrs	Intermittent, crisis-only family intervention + ACT	Low symptoms and hospitalization in both groups compared with usual rates, but no differences between conditions; ongoing intervention group had better employment outcomes
McFarlane et al., submitted	69 unemployed people with major psychiatric disorder receiving ACT and families in	FACT including multifamily psychoeducation, over 18 mos	Conventional vocational rehabilitation	FACT condition showed significantly more competitive jobs and

Table 1. Summary of controlled family intervention trials—Continued

Study	Participants	Intervention	Control condition	Results
<b>A long followup of an original family psychoeducation study</b>				
suburban and rural New York, randomly assigned				
40 people with schizophrenia and no relapse in 2 yrs in England, randomly assigned	5- and 8-yr followup of 9-mo behavioral family intervention designed to reduce EE + usual care	Usual services + 2 informational sessions about schizophrenia	Significantly fewer relapses 5 and 8 yrs after intervention; lower family EE	total earnings; no inpatient differences
Farrier et al. 1994				

Note.—ACT = assertive community treatment; BFM = behavioral family management; EE = expressed emotion; FACT = family-aided assertive community treatment.

based mental health services. It consisted of ten standardized lectures and three discussions presented by psychiatrists in each community over the 12-month length of the program. Those in the intervention group fared significantly better than controls on a number of measures including relapse rate, positive and negative symptoms, functional disability, ability to work, and treatment compliance. Families experienced reduced burden and had increased knowledge.

Xiong et al. (1994) randomized 63 people with schizophrenia living with family in urban China to treatment as usual (control) or culturally specific family education that included the patient. In the intervention, biweekly meetings in the first 2–3 months provided families with information on schizophrenia and established a relationship between family and clinician. Phase 2 then involved monthly single-family meetings with the clinician, multi-family group sessions, home visits, and extended family outreach, all emphasizing problem-solving skills and illness management. After the patient's functioning and the family's coping strategies improved, the program moved into "maintenance" phase—attendance at monthly multi-family groups and briefer quarterly clinician meetings. At 12 and 18 months, patients in the intervention group had experienced significantly fewer and shorter hospitalizations, less social dysfunction, and longer employment tenure. Their family members reported significantly lower levels of burden than control families, and the intervention was less costly than standard treatment.

Xiang et al. (1994) conducted a 4-month family intervention in which 69 people with schizophrenia and 8 with affective psychoses in three rural communities in China were randomly divided into two conditions: family intervention plus drug treatment (intervention), and drug treatment only (control). The family intervention consisted of periodic workshops, family visits, discussions between health workers and family, local public informational broadcasts, and monthly supervision sessions for the facilitating doctors. The intervention group showed significant positive changes not found among the control group including enhanced treatment compliance; lessened neglect and abuse of the ill relative; and improved mental status, improved work functioning, and decreased disruptive behavior on the part of the ill relative.

Zhang et al. (1994) compared hospitalization rates between 39 first admission men with schizophrenia randomly assigned to a family intervention involving group and individual counseling sessions every 1–3 months and 39 similar patients randomly assigned to usual treatment in urban China. During the intervention, families facing similar issues were grouped together; home visits were occasionally used for families not attending the group meetings. After 18 months, patients in the intervention

group were significantly less likely to have been hospitalized than controls. Regular medication use had significant independent and additive effects on outcome, so that people in the intervention group who also took medication regularly were 7.9 times less likely to be hospitalized over the duration of the study than controls who did not.

Telles et al. (1995) compared the effectiveness and cross-cultural applicability of behavioral family management (BFM) and standard case management (CM) in preventing exacerbation of symptoms and relapse among 40 low-income Spanish-speaking people diagnosed with schizophrenia, in Los Angeles, CA. Most participants were first generation immigrants. Patients were randomly assigned to the two conditions. BFM is a highly structured program comprising education about schizophrenia, communication skills, and problem-solving training. Its structure was not modified, although the sociocultural context was taken into account as this sample was different from those usually presented with BFM. For the total sample, BFM did not differ from CM in any outcomes. Among patients and families least assimilated to U.S. culture, BFM was significantly related to *greater* risk of symptom exacerbation. Among slightly more acculturated patients and families there was no effect across family treatment conditions. The authors emphasize the important influence of sociocultural factors in the effectiveness of various interventions.

#### Studies Involving Relatives of New-Onset Patients.

Linszen et al. (1996) studied relapse among 76 young (15–26 years old) persons with recent-onset schizophrenia in the Netherlands. Subjects were randomized into two groups: individual psychosocial program (IPI, control group), or IPI plus a behavioral family intervention (IPFI, intervention group). During hospitalization, *all* family members attended three to four educational sessions. Groups were randomized at discharge and stratified by level of expressed emotion, after which patients in *both* groups met biweekly for 5 months, then monthly for 7 months, with clinicians in illness management sessions at the clinic (IPI). Family members of people assigned to the IPFI group also met with clinicians, following a similar schedule and a curriculum modeled on Falloon's BFM (psychoeducation, communications training, and problem-solving skills training). Twelve months after discharge, relapse rates were very low for both treatment groups. The overall relapse rate during the outpatient intervention was 16 percent. There was no positive effect from the addition of the family intervention. In the IPFI group, patients from "low EE" families relapsed slightly *more* often to a near significant extent. The authors speculate this may reflect the BFM program adding stress to such families by focusing on (unneeded, for them) communica-

tions training rather than (needed) emotional support.

