COGNITIVE-BEHAVIOURAL INTERVENTIONS FOR PATIENTS WITH FUNCTIONAL PSYCHOSES AND THEIR CAREGIVERS

ABSTRACT: Since 1980, twenty-two controlled studies of long-term cognitive-behavioural family interventions integrated with optimal drug and case management have shown substantial additional benefits for people with schizophrenic disorders. These include 14 random-controlled comparisons carried out with sound scientific methods, that document the significant clinical, social and economic advantages of these new approaches, that include patients, relatives and close friends in the continuing care program. Major exacerbations of psychotic symptoms and admissions to hospitals are more than halved, social disability is reduced with increased employment rates, burdens on family carers are lowered and their health improved. Some of these benefits may result from the synergistic benefits of improved cooperation with medications. Although there are small additional costs involved in the delivery of these strategies, these are dramatically offset by reductions in the need for expensive crisis care, resulting in very high cost-effectiveness.

The minimal amount of treatment needed to obtain maximum benefits from both drug and family treatments is not yet clear, but the most successful programmes provide a flexible amount of treatment, extending for at least 6 months, even for first episode cases. Stable benefits appear only when optimal combinations of drug and family treatment is available according to need for at least two years. The approaches can be delivered in single family groups, multiple family groups, separate groups of relatives and patients, and in groups of residents in non-family households. Engagement of family members has been a problem with some approaches, but once they have begun the programme continued participation is excellent. Field trials have shown that the integrated pharmacological and family strategies can be applied with similar benefits in routine clinical services.

All recent authoritative reviews of this body of research have reached a consistent conclusion that further delays in implementing these methods in clinical practice can no longer be justified, either on the grounds of insufficient scientific evidence for their effectiveness, or on account of problems with securing additional manpower resources for implementation.

COGNITIVE-BEHAVIOURAL FAMILY TREATMENT VS CASE MANAGEMENT


Method:
36 patients with schizophrenic disorders were allocated at random to two equally intensive cognitive-behavioural treatment approaches for 24 months, either 1) individual CBT added to minimal effective doses of medication plus assertive case management and vocational counselling; or 2) family-based CBT added to medication, case management and vocational counselling.

Results:
Significant benefits in clinical, social and family adjustment ratings were associated with the family approach. At the end of two years of continuous treatment 64% of patients receiving the family approach were clinically recovered (absence of all positive and negative symptoms) from schizophrenia and 41% had no evidence of social disability. 94% of families reported no more than mild burden. A detailed economic analysis showed high benefit/cost ratios and high cost-effectiveness.

Comments:
Two years of continued family treatment that combined individualised problem solving training with multiple family groups appears to lead to recovery from schizophrenic disorders. This recovery continued through the third year of treatment when this was provided (unpublished data). An additional finding was a reduction in episodes of affective and anxiety symptoms in cases receiving the family treatment.


Method:
104 young patients who had been discharged after a hospital admission for a major episode of schizophrenia (DSM -II) were allocated randomly to 1) brief family treatment (6 sessions) or 2) routine outpatient treatment. They were also randomly allocated to have a) 25mg of depot fluphenazine every 2 weeks, or b) 6.25mg every 2 weeks.

Results:
No patients had major episodes in the group having "standard" dose of drugs plus the family intervention, 9% in the family treatment plus low dose medication, 24% in the standard dose only and 48% in the low dose alone. These differences were supported by rating scale changes of symptoms, and were still evident at longer followup.

Comments:
This study was a pioneering project, which showed that an educational approach that involved families and focused on stress management could have benefits in addition to those achieved with drug treatment alone.


Method:
51 patients with schizophrenic disorders who were living, or in close contact, with their families were randomly allocated to either 1) family treatment with continual standard dose medication, or 2) family treatment with medication given only when early signs of an episode emerged (i.e. "targeted") over and 18 month period following a major episode.

