# Family interventions for mental disorders: efficacy and effectiveness

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The physician Henry Richardson described the role of family care in the recovery from physical and mental health problems in 1948 (1). His landmark book entitled "Patients have families" was read by a group of psychiatrists and social anthropologists at the Palo Alto Research Institute in California and became the basis of the systemic approach to family interventions (see 2 for details of this historical perspective). Unlike Richardson, these psychoanalytically trained professionals postulated that family influence was an etiological factor in serious mental disorders, rather than a key factor on the road to recovery. For many years the family system was thought to be the root of all evil and families were accused of inadvertently abusing their offspring through a variety of subtle communication strategies, such as the double-bind or communication deviance. However, these pioneers of family treatment spent considerable time with families and attempted to help them correct these defects. A special unit was opened at National Institutes of Health (NIH) in Bethesda where entire families lived for up to two years, with regular meetings to study their communication styles when faced with day to day life problems. The mere fact of convening family meetings on a regular basis, where families were encouraged to speak openly about their stresses and to attempt to find solutions to their most pressing problems, often appeared to have substantial therapeutic impact.

Around the same time, a team of British sociologists and social psychiatrists began to study the outcome of relocating long-term mental hospital residents into community settings (3). Led by George Brown and John Wing, they noted that one of the predictors of successful resettlement was the interpersonal environment of the households where patients resided (4,5). The worst outcomes were in hostels where little warmth and support was provided. But the next worst situation was households where patients lived with close relatives, such as parents or spouses. This unexpected finding was explored in a series of studies using more and more sophisticated interviewing techniques to try to flesh out the specific features associated with success or failure of community care (6). The 1976 doctoral dissertation of Christine Vaughn compared the effects of family attitudes on the short-term rates of recurrence of major episodes of depression or psychosis in outpatients who had shown good recovery after acute hospital treatment. This study was summarised in a classic paper that established family factors as a key variable in achieving stable recovery from severe mental disorders. In her classic paper (7), co-authored by Julian Leff, Vaughn emphasised the value of the negative attitudes of emotive criticism and intrusiveness as predictors of a relapsing clinical course. However, in her unpublished thesis, greater emphasis was placed on the better clinical outcome associated with supportive comments and emotional warmth expressed by relatives towards the patient (8). Unfortunately the term 'expressed emotion' became synonymous with negative aspects of family care. Alternative hostels and residences were developed, despite the fact that the earlier studies had shown that they were associated with the highest rate of failure of community care.

Fortunately not all those who studied this literature concluded that the best way forward was to seek alternatives to family care for people with serious mental disorders. A small group led by Robert Liberman set out on a different direction that aimed to help those families who were so burdened and stressed by the care of their relatives, that they were unable to demonstrate the positive caring behaviours that appeared to enhance the prognosis of patients. Detailed education about the nature of mental disorders and their optimal treatment was followed by practical problem solving about how to manage the everyday difficulties they encountered with patients' residual symptoms and interpersonal difficulties (9). Relatives and patients were encouraged to use effective communication skills to express their emotions in a manner not dissimilar to the methods developed by earlier family systems therapists. The focus was on increasing the expression of positive comments for efforts patients made, no matter how trivial they might seem, and on reducing nagging and hostile criticism, replacing this with attempts to clarify key problem issues in a way that would enhance patients' efforts to solve them. In simplistic terms, this psychoeducational approach aimed to convert harmful high expressed emotion to helpful low expressed emotion, or to teach family members some of the core skills of effective nursing and rehabilitation strategies. From these early beginnings in the mid 1970s, a series of random controlled trials was instigated, initially with schizophrenic disorders, but later with an increasing range of mental health problems. In the remainder

of this paper we will review the results of this body of work in terms of evidence for the efficacy and the effectiveness of family interventions in adult mental health.

## FAMILY INTERVENTIONS FOR SCHIZOPHRENIC DISORDERS

Optimal drug therapy remains the cornerstone of the clinical management of psychotic disorders, at least in the periods after major psychotic episodes. However, substantial additional benefits have been reported when optimal pharmacotherapy has been integrated with family-based treatments (10-15). The educational family strategies attempt to reduce the impact of environmental stresses on the biologically vulnerable individual whilst promoting social functioning. Two major strategies have been developed. The first, carer-based stress management, derived from cognitive behavioural therapy, seeks to enhance the problem solving efficiency of the patient and his or her social support system and to actively promote the achievement of personal life goals (2). The second educates caregivers in stress reduction strategies and to increase acceptance of behaviour associated with both positive and negative symptoms (6,16).