Nugter et al. (1997) studied 52 individuals with recent-onset schizophrenic disorders and their families in the Netherlands. The same research group performed this study and the study by Linszen et al. (1996) already discussed. During hospitalization all patients received usual care, and all families were offered two psychoeducational meetings. At discharge they were randomly assigned to individual outpatient treatment (IT) or IT plus family treatment. The outpatient family treatment consisted of 18 sessions over 12 months of clinic-based BFM (Falloon and Pederson 1985), focusing on education and communications and problem-solving skills training. The overall relapse rates were again low, ranging from 21 percent to 23 percent depending on criteria used. The addition of family psychoeducation to the IT did not affect family EE levels or patient relapse rates. The authors surmised that the BFM family treatment does not meet the needs of families of new-onset patients, as they may believe that the illness will not recur.

Rund et al. (1994) provided families of 12 Norwegian adolescents (aged 13–18) diagnosed with early-onset schizophrenia spectrum disorders (9 with schizophrenia) with a three-part family intervention. The intervention began while the patient was hospitalized and lasted 2–3 years. During the inpatient phase, the families received bimonthly family sessions using a structured curriculum, and a day-long informational seminar about mental illness. After discharge, they received monthly family sessions in the home and one or more additional day-long seminars. When the patient was stabilized, family sessions were dropped back to every other month and were augmented by phone support as needed. Outcomes were compared with those for a matched (not random) comparison group of adolescent patients with schizophrenia. The authors found no differences between the two conditions in the number of patients who had one relapse over 2 years; however, only 8.3 percent of the intervention group patients relapsed twice over the 2-year interval compared with 58 percent of the control group. Psychosocial functioning was nearly significantly better in the experimental condition. The family condition was less expensive than treatment as usual because of nonsignificantly lower total weeks of hospitalization in the family treatment group.

#### Comparison of Family Psychoeducation With Individual Therapy Developed for Schizophrenia.

Hogarty et al. (1997) compared four manualized treatment conditions: personal relapse-prevention therapy, family psychoeducation, personal relapse-prevention therapy plus family psychoeducation, and general supportive therapy in a total of 97 people diagnosed with schizophrenia who lived with their families. The therapies were delivered for 3 years postdischarge in

Pittsburgh, PA, at the Western Psychiatric Institute and Clinic. Personal therapy was developed specifically for persons with schizophrenia. It was "designed to forestall the late (second-year) relapse common among modern psychosocial approaches...and to enhance personal and social adjustment through the identification and effective management of affect dysregulation that was believed to either precede a psychotic relapse or provoke inappropriate behavior that was possibly generated by underlying neuropsychological deficits" (Hogarty et al. 1997, p. 1506). The family therapy condition was similar to that previously evaluated by Hogarty et al. (1986). This study included 29 (27%) new-onset patients and families with both high and low levels of EE. The overall relapse rate in this study was very low, with only 44 (29%) patients having a psychotic relapse over 3 years. Only 24 (16%) patients experienced a nonpsychotic affective relapse over 3 years. The study found no significant effects of personal therapy or family therapy in forestalling relapse, although personal therapy was nearly significantly superior in preventing psychotic relapse. The authors note that the remarkable survivorship of persons completing the study in the supportive therapy condition may account for the lack of personal therapy or family treatment effects. One-third of the supportive therapy patients had treatment-related terminations; supportive therapy patients who continued in the study had a 76 percent survivorship at 1 year, and 72 percent at 2 years. Authors also note that the supportive therapy condition in this study was very comprehensive and benefited from years of acquired knowledge in conducting research in schizophrenia at the Western Psychiatric Institute and Clinic.

**Studies Testing Less Intensive or Briefer Family Education Models.** Schooler et al. (1997) randomized 313 people with schizophrenia or schizoaffective disorder from five sites across the United States into one of three medication conditions (continuous moderate dose, continuous low dose, or targeted early intervention only during symptom exacerbation) and one of two family treatment strategies (supportive family management [SFM], or applied family management [AFM]). AFM was modeled on the behavioral family management program created by Ian Falloon. Over 2 years, SFM families attended monthly group meetings in which education and support were provided, while AFM families did the same *and* received monthly home visits focusing on communication and problem-solving skills. Both family conditions also had access to crisis intervention services from the research teams. There were no relapse differences across the family treatment strategies, although hospitalization rates under *both* conditions were similar to those reported in family treatment literature and lower than those for usual (no family intervention) treatment

(25% over a 2-year period). The authors attribute the lack of difference to the high level of engagement attained in both conditions and to the enhanced staff and services availability built into the research protocol (compared with usual services).

Szmukler et al. (1996) randomly assigned the "principal caregiver" of 63 people with schizophrenia admitted to a psychiatric hospital in Victoria, Australia, to a single 1-hour informational presentation about schizophrenia (control) or to six counseling sessions (one per week) of education and assistance in problem solving. These sessions were conducted at home without the patient. Participants in the counseling sessions reported significant improvement in understanding their ill relative and having a more positive relationship at 3 and 6 months postintervention. However, there were no group differences on reports of the negative aspects of caregiving or in coping style.

Solomon et al. (1996) randomly assigned 183 family members of people with schizophrenia from a large east coast U.S. city to one of three conditions: (1) 6–15 hours of individualized consultation, (2) ten 2-hour weekly family psychoeducation group meetings, or (3) a 9-month wait-list control. Postintervention measures found that the consultation model increased participants' sense of self-efficacy regarding their ill relative(s) and that the psychoeducation group meetings had the same effect for relatives who had never before participated in a support or advocacy group for family members. There were no differences among conditions in the extent of family contact with mental health professionals (Solomon et al. 1998). The authors also speculated that other benefits would likely develop as family members used and practiced new skills.