Results:
At 12 months 4% of the patients having continued medication and family treatment had major episodes, compared to 17% of those with the targeted medication. The family intervention was discontinued at this point, and at 18 months 4% of the continued medication group had major episodes (i.e. no further episodes), whereas 34% of those receiving targeted medication had recurrences by 18 months. However, clinical, social and family burden rating scales showed that both groups had improved significantly from the beginning of treatment, with no differences between the two medication strategies. Lowered need for crisis management and hospital admissions provided a substantial cost saving for family treatment with continued medication.

Optimal medication is essential to obtain maximal benefits, particularly to avert psychotic exacerbations in the first 18 months after a major episode. However, targeted medication may suit some cases, and further research is needed to define the characteristics of this group.


Method:
103 patients residing in high expressed emotion households after a major schizophrenic episode and stabilised on medication were randomly assigned to 24 months of either 1) educational family treatment; 2) social skills training; 3) combined family and social skills training, or 4) medication only.

Results:
After 24 months 34% of who had family treatment had had a major exacerbation, compared to 57% who had social skills training only, or 66% receiving medication only. Social adjustment measures of cases who had not had an episode were similar for all groups, results favouring the social skills training groups.

Comments:
Cases who were compliant with treatments, especially in taking tablets, and showed lower household stress levels (measured by expressed emotion of caregivers) had the best outcomes.


Method:
This complicated project contains two controlled studies; the first involves family treatment, the second only individual psychosocial treatments and is not relevant to this bibliography. 97 patients with RDC criteria for schizophrenia (not all met DSM-III-R criteria) were allocated to either 1) educational family treatment, (Hogarty et al 1986) 2) intensive individual educational treatment, 3) combined family plus individual treatment, or 4) supportive case management. All cases were treated throughout 36 months after discharge from hospital following a major episode.

Results:
38% of patients receiving family treatment had a major episode of psychosis, affective disorder, or had withdrawn from treatment by 24 months, 28% of those allocated to supportive case management, and only 13% of those receiving individual treatment. The advantages continued to the end of the third year. The improvement in clinical scales of residual symptoms were greatest with the family approach, but social functioning benefits were mainly in the first year, whereas those of the intensive individual approach continued to increase throughout the 3 years. 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). No economic analysis was done, and benefits to family members were not assessed.

Comments:
The results of the educational family treatment used here are similar to those found in other studies using this approach (Hogarty et al., 1986, 1988; McFarlane, 1995a, b), which encourages stress reduction rather than the stress management provided in the more intensive individual approach. It is not clear whether the monthly MFGs that were a feature of the earlier studies were used. Nor is it clear whether the combined family and individual approach had any added advantages -- unfortunately the number of cases is probably too small to observe such benefits, which were evident with the combination of family and individual skills training in the previous work of this centre. As the authors conclude, it is essential to secure funding to replicate this study before drawing definite conclusions, and it is hoped that adequate funds can be obtained for many further important studies of this nature.

Method:
This is a complex study that compares adding a) education about medication; b) individual CBT; and c) a caregiver's support group to optimal medication for 191 outpatients with schizophrenic disorders in Münster, Germany. Patients and key family members were randomly allocated to receive progressively more intensive combinations of these strategies over an 8 month period, and then followed up for 5 years.

Results:
After 12 months of followup there was no difference between any of the groups, but after two years the most intensive approach, which included medication education, individual CBT and the caregivers' support group had 24% of participants readmitted to hospital on at least one occasion, compared to 50% of those who only received medication. This trend was maintained after 5 years of followup, during which time no further training was provided. At this point 42% of the combined treatment participants had been readmitted, compared to 69% of the medication only group.

Comment:
The benefits of family treatments provided for at least 6 months may last for many years. The question whether these benefits can be even greater if the treatments are maintained throughout these periods needs to be answered.


Method:
24 patients with schizophrenic disorders who were living in high expressed emotion households were randomly allocated to 9 months of treatment with either 1) family treatment to reduce expressed emotion, or 2) routine outpatient psychiatric care. The family treatment combined individual sessions in the home with multiple family groups.