Fifty controlled studies with adequate research methodology have been published since 1980. Fifteen were of brief duration and could not be considered an adequate trial of integrated biomedical and psychosocial treatment for serious mental disorders. Most of these studies were mental health education only (17-23). Two early pioneering studies of brief family intervention were also excluded (24,25). Eight other studies had serious methodological flaws and were excluded from the detailed analysis. They were mainly studies of the benefits of applying family approaches in clinical practice (26-33). One excellent study was excluded on the basis that the experimental 'relapse prevention program' investigated consisted of a complex blend of individual, group and family strategies (34), while another compared brief and long-term family education (35).

The remaining 25 studies were generally of a high quality. One major deficit, common to all psychosocial research, is the inability to deliver psychosocial treatments in a manner that was 'blind' to the patients and associates, including the clinicians and independent assessors. Relatively few studies controlled for non-specific variables, such as therapist contact, skills and enthusiasm, or the ancillary treatment strategies used in the case management.

The studies varied considerably in the specific intervention strategies examined. The most basic merely provided several sessions giving information about drug treatments (36,37). Others extended for several years, with continued education, stress management strategies, social skills training, vocational training, specific cognitive behavioural strategies and home-based crisis management when necessary (38-46). It is important to realise that not all family interventions are the same, and for that reason the benefits may be expected to differ.

Almost all studies involved patients with a diagnosis of schizophreniform, schizophrenic or schizoaffective psychoses. Treatment was usually initiated after crisis management had produced a remission of the acute symptoms of a major psychotic episode. The methods of outcome assessment varied substantially. Most studies focused on prevention of major exacerbations of psychotic symptoms, using clinical judgments of 'relapse' that were not always well standardized (47). Some studies also used standardized rating scales to measure clinical, social, family and economic benefits, so it is possible to examine a broader range of relevant outcomes. Differential dropouts from the treatment approaches were rarely evaluated. However, we have endeavored to use the 'intention-to-treat' approach to analyzing the benefits. Furthermore, in our consideration of clinical efficacy, we have devised an index of outcome that combines not merely major psychotic episodes, but major episodes of any psychiatric symptoms, such as suicidal ideation/attempts or affective disturbances, hospital admissions for any reason, and withdrawal from the allocated treatment for clinical reasons. This provides a highly conservative portrayal of the benefits that might be expected in clinical practice.

### Clinical benefits

Eighteen trials compared individualized case management and maintenance medication with or without the addition of a family-based stress management strategy. Of these, 14 showed a significant advantage for the stress management approaches (36-38,40, 41,44,46,48-54), two no significant differences (55,56), and two showed greater advantages for individual case management (39,40).

The proportion of cases maintained in treatment for one year without any major exacerbations of any form of psychopathology showed a 25% advantage for the stress management strategies: 62% had a successful outcome during the 12-month period, compared to 37% of those not receiving carer-based stress management. These results are highly significant both from a statistical as well as a clinical viewpoint (58).

### Remission of residual symptoms

The absence of major episodes is not the only goal of long-term treatment. Most patients experience continuing psychotic and deficit symptoms for some time after a major psychotic episode (59). The benefits of family strategies in reducing this residual psychopathology, and thereby enhancing the trend towards full remission of schizophrenia, was assessed in 13 studies (39,40,44-46, 48,49,51,52,54,55,60, 61). These studies compared ratings of psychopathology at the beginning of the study with those obtained up to a year later. In 9 of these studies an overall trend towards recovery was observed, both with

experimental and control treatments. Zhang et al (54) noted this trend only for those patients receiving the stress management who did not have any symptom exacerbations. One study that used a blind assessor to conduct standardised interviews of psychopathology before treatment, and again at 9 and 24 months, showed that 65% of cases receiving the family-based approach achieved full remissions of both psychotic and deficit schizophrenic symptoms at two years, in contrast to 15% associated with individual assertive case management (40).

### Social outcome

Full social recovery from mental disorders may be more difficult to achieve than clinical remission. Thirteen studies employed standardized assessments of social functioning, although three employed methods that lacked adequate scientific rigor, and one proved too complex to include (39). Five of the 9 remaining studies showed significantly greater benefits for stress management strategies (26,37,40,46,52,53), one a clear trend (44) and three showed no significant benefits when compared with drug treatment and case management (36,51,55). Despite the difficulties of measuring gains on inventories that include a broad range of social goals, many of which are not personally relevant to every patient, advantages for the family-based approaches were evident. One study that examined this issue carefully with blind ratings showed that 40% of patients in the family treated group had no signs of social disability after two years of comprehensive treatment that also integrated social skills training and individualized vocational rehabilitation within the treatment program (40). This contrasted with 6% of cases that had received individual assertive case management of similar intensity.