McFarlane et al. (1996) examined outcome differences for 68 people with schizophrenia receiving assertive community treatment in Maine depending on whether their families were involved in family intervention only during crises (crisis family intervention) or more consistently and intensively in ongoing multifamily psychoeducation groups (ongoing family intervention). Participants were randomly assigned between groups and followed for 2 years. Patients in both conditions experienced hospitalization and symptom severity levels lower than expected with usual treatment. These did not significantly differ between the different family conditions. However, patients in the ongoing family intervention group had near-significant mean employment rates for the 2-year period (32% vs. 19%). During the period from 4 to 20 months, the ongoing family interaction group had significantly higher employment rates. Authors speculated that enhanced employment is tied to reduced family stress, enabling the identified patient to better tolerate work stress.



McFarlane et al. (submitted) continued their examination of the combination of family psychoeducation and assertive community treatment on vocational outcomes. They compared the outcomes of 69 unemployed persons with a major psychiatric disorder (65% schizophrenia spectrum) randomly assigned to family-aided assertive community treatment (FACT) or to conventional vocational rehabilitation. Subjects were followed for 18 months. The study was conducted in an urban suburb of New York City and in a more rural area of New York State. The family condition consisted of multifamily psychoeducational groups as implemented in several other studies conducted by McFarlane, but embedded within an assertive community treatment team. Results indicate that FACT subjects had significantly more competitive jobs and more total earnings. For the schizophrenia subsample, there was significant treatment by time interactions for negative symptoms and general psychopathology favoring FACT. There were no differences between conditions for hospitalization. In this study, it is difficult to assess the differential impact of the assertive community treatment and the multifamily groups.

**A Long Followup of an Original Family Psychoeducation Study.** Tarrier et al. 1994 studied the effect on relapse of patients' relatives participating in psychoeducation as followup to a larger British study. They traced 40 people with schizophrenia who had not relapsed during 2 years after a randomized control trial of behavioral family intervention aimed at reducing EE and relapse risk. Those who had been in the 9-month family intervention condition showed significantly fewer relapses at 5 and 8 years than the "high EE" control group, and had profiles much more similar to the "low EE" control group. The authors interpret this as suggesting the intervention moved "high EE" families to "low EE" status.

## Analysis and Synthesis

How do these studies inform the recommended services to families of persons with schizophrenia? Taken as a group, these more recent studies confirm the potential advantages and benefits of services to families and family psychoeducation identified by the PORT and other reviews (Goldstein 1994; Leff 1994; Penn and Mueser 1996). However, they raise important caveats as outlined below.

**What Is the Control or Comparison Condition?** The four studies from China show a dramatic impact of family psychoeducation in reducing relapse and improving other outcomes. In contrast, family psychoeducation confers no benefit in relapse reduction in the two Dutch studies or in

the 1997 study by Hogarty and colleagues of personal therapy in Pittsburgh. While these groups of studies differ in a variety of ways, one of the important differences is the nature of the comparison conditions. In the Dutch and Pittsburgh studies, family psychoeducation was compared to highly developed individual treatment models. Relapse rates were low for all groups. In China, the comparison conditions were bare bones individual services. Thus, individual therapy is not static but is itself changing and growing with research and changes in service systems such as managed care. The studies by McFarlane and colleagues were implemented within assertive community treatment teams, another type of service model that reduced relapse rates dramatically. The addition of multiple family groups did not reduce relapse but did improve employment outcomes. The point is that in predicting the added value of family psychoeducation for relapse reduction, it is important to consider the nature of the standard or comparison treatment. Enriched individual models or other innovative programs may be as effective as family psychoeducation for relapse reduction, especially in the context of improved medications. On the other hand, family psychoeducation is likely to show added benefit in terms of relapse reduction in settings with basic, unenriched services such as those common in the public sector during this era of cost containment.

**What Are the Goals of Family Interventions?** The recovery paradigm for consumers and families has underlined the importance of looking beyond relapse when assessing program efficacy: Client and family functioning and quality of life must also be considered. The Chinese studies confirm the role of family psychoeducation in reducing patient functional disability and improving employment. They also suggest that the well-being of families improves with reduced burden and increased knowledge. McFarlane's work yields compelling data on the potential of multifamily groups to increase employment. The enhanced self-efficacy obtained in Solomon et al.'s study of family consultation and the family education program and the improvements in client-family relationships in the study by Szmukler et al. should not be dismissed. Unfortunately, even when they are measured, nonrelapse outcomes are usually secondarily reported.

**Is There an Optimal or Best Type of Family Intervention? A Critical Ingredient?** The schizophrenia PORT recommendations specified that family interventions should be at least 9 months long. Indeed, Szmukler et al. and Solomon et al. both comment on intervention brevity (6 weeks and 3 months, respectively) as possible explanations for the limited impact of interventions they studied. However, the intervention reported in Xiang et al. was only 4 months long, with positive effect. The tension

between the increased feasibility and possibly reduced efficacy of a shorter intervention program demands further research. The optimal intervention length may depend on program goals. Family programs intending to reduce patient relapse and improve patients' functional status must be at least 9 months, if not longer. Shorter programs may influence knowledge, attitudes, and the quality of relationships. Interestingly, the followup study by Tarrier et al. showed reduced hospitalization at 5 and 8 years after an only 9-month intervention, a testament to the durability of changes produced by the program.