Results:
After 9 months 9% of patients who had family treatment had major episodes compared to 50% of patients receiving routine medication and support. At the end of two years followup 20% of the family treatment had had major psychotic episodes and 78% of the routine treatment group. However, two (17%) additional family treatment patients committed suicide.

Comments:
This study reminds us that major affective episodes are common in schizophrenia, and that programmes need to prevent these life-threatening disturbances as well. The suicides in this study occurred after the family treatment had finished, and may have been prevented if the approach had not been time-limited.


Method:
28 patients with chronic schizophrenia who were living with their parents in high expressed emotion households received 9 weeks of intensive inpatient rehabilitation and were followed up with community case management for 24 months. During the rehabilitation phase they were randomly allocated to either 1) social skills training plus cognitive-behavioural multiple family treatment, or 2) health enhancement training plus supportive multiple family treatment of equal intensity.

Results:
At 24 months 50% of the patients who received the CBT skills and family treatment had had major episodes, and 79% of patients who received the comparison programme.

Comments:
This suggests that training in managing the specific problems that contribute to stress may be more useful than more general stress management approaches. Furthermore, brief intensive programs may be less effective than long-term continued training.

Method. 76 patients with recent onset of schizophrenic disorders admitted to a university hospital in Amsterdam were randomly allocated to a 12 month programme of either 1) patient and family education and stress management training in hospital followed by continued individual sessions after discharge; or 2) an identical programme, but with cognitive-behavioural family treatment instead of individual sessions after discharge.

Results. There was no difference between the two approaches, with 15% of patients who received the individual outpatient programme having major episodes and 16% of those who had family treatment as outpatients.

Comments. Comprehensive continued educational programmes that involve families and assist patients in the management of real-life stresses, including problems with medication, are effective for first episode cases. They can be initiated while patients are receiving hospital treatment.


Method. 41 patients with chronic schizophrenia were allocated to 12 months of either 1) cognitive-behavioural family treatment, or 2) routine psychiatric treatment.

Results. 14% of patients who received the family treatment and 55% of those receiving routine treatment had major episodes. Expressed emotion status of households did not predict the success of outcome. No improvement in work functioning was seen in the family treated group, but deterioration was seen in the routine treated cases. Average doses of medication were very high and may have accounted for the high levels of negative symptoms that were associated with poor social functioning.

Comments. Improvements in social functioning depend on many factors, including negative symptoms, medication, and availability and incentives for lifestyle changes, not merely increased stability of psychotic symptoms. Furthermore, one year of treatment may be too short a time to achieve major advances in social achievement in chronic cases.


Method. This study encompassed several sub-studies; these included a) the benefits of 2 sessions of education; b) the benefits of two forms of cognitive-behavioural family treatment – discussion groups and role-playing over 9 months; c) benefits of treatments in high and low expressed emotion households. 83 patients recovering from major episodes of schizophrenia were allocated randomly to one of 6 treatment programmes in addition to optimal medication and followed for 24 months.

Results. There was no benefits in terms of reductions in major episodes for brief education. Both cognitive-behavioural family strategies showed similar lower rates of major episodes than routine medication (12% vs 48%). This advantage was still evident up to 8 years after the end of treatment. Improvements in social adjustment favoured the family intervention. Lowering of expressed emotion was partially related to the benefits of the family treatments. The cost savings to the mental health services was around 30%.
Comments. Brief education appears to have little value unless linked to a continuing programme of family treatment, even for people living in low expressed emotion environments. The precise style of cognitive-behavioural family intervention does not seem to influence reduction in major psychotic episodes.


Method. 40 low-income Spanish-speaking patients with schizophrenic disorders were randomly assigned to receive 12 months of either 1) individual cognitive-behavioural case management (as for Falloon 1985) or 2) behavioural family management. Continuous doses of medication were provided throughout.

Results. Highly significant improvements in clinical and social ratings were seen in both treatments. No additional benefits for the family treatment were found at 12 months. Although there were no significant differences on the entire sample on clinical and social ratings, the less acculturated patients who received family treatment had more exacerbations and poorer social adjustment than those who received individual treatment; 60% had exacerbations within the first 8 weeks of beginning the family treatment.