### Family benefits

An important goal of family stress management strategies is to enhance family functioning and reduce stresses, particularly those associated with caring for the patient. A mean reduction in the stress of caregiving of 34% was reported in four studies that examined this outcome (40,44,45,53). This was contrasted with a reduction of 9% in the drugs and case management conditions. Five of the six studies that compared standardized family stress ratings associated with stress management vs. drugs and case management showed significant advantages for the stress management approach (37,40,46,52, 53). The self-help multiple-family group approach of Buchkremer et al (55) showed no change in a measure of family problems associated with the patients' illness, but was associated with increased warmth and reduced hostility towards the patients.

### Economic benefits

Improvements in clinical, social and family functioning would be expected to reduce the need for intensive medical and social care and thereby produce economic benefits for service providers. Six studies reported such benefits, albeit in relatively unsophisticated assessments of costs (29,40,42, 45,52,62). It is important to note that no study showed that the addition of family approaches costs more to the services. In most instances the cost savings to the services of integrating family assistance in this way were substantial. Further, the additional cost to the family was usually minimal, particularly as most treatment sessions were arranged flexibly to minimize loss of earnings or the cost of transport.

### Enduring benefits

The duration over which programmes were applied varied from 6 months to four years, with most providing this treatment for 9-12 months. It was apparent that benefits endured, and trends towards clinical and social recovery continued, when the treatment approach was continued without major modifications throughout the study period (38,40, 42-44,63). Where treatment ceased at the end of the study period, it was noted that the stress of impending termination of a successful treatment program may have contributed to an excess of episodes at this period (38). However, withdrawal of intensive training in stress management was not usually associated with an immediate cessation of apparent clinical benefits. The studies that examined clinical benefits over at least two years showed a 23% advantage for stress management in minimizing major clinical episodes (36,38,40,42-44,63-65).

All four studies that followed up cases for at least 4 years have shown long-term evidence of clinical benefits (42,66-68). However, the methodology of long-term follow-up studies is less than optimal, and it is clear that for individual cases the benefits tend to diminish once active treatment is stopped. As with all major health problems, comprehensive treatment needs to be continued until all residual impairments, disabilities and handicaps have been resolved, and then followed by monitoring of early signs of recurrences and the provision of booster treatment when this is indicated (39,67). Studies of long-term optimal programmes of this nature are essential (69).

### Effectiveness of family treatment in routine clinical practice

One major concern raised by many observers has been the ability to replicate the benefits of controlled trials in clinical practice. In this field there has been a tendency to dilute the methods, using merely part of the intervention program, usually only the mental health education component (17,23, 35,70-92). Some of these studies have shown limited benefits, particularly improved adherence to medication (12). However, substantial clinical and social benefits are generally less than those associated with more comprehensive programmes applied over longer periods.

A series of comprehensive field tri-

als have been completed, with almost all reporting successful replication of the controlled trial results (26-34, 93-101).

### Comparative benefits of stress management approaches

The strategies used in stress management approaches include:

- comprehensive assessment of biomedical and psychosocial needs
- case management
- optimal drug treatment
- education of patients and key carers about mental disorders and the treatment
- training in effective problem solving of current and anticipated stresses
- specific strategies to manage problems of compliance
- social and work skills training
- specific strategies for residual psychotic and deficit symptoms
- specific strategies for residual affective and anxiety symptoms
- early detection of exacerbations
- assertive crisis intervention.

At present there have been few studies that have attempted to compare different combinations of strategies. Whereas it is clear that health education alone has limited overall benefits (12), it is not clear which combination of ingredients or setting of treatment is most effective and efficient (34). The effect sizes of clinical benefits of the key combinations of interventions suggest that long-term educational or systemic approaches may be less efficacious than those using problem solving and cognitive behavioural methods (58). Although a carer-based approach has been strongly advocated, there is also strong support for long-term individual approaches that use similar stress management methods. In one study that compared individual and family-based approaches, 38% of patients receiving family treatment had a major episode of psychosis or affective disorder, or had withdrawn from treatment by 24 months, compared to 28% of those allocated to supportive case management, and only 13% of those receiving intensive individual stress management training (39). These advantages continued to the end of the third year. Reduction of residual symptoms was greatest with the family approach, but social functioning benefits occurred mainly in the first year, whereas those associated with the more intensive individual approach continued to increase throughout the 3 years (39). In this study, patients expressed low satisfaction with the family treatment, and were highly satisfied with the individual approach, which had 73% more sessions (2.4 per month over the 36 months vs. 1.4). Unlike earlier studies, Hogarty's Pittsburgh group did not find any added benefits from combining family and individual strategies.