The comparison between applied and supportive family management as investigated in the Treatment Strategies in Schizophrenia study (Schooler et al. 1997) is provocative. Both family interventions were equally effective for the reported outcomes. That is, the additional problem-solving techniques taught in the applied program did not add to the capacity of the model to reduce relapse. (There has also been some debate as to whether the family members actually acquired the skills taught in the applied condition [Lieberman and Mintz 1998]). However, it is critical to recognize that all the families in both models received extensive education, information, and support. Compared with studies of patients whose relatives received no family program, all families in Schooler et al.'s study appeared to derive benefit. It is also interesting to note that in the two Dutch studies, families in both the family treatment and the comparison conditions participated in educational groups during the inpatient phase. The extent to which families benefited from participating in this component of the program is unknown. More work is clearly necessary to delineate the critical components of family psychoeducation programs.

#### **For Whom Does Family Psychoeducation Work Best?**

The notion that one family program would meet the needs of all families and patients is counterintuitive. Phase of illness, family and patient life cycle stages, and cultural background are among the many participant factors that may influence the effectiveness of a given family program. Rund et al. (1994) found that the most symptomatic patients benefited most from the family intervention. Four studies (Rund et al. 1994; Zhang et al. 1994; Linszen et al. 1996; Nugter et al. 1997) focused on patients early in the course of schizophrenia. In two of these studies, relapse was reduced for clients in families that received the intervention. It is therefore difficult to draw conclusions about the differential merits of family psychoeducation for persons and families in early versus later phase of illness. At the very least, the qualitative nature of the intervention should be tailored somewhat for new-onset versus more chronic diagnoses. The reactions of "first break" families were noted to differ from families that have been dealing

with the illness and an ill relative for a longer period of time (Linszen et al. 1996; Nugter et al. 1997; Solomon et al. 1996).

While none of the new studies reported here was restricted to families classified as being high in expressed emotion, Linszen et al. (1996) did stratify patients by levels of EE (low vs. high) before condition assignment. Nugter et al. (1997) measured expressed emotion and reported the relationship between patient outcome and change in EE ratings. Linszen et al. (1996) hypothesized that the near-significant increase in relapse observed in patients of "low EE" families receiving the family intervention may be due to the fact that the family model emphasizes communication and conflict skills training. They suggested that the intervention increased the stress levels of these families by implying something was wrong with their family interaction styles. While the data do not support offering family psychoeducation only to families who have first been assessed and classified as being high in expressed emotion, they do underscore the importance of families examining their own needs and understanding the goals and methods of a particular program before joining it.

The work by Telles et al. (1995) addressed the issue of adapting family psychoeducation along cultural (in addition to individual) lines. Their findings emphasized how differences in family "acculturation" influenced the efficacy of the behavioral family management model. However, the larger issue conveyed is that the program did not meet the needs of certain families because of their cultural background, even though technical aspects such as language were accommodated.

More positively, the Chinese programs spell out strategies the authors used to create family programs that fit with local practices and existing health care systems in rural and urban China (Mingyuan et al. 1993; Xiang et al. 1994; Xiong et al. 1994; Zhang et al. 1994). Other work (Shankar 1994; Susser et al. 1996) has also suggested that individual as-needed consultation models may work better in communities where mental health is less professionalized, and so group psychoeducation or treatment programs are less accepted.

**Is Family Psychoeducation Effective as Part of Usual Practice?** The first generation of research in family psychoeducation established positive outcomes in rarefied research settings with highly trained research staff and selected patients. However, truly effective interventions work under usual practice conditions. The conduct of research inevitably alters "usual practice" in a variety of ways, and the closer a study comes to approximating usual practice, the less methodologically rigorous it tends to be. Therefore, assessment of effectiveness requires

some speculation. It appears that for the most part, the family interventions described in the studies reviewed here were creations of research and did not resemble usual practice. However, several studies with positive findings were carried out in clinical environments more representative of usual care (e.g., the studies in China; Rund et al. 1994; McFarlane et al. 1996; Solomon et al. 1996). A study of McFarlane's multifamily psychoeducation group is currently being conducted in the State of Washington by Dennis Dyck. This study modifies McFarlane's original study of this model by implementing the program in an outpatient managed care setting at sites with remote supervision and technical assistance. The early results from this study are promising (Dyck, personal communication), although it is premature to draw any conclusions.

**The Current Status of Implementation of Family Interventions.** The fact that so many of the family intervention studies use "usual treatment" as their *control* condition points out that access to family services is not the norm. The PORT study found that only 31 percent of a sample of persons who had family contact and who were receiving treatment for schizophrenia reported that their family received information about the illness (Lehman et al. 1998a, 1998b; Dixon et al. 1999a). Young et al. (1998) evaluated the quality of care for a cohort of persons with schizophrenia. They found that of the 68 percent of patients with close family contact, 39 percent received poor quality care as measured by the absence of any family contact. Family contact between clinicians and family members that does occur is likely to be informal rather than a part of a specific treatment program or model (Dixon et al. 1999a).

Barriers to implementation of family psychoeducation come from providers and payers, family members, and in some cases from consumers. Mental health professionals have expressed concern about the cost and length of structured family psychoeducation programs (9 months to 2 years), the interest of families in such programs, and confidentiality (Dixon et al. 1997). A PORT-sponsored dissemination of McFarlane's multifamily psychoeducation group model found the following obstacles to implementation: lack of program leadership and conflict between the philosophy and principles of McFarlane's model and typical agency practices. Wright (1997) found that job and organizational factors were much more predictive of the frequency of mental health professionals' involvement with families than were professionals' attitudes. Bergmark (1994) noted the persistence of psychodynamic theory as a barrier in that some families perceive psychoeducation programs as family blaming, thereby inhibiting collaboration between professionals and families.