A less complex study of a cohort of patients who were receiving assertive community treatment found that, although the addition of crisis family treatment could prevent major episodes as effectively as continuous multifamily treatment, it was less successful in achieving social benefits, particularly in the field of employment (44). Further complex studies that compare the ingredients of comprehensive treatment programmes are essential to refine these approaches.

### Single family versus multi-family groups

A series of 8 studies that compared stress management conducted predominantly in multi-family groups with that conducted mainly in individual sessions showed a mean advantage of only 3% greater clinical success for the single family approach (37% vs. 34%) in the first year of treatment (36,42-44,63,102-105). Two further studies have compared a multiple family group with a medication and case management control (48,55). The first study of self-help relatives' groups did not involve the patients and showed a higher rate of hospital admissions than the control condition (55), while the second showed reduction in service use, including hospital admissions, associated with multi-family treatment (48). McFarlane et al (42) have shown that there may be advantages for the multi-family approach when it is used as a long-term maintenance strategy, but this work has not yet been replicated fully, although two other studies used multi-family approaches in the second year of the programs with good maintenance of clinical benefits (40,106). The complex methodology of these comparative studies prevents any clear conclusions about the relative merits of these approaches, particularly when the psychosocial strategies used have differed in the single and multiple family settings. A current multi-centered study nearing completion in Italy has contrasted identical methods in single and multi-family settings. The early results seem to support the findings that similar clinical benefits are achieved in both settings (104). However, this study has again highlighted a somewhat greater rate of withdrawal from the multi-family groups (42-44,101,102). Although multi-family settings may appear more cost-effective, it is important that all costs are considered, not merely the time spent conducting the treatment itself, before concluding that this strategy should be the method of choice for services. It is unlikely that any one training format will meet the needs of all cases, and a comprehensive service will include a range of efficacious family and individual approaches, tailored to the needs of individual cases at different stages in their clinical and social recovery.

### Integration with social and work skills training strategies

The addition of social skills training strategies to assist patients to cope more effectively with stresses in community settings outside the family appears to confer an added benefit to those methods that focus more on stresses within the patient's immediate social network. Six studies that combined social skills training strate-

gies with carer-based stress management appear to have achieved the best clinical outcomes (38,40,41,46, 106). Only 19% of patients receiving this integrated approach had poor outcomes during the first year of treatment. The precise manner in which these strategies are integrated has not been studied. In some programs the social and work skills training has been an integral part of the family problem solving sessions (40, 41,46), in others the two approaches are conducted in separate sessions (38,39,105). It is noted that the benefits of conducting social skills training without the collaborative support of key caregivers appears to have limited long-term benefits in the well-controlled studies that have been completed (38).

### Integration of other psychosocial strategies for residual symptoms

Several groups have used a cognitive behavioural approach that includes specific strategies for residual psychotic, deficit, affective and anxiety symptoms, all of which are common in functional psychotic disorders (40,41). These strategies have been demonstrated as highly efficacious when studied in non-schizophrenic populations (107). To date there have been no controlled studies that have compared family programs that include such strategies when indicated, with those that use only the generic problem solving methods. One study that employed a wide range of cognitive behavioural strategies showed an improvement in the rates of affective and anxiety episodes in the second year of treatment (40).

### Does family-based stress management reduce the level of medication needed to prevent recurrences?

Attempts to substantially lower dosages of drugs below those deemed clinically optimal have proven relatively unsuccessful (45,105). However, in these studies the dose of drugs was rapidly and substantially lowered, rather than gradually reduced in the manner recommended in clinical practice. Hahlweg et al (45) showed a relatively low rate of major episodes with a targeted dose strategy throughout the period that regular stress management sessions were conducted. Schooler's collaborative study did not replicate this finding, but did support the hypothesis that family-based strategies may enable lower doses of medication to be used without increasing the risk of major episodes (105).

## FAMILY INTERVENTIONS FOR AFFECTIVE DISORDERS

Family education and stress management is frequently used in treatment programmes for major affective disorders, but relatively few studies have been conducted to assess the benefits of these approaches. Controlled studies of bipolar disorders that have involved families in the treatment process have shown added benefits, similar to those obtained in the studies on schizophrenic disorders (108-113). Such benefits in a condition where pharmacotherapy is often unsatisfactory suggests that carer-based approaches should be more widely available (114).

Despite substantial evidence for the association between family and marital factors and the onset and course of major depressive disorders (115), most psychosocial strategies have focused on stress and vulnerability from the individual perspective. There is limited evidence that family or marital strategies achieve somewhat greater benefits than the individual cognitive behavioural or interpersonal approaches, particularly where marital conflict is an ongoing major stressor (116-124).

Early intervention using a family-oriented approach when depressive or manic symptoms first emerge may prove highly efficacious in preventing major affective episodes, associated social morbidity and potential suicide risk (125,126). While offering considerable promise, further carefully controlled studies are essential to enable carer-based approaches to be targeted with greater precision to the specific problems associated with affective disorders.

## FAMILY INTERVENTIONS FOR ANXIETY AND OBSESSIVE-COMPULSIVE DISORDERS

The education and assistance of family members and friends in the application of specific cognitive behavioural strategies for anxiety and obsessive-compulsive disorders is common practice (127-133). However, we are not aware of any controlled studies of the specific benefits associated with carer involvement.

One controlled study of chronic post-traumatic stress disorder showed no benefits from adding cognitive behavioural family strategies to a programme of graduated exposure (134).

## FAMILY INTERVENTIONS FOR EATING DISORDERS

Family involvement in the treatment of anorexia nervosa is common to most programmes (135). However, few controlled studies have been conducted (136-138). The results do not show any consistent benefits for family therapies when they have been compared to various individual psychotherapeutic approaches. The family treatment strategies have varied considerably and there is no evidence to support the superiority of any one approach (139,140).

## FAMILY INTERVENTIONS FOR ALCOHOL AND SUBSTANCE ABUSE

Evidence for the benefits of family strategies is accumulating in the treatment of alcohol and substance abuse. This includes the engagement of unmotivated subjects (141), and the treatment of substance use in patients with schizophrenic disorders (142).

## CONCLUSIONS

There is sufficient scientific evidence to conclude that strategies that

enhance the caregiving capacity of family members and other people involved in the day to day care for people with mental disorders have a clinically significant impact on the course of major mental disorders. This evidence is strongest for schizophrenic and bipolar affective disorders. The best results appear to be associated with comprehensive methods that integrate carers into the therapeutic team through education and training in stress management strategies, with continued professional support and supervision over a period of at least two years. Although education about mental disorders and their biomedical and psychosocial treatment is a valuable component of these approaches, and may improve engagement and adherence to treatment programmes, it does not seem sufficient to reduce the risk of major episodes or to promote clinical and social recovery.

There is growing evidence for the benefits of carer-based methods for depressive and eating disorders. However, it is not clear which cases benefit more from family or individual approaches, or how best to combine the two formats of treatment. Finally, although family members are almost always involved in programmes for anxiety disorders and substance abuse, research is needed to clarify the merits of this involvement.

In addition to the benefits in terms of improved prognosis, there is evidence that social morbidity is reduced, particularly when treatment continues for at least two years and integrates personal goal setting and aspects of social and work skills training. Despite evidence that the benefits of family work are not well sustained once the intensive training phases have been completed, there is a lack of research into how improvements can be maintained. Multi-family group formats offer promise as a long-term strategy for parental families. But carers who are spouses, partners, siblings, children and close friends may prefer other formats.

Benefits from family approaches are also evident for the carers themselves, with reduced stress associated with their caregiving roles. However, even when evidence-based family programmes are applied, the stress associated with continued family care of chronic cases remains considerable and alternative supportive caregiving arrangements are essential (143). Efforts to develop and evaluate similar therapeutic programmes in residential services must be given a high priority.

Despite the clear evidence of efficacy and efficiency, few services have incorporated these carer-based strategies into their routine practice (144). This problem is shared with most non-commercial advances in clinical practice. In addition to adequate training in educational and psychological strategies, assertive management of services is needed to ensure that the efforts of key caregivers of all patients are fully integrated into clinical programmes at all times. Almost all patients have somebody who cares for them, or at least somebody who cares about them. With improved understanding and straightforward training in problem solving approaches caregivers can provide a substantial additional resource to the therapeutic team, a resource that promises to contribute to long-term clinical and social recovery from major disorders.

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