The World Schizophrenia Fellowship Strategy Development Group identified the following barriers to implementation of family programs (World Schizophrenia Fellowship 1997): stigma against mental illness, psychoeducation treatments not seen as important, conflicted relationships between consumers and caregivers, varying models of family intervention, inadequate training of professional work force, costs, and structural problems in many mental health systems.

Family advocates have also expressed concern about the time commitment, the exclusion of families whose relative is not currently receiving treatment, psychoeducation's roots in EE theory, and the focus on patient relapse as the outcome of interest rather than family well-being (Solomon 1996). Consumers also sometimes do not provide permission for providers to be in touch with family members.

## What Has Filled the Gap? Family Education by Families

Despite the positive effects of professionally led family psychoeducation interventions that are documented by existing research, relatives of people with schizophrenia have experienced a paucity of services. Involved family members often report dissatisfaction with the mental health system and the professionals that compose it, especially around issues of information and support availability, access to clinicians, and inclusion in their ill relatives' treatment (Spaniol et al. 1987; Solomon and Marcenko 1992; Hatfield et al. 1994; Greenberg et al. 1995; Struening et al. 1995). Families have created self-help groups and organizations to help fill these gaps and advocate for system reform. In this country, the National Alliance for the Mentally Ill (NAMI) is the best-known national group. Primarily, family members attend self-help and support groups to receive emotional support and accurate information about mental illness and mental health services (Heller et al. 1997a; Heller et al. 1997b).

In addition to ongoing support groups, The NAMI-sponsored Family-to-Family Education Program as well as the Journey of Hope Program have enjoyed widespread support by State governments (Dixon et al. 1999b). These 12-week courses for family members combine information, skill building, and support—and so share many of the goals and strategies of family psychoeducation. However, while psychoeducation tends to be clinic based and delivered by mental health professionals, family-to-family education is community oriented, based on theories of stress, coping, and adaptation, and is delivered by trained peer family members (Solomon 1996). It is also open to anyone with a family

member who has serious and persistent mental illness; unlike most professionally led programs, the person with schizophrenia does not need to be receiving treatment in order for the family member to participate. These practices follow from the program's primary concern with *family* well-being, while professionally led family psychoeducation tends to emphasize *patient* outcomes. Their shorter length and volunteer leadership often mean family-to-family programs are less expensive than psychoeducation as well. Unfortunately, research on family-to-family education is not as extensive as research on family psychoeducation (Dixon and Lehman 1995). Since no evaluations using comparison or control groups have been conducted, the efficacy of these programs cannot yet be evaluated.

The other alternative model of family intervention that has evolved is the more individualized "family consultation" model discussed in the work of Mingyuan et al. (1993), Xiang et al. (1994), and Zhang et al. (1994) in China, and Shankar's (1994) work in India. Consultation was also an arm of the study by Solomon et al. (1996, 1998). In this model, although education and groups may be available (or not), the primary focus is on private consultation between the family members and a trained clinician or family member consultant. The consultant's purpose is to provide whatever advice, support, and information is needed, tailored to the specific needs of the family as they articulate them. Consultations occur when the family requests them and may lead to other referrals, simultaneous involvement in other programs, or termination or restart at any time. As with the family-to-family education model, the efficacy of consultation cannot be assessed because virtually no research has been conducted.

## Conclusions and Recommendations

The data supporting the efficacy of family psychoeducation remain compelling. Such programs should remain as part of best practices guidelines and treatment recommendations. The recent literature suggests that assessing the appropriateness of family psychoeducation for a particular patient and family should consider the following questions, to which affirmative answers would increase the appropriateness of family psychoeducation for an individual patient and his or her family:

- Are the family and patient interested in participating in family psychoeducation?
- To what extent is the patient involved with the family and what is the quality of that relationship?
- Are there clear patient-related outcomes that clinicians, family members, and patients can identify as goals, such as decreased relapse or increased employment?

- Would the patient and family choose family psychoeducation instead of alternatives available in the agency or community to achieve outcomes identified?

The role of other family intervention models might include a consultation to assist the family and patient in coming to a decision about participation in family psychoeducation. Peer-led family education programs conducted outside of the service system clearly have a role when the patient is not in treatment or is unwilling to give permission for the family to participate in it, making relatives ineligible for professionally led family psychoeducation. Although again there is little research on the peer models, they may also serve certain needs psychoeducation does not or have particular strengths because they are peer led and emphasize family well-being. Support of family-to-family models by mental health professionals will be valuable in addressing these unknowns. At this point, however, professionally led family psychoeducation models that at least have support, information, and crisis intervention components appear to be the only ones documented as useful in achieving patient improvement.

This review also highlights the incompleteness of our knowledge, the widespread lack of dissemination and implementation of family psychoeducation, and the potential existence of other effective service models. Research must address the following issues:

- We need to better understand the state of affairs regarding services for relatives of people with serious mental illnesses. Currently available information is inadequate to accurately describe what services and support family members are or are not getting, and from what sources. Rectifying this will require addressing multiple issues: patients, families, providers, finances, and service organizations. In some cases, the details of family needs are not even well understood.
- We need to devise more sophisticated evaluations of family interventions to better discern what works for whom at what cost. These evaluations need to identify key critically effective "ingredients" and best practices in general and consider the differing needs of diverse family members.
- To make an actual contribution to family members' and consumers' lives, such research must be applied to developing even more beneficial models of family intervention. This may mean creating programs (or components of programs) that address the differential issues of parents versus siblings of adults with schizophrenia, or family members of people whose illness is of recent onset versus those who have been dealing with the illness for years, for example. Research may also consider optimal combinations of models: structured group and consultation; peer and professional.
- Other work must address the systems-level problems. We have some clues as to why family services, even proven

low-cost ones, are unavailable in most places. However, the dynamics of these obstacles, and their dismantling, have not been addressed. The many political and economic issues of doing so in the current and future mental health system must be taken into consideration, as must questions about successful family services shifting responsibilities and costs of care onto families. Disseminating and implementing successful models requires simultaneous top-down and bottom-up efforts in the mental health system—gaining the support of managing institutions and companies as well as the involvement of front-line providers, family members, and consumers.

- Underpinning these various research directions is also a need to better understand the role of family members in the illness management, coping, course of illness, and recovery of the individual with schizophrenia. Inquiry in this area, as others, must be driven by appreciation for the full biopsychosocial model, rigorous research, and the strengths and stresses of all parties.

When this work is done, we hope family psychoeducation and family-to-family programs will be much more accessible to family members who want them. In the meantime, family-provider interactions will continue to take place most often in the daily course of the consumer's receiving services. Providers, consumers, and families will continue to work in their local communities to find and create the relationships and resources that can address consumer and family-member needs in the absence of proven and prepackaged intervention programs.

The literature regarding family-member services contains many suggestions for doing this with optimal effectiveness. Family members invariably express needs for information, skills, and support. Commonalties among the interventions reviewed in this paper directly address these needs and can be adapted for provider use outside of formal psychoeducation programs. First, providers can offer family members information about schizophrenia and other mental illnesses, illness management, navigating the mental health system, and community resources they might find helpful. Such information should not be offered only once, but consistently. Many consumers and family members will want more detailed and sophisticated information as time and their knowledge base increase—providers can and do anticipate this and offer both conversation and written materials that are tailored to current needs.

Second, providers can assist family members in learning communication and problem-solving skills. Mental illness brings many disruptions and fears into a family, often causing considerable conflict. While information can create understanding, effective communication, negotiation, and problem solving can make difficult and emotional conversations constructive. Some providers may decide to see a client and his or her

involved family members together to discuss tenets of good communication, methods of conflict resolution, and how to use them. Others may want to frame such interventions as family therapy, or facilitate families' taking part in community-based workshops. Ongoing assistance to identify and resolve conflicts as they arise can both support the family and teach skills in vivo.

Third, family members need support. Good relationships with mental health providers and enhanced ability for family members to support each other are both helpful. Additionally, consumers and family members may need help understanding and responding to reactions others in their support system may have to mental illness, especially stigma. Moreover, they may desire contact with people who have schizophrenia or a relative with it, to share experiences and information. Self-help and support groups for family members, and for consumers, are increasingly common in community mental health centers, self-help organizations, and other facilities. Providers may want to know about those in their area, as well as State or national organizations that might have such information.

The three provider actions summarized above assume competencies that some providers may not have. Providers wishing to serve families and consumers better may first have to teach themselves about surrounding community resources. They may have to examine their own abilities to conduct family therapy, or to teach communications and coping skills. If these abilities are found wanting, providers may need to invest in increasing their capacities before offering such services, or refer consumers and families to other providers for these services. They may need to take a lead in creating community resources as well.

Underlying all of these components are the relationships among family members, consumers, and providers. The actions outlined above require investments of time and interaction. The most successful formal programs list building rapport and trust as important ingredients. Both are perhaps even more important when working to meet family and consumer needs without the structure of formal family psychoeducation programs.

## References

- Bergmark, T. Models of family support in Sweden: From mistreatment to understanding. *New Directions in Mental Health Services*, 62:71–77, 1994.
- Cochrane, J.J.; Goering, P.N.; and Rogers, J.M. The mental health of informal caregivers in Ontario: An epidemiological survey. *American Journal of Public Health*, 87:2002–2008, 1997.

- Dixon, L. Providing services to families of persons with schizophrenia: Present and future. *Journal of Mental Health Policy and Economics*, 2:3–8, 1999.
- Dixon, L., and Lehman, A. Family interventions for schizophrenia. *Schizophrenia Bulletin*, 21(4):631–643, 1995.
- Dixon L.; Lyles, A.; Scott, J.; Lehman, A.L.; Postrado, L.; Goldman, H.; and McGlynn, E. Services to families of adults with schizophrenia: From treatment recommendations to dissemination. *Psychiatric Services*, 50:233–238, 1999a.
- Dixon, L.; Goldman, H.H.; and Hirad, A. State policy and funding of services to families of adults with serious and persistent mental illness. *Psychiatric Services*, 50:551–553, 1999b.
- Dixon, L.; Scott, J.; Lyles, A.; Fahey, M.; Skinner, A.; and Shore, A. Adherence to schizophrenia PORT family treatment recommendations. *Schizophrenia Research*, 24:220, 1997.
- Falloon, I.R.H.; Boyd, J.L.; McGill, C.W.; Razani, J.; Moss, H.B.; and Gilderman, A.M. Family management in the prevention of exacerbations of schizophrenia: A controlled study. *The New England Journal of Medicine*, 306:1437–1440, 1982.
- Falloon, I.R.H., and Pederson, J. Family management in the prevention of morbidity of schizophrenia: The adjustment family unit. *British Journal of Psychiatry*, 147:156–163, 1985.
- Goldstein, M.J. Psychoeducational and family therapy in relapse prevention. *Acta Psychiatrica Scandinavica*, 382(Suppl):54–57, 1994.
- Greenberg, J.S.; Greenley, J.R.; and Kim, H.W. The provision of mental health services to families of persons with serious mental illness. *Research in Community and Mental Health*, 8:181–204, 1995.
- Hatfield, A.; Coursey, R.D.; and Slaughter, J. Family responses to behavior manifestations of mental illness. *Innovations & Research*, 3:41–49, 1994.
- Heller, T.; Roccoforte, J.A.; and Cook, J.A. Predictors of support group participation among families of persons with mental illness. *Family Relations*, 46:437–442, 1997a.
- Heller, T.; Roccoforte, J.A.; Hsieh, K.; Cook, J.A.; and Pickett, S.A. Benefits of support groups for families of adults with serious mental illnesses. *American Journal of Orthopsychiatry*, 67:187–198, 1997b.
- Hogarty, G.E.; Anderson, C.M.; Reiss, D.J.; Kornblith, S.J.; Greenwald, D.P.; Javana, C.D.; Madonia, M.J.; and the Environmental/Personal Indicators in the Course of Schizophrenia Research Group. Family psychoeducation, social skills training, and maintenance chemotherapy in the aftercare treatment of schizophrenia: I. One year effects of a controlled study on relapse and expressed emotion. *Archives of General Psychiatry*, 43:633–642, 1986.
- Hogarty, G.E.; Kornblith, S.J.; Greenwald, D.; DiBarry, A.L.; Cooley, S.; Ulrich, R.F.; Carter, M.; and Flesher, S. Three-year trials of personal therapy among schizophrenic patients living with or independent of family: I. Description of study and effects on relapse rates. *American Journal of Psychiatry*, 154:1504–1513, 1997.
- Koenigsberg, H.A., and Handley, R. Expressed emotion: From predictive index to clinical construct. *American Journal of Psychiatry*, 143:1361–1373, 1986.
- Leff, J. Working with the families of schizophrenic patients. *British Journal of Psychiatry*, 164(Suppl 23):71–76, 1994.
- Lefley, H.P. Expressed emotion: Conceptual, clinical and social policy issues. *Hospital and Community Psychology*, 43:591–598, 1992.
- Lehman, A.F.; Steinwachs, D.M.; and PORT coinvestigators. At Issue: Translating research into practice: The Schizophrenia Patient Outcomes Research Team (PORT) treatment recommendations. *Schizophrenia Bulletin*, 24(1):1–10, 1998a.
- Lehman, A.F.; Steinwachs, D.M.; and PORT coinvestigators. Patterns of usual care for schizophrenia: Initial results from the Schizophrenia PORT Client Survey. *Schizophrenia Bulletin*, 24(1):11–19, 1998b.
- Lieberman, R.P., and Mintz, J. Reviving applied family intervention. *Archives of General Psychiatry*, 55:1047–1048, 1998.
- Linszen, D.; Dingemans, P.; van der Does, J.W.; Nugter, A.; Scholte, P.; Lenoir, R.; and Goldstein, M.J. Treatment, expressed emotion, and relapse in recent onset schizophrenic disorders. *Psychological Medicine*, 26:333–342, 1996.
- McFarlane, W.R.; Lukens, E.; Link, B.; Dushay, R.; Deakins, S.; Newmark, M.; Dunne, E.J.; Horen, B.; and Toran, J. Multiple-family groups and psychoeducation in the treatment of schizophrenia. *Archives of General Psychiatry*, 52:679–687, 1995.
- McFarlane, W.R.; Dushay, R.; Statsny, P.; Deakins, S.; and Link, B. A comparison of two levels of family-aided assertive community treatment. *Psychiatric Services*, 47:744–750, 1996.
- McFarlane, W.R.; Dushay, R.A.; Deakins, S.; Lukens, E.P.; Toran, J.; and Link, B. Employment outcomes in family-aided assertive community treatment, submitted for publication.

- Mingyuan, Z.; Heqin, Y.; Chengde, Y.; Jianlin, Y.; Qingfeng, Y.; Peijun, C.; Lianfang, G.; Jizhong, Y.; Guangya, Q.; Zhen, W.; Jianhua, C.; Minghua, S.; Jushan, H.; Longlin, W.; Yi, Z.; Buoying, Z.; Orley, J.; and Gittelman, M. Effectiveness of psychoeducation of relatives of schizophrenic patients: A prospective cohort study in five cities of China. *International Journal of Mental Health*, 22:47–59, 1993.
- Nugter, A.; Dingemans, P.; van der Does, J.W.; Linszen, D.; and Gersons, B. Family treatment, expressed emotion and relapse in recent onset schizophrenia. *Psychiatry Research*, 72:23–31, 1997.
- Penn, L.D., and Mueser, K.T. Research update on the psychosocial treatment of schizophrenia. *American Journal of Psychiatry*, 153:607–617, 1996.
- Rund, B.R.; Moe, L.; Sollien, T.; Fjell, A.; Borchgrevink, T.; Hallert, M.; and Naess, P.O. The psychosis project: Outcome and cost-effectiveness of a psychoeducational treatment program for schizophrenic adolescents. *Acta Psychiatrica Scandinavica*, 89:211–218, 1994.
- Scazufca, M., and Kuipers, E. Stability of expressed emotion in relatives of those with schizophrenia and its relationship with burden of care and perception of patients' social functioning. *Psychological Medicine*, 28:453–461, 1998.
- Schooler, N.R.; Keith, S.J.; Severe, J.B.; Matthews, S.M.; Bellack, A.S.; Glick, I.S.; Hargreaves, W.A.; Kane, J.M.; Ninan, P.T.; Frances, A.; Jacobs, M.; Lieberman, J.A.; Mance, R.; Simpson, G.M.; and Woerner, M.G. Relapse and rehospitalization during maintenance treatment of schizophrenia—The effects of dose reduction and family treatment. *Archives of General Psychiatry*, 54:453–463, 1997.
- Shankar, R. Interventions with families of people with schizophrenia in India. *New Directions for Mental Health Services*, 62:79–88, 1994.
- Solomon, P. Moving from psychoeducation to family education for families of adults with serious mental illness. *Psychiatric Services*, 47:1364–1370, 1996.
- Solomon, P.; Draine, J.; Mannion, E.; and Meisel, M. Impact of brief family psychoeducation on self-efficacy. *Schizophrenia Bulletin*, 22(1):41–50, 1996.
- Solomon, P.; Draine, J.; Mannion, E.; and Meisel, M. Increased contact with community mental health resources as a potential benefit of family education. *Psychiatric Services*, 49:333–339, 1998.
- Solomon, P., and Marcenko, M. Families of adults with severe mental illness: Their satisfaction with inpatient and outpatient treatment. *Psychosocial Rehabilitation Journal*, 16:121–134, 1992.
- Spaniol, L.; Jung, H.; and Zipple, A. Families as a resource in the rehabilitation of the severely psychiatrically disabled. In: Hatfield, A.B., and Lefley, H., eds. *Families of the Mentally Ill: Coping and Adaptation*. New York, NY: Guilford Press, 1987. pp. 167–190.
- Struening, E.L.; Stueve, A.; Vine, P.; Kreisman, D.E.; Link, B.H.; and Herman, D.B. Factors associated with grief and depressive symptoms in caregivers of people with mental illness. *Research in Community and Mental Health*, 8:91–124, 1995.
- Susser, E.; Collins, P.; Schanzer, B.; Varma, V.K.; and Gittelman, M. Can we learn from the care of persons with mental illness in developing countries? *American Journal of Public Health*, 86:926–928, 1996.
- Szmukler, G.I.; Herrman, H.; Colusa, S.; Benson, A.; and Bloch, S. A controlled trial of a counseling intervention for caregivers of relatives with schizophrenia. *Social Psychiatry and Psychiatric Epidemiology*, 31:149–155, 1996.
- Tarrier, N.; Barrowclough, C.; Porceddu, K.; and Fitzpatrick, E. The Salford Family Intervention project—Relapse rates of schizophrenia at 5 and 8 years. *British Journal of Psychiatry*, 165:829–832, 1994.
- Tarrier, N.; Barrowclough, C.; Vaughn, C.; Bamrah, J.S.; Porceddu, K.; Watts, S.; and Freeman, H.L. The community management of schizophrenia: A controlled trial of a behavioural intervention with families to reduce relapse. *British Journal of Psychiatry*, 153:532–542, 1988.
- Tarrier, N.; Barrowclough, C.; Vaughn, C.; Bamrah, J.S.; Porceddu, K.; Watts, S.; and Freeman, H.L. Community management of schizophrenia: A two-year follow-up of a behavioural intervention with families. *British Journal of Psychiatry*, 154:625–628, 1989.
- Telles, C.; Karno, M.; Mintz, J.; Paz, G.; Arias, M.; Tucker, D.; and Lopes, S. Immigrant families coping with schizophrenia: Behavioral family intervention v. case management with a low-income Spanish-speaking population. *British Journal of Psychiatry*, 167:473–479, 1995.
- World Schizophrenia Fellowship. Strategy development: Family interventions work: Putting research findings into practice. Report of the World Schizophrenia Fellowship, following discussions at the Christchurch Convention Center, New Zealand, September, 4–5, 1997.
- Wright, E.R. The impact of organizational factors on mental health professionals' involvement with families. *Psychiatric Services*, 48:921–927, 1997.
- Xiang, M.G.; Ran, M.S.; and Li, S.G. A controlled evaluation of psychoeducational family intervention in a rural Chinese community. *British Journal of Psychiatry*, 165:544–548, 1994.

Xiong, W.; Phillips, M.R.; Hu, X.; Wang, R.; Dai, Q.; Kleinman, J.; and Kleinman, A. Family-based intervention for schizophrenic patients in China: A randomized controlled trial. *British Journal of Psychiatry*, 165:239–247, 1994.

Young, A.S.; Sullivan, G.; Burnam, M.A.; and Brook, R.H. Measuring the quality of outpatient treatment for schizophrenia. *Archives of General Psychiatry*, 55:611–617, 1998.

Zastowny, T.R.; Lehman, A.F.; Cole, R.E.; and Kane, C. Family management of schizophrenia: A comparison of behavioral and supportive family treatment. *Psychiatric Quarterly*, 63:159–186, 1992.

Zhang, M.; Wang, M.; Li, J.; and Phillips, M.R. Randomized-control trial of family intervention for 78 first-episode male schizophrenic patients: An 18-month study in Suzhou, Jiangsu. *British Journal of Psychiatry*, 165(Suppl 24):96–102, 1994.

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