Comments. These results are very puzzling, particularly as the therapists came from the same culture as the families they treated, and adapted the strategies to the culture of each case. However, evidence supports the view that many of these patients were not well stabilised at the time the family treatment began, and that the educational approach may have been stressful for them, particularly when conducted in a clinic setting.


Method. 24 patients with schizophrenic disorders who were living with their families in Benevento, Italy while recovering from acute episodes were allocated randomly to either, 1) cognitive-behavioural family treatment, or 2) routine psychiatric treatment for 12 months.

Results. 8% of cases having the family treatment and 42% receiving routine treatment had major episodes. Both treatments were associated with reductions in positive and negative symptoms, social disability and family burden. These benefits were substantially and consistently greater for the family treatment cases. Improved compliance with medication and lowered doses were also associated with the family treatment.

Comments. This is a further careful replication of earlier studies in a southern European culture. It demonstrates the robust nature of these family methods.


Method. 63 patients with schizophrenic disorders who were living with their families in Shashi City, China were allocated randomly two either, 1) monthly multiple family educational groups for 1-2 years, or 2) medication only.

Results. After 12 months 33% of those allocated to the family treatment had major episodes compared to 60% of those receiving medication only. Family-treated patients were working for an average of 5.6 months in the first year, compared to 3.1 months for medication only cases and families were less burdened. These results were supported by changes on clinical, social and family scales. Cost savings were 58% of the average per capita income.

Comments. Educational family methods can be adapted to diverse cultures and health delivery systems with similar clinical, social, family and economic benefits. Medication compliance was improved by the family approach, but appeared to account for only part of the benefits.

Method. 32 severely disabled young (18-35 years) inpatients with treatment-resistant schizophrenic disorders were allocated at random to two forms of family treatment as part of a programme to discharge them to community placements; 1) cognitive-behavioural family treatment (Falloon et al., 1985), or 2) educational family treatment (Hogarty et al 1986). After a 4-month intensive inpatient phase patients who were able to leave hospital had monthly booster sessions for another 12 months.

Results. 53% of those allocated to the CBT approach were either not discharged, or readmitted during the 12 month followup period, compared to 47% of those who received the educational approach. Improvements in positive and negative symptoms, social functioning and family burden were similar in both groups, with the CBT family approach showing more sustained benefits, but a lower proportion of time spent out of hospital.

Comments. This study showed the value of involving families in the rehabilitation of severely disabled patients. Once again no striking advantages were found one or other of the two family strategies. This is not surprising as both approaches have similar principles and core components.


Method. 83 patients who had been admitted to hospital for the first time with a schizophrenic disorder were allocated to either 1) family educational treatment sessions every 1-3 months for 18 months, or 2) medication only.

Results. 15 % of those who received the family treatment had major episodes during the 18 months followup and 54% who had medication only.

Comments. Low intensity educational family treatment appears beneficial in first episode cases when compared with poorly organised pharmacotherapy.


Method. 3343 outpatients with schizophrenia who were living with relatives in 5 cities in China were allocated randomly to either 1) family educational treatment or 2) medication only for 12 months.

Results. After 12 months 32% of patients receiving family treatment had had psychotic episodes and 60% of those receiving medication only. Reductions in social disability and family burden were greater with family treatment.

Comments. This large scale study demonstrates the ability of family treatments to be disseminated widely, with benefits similar to that seen in more discrete studies.

INDIVIDUALISED FAMILY TREATMENT VS MULTIPLE FAMILY GROUPS


Method: 23 patients with schizophrenic disorders who were living in high contact with relatives who expressed high levels of criticism or overinvolved attitudes were randomly allocated to 9 months for either 1) homebased individual family treatment (based on Hogarty et al 1986); or 2) multiple family group treatment.

Results: In the 9 month of active treatment 8% of cases of the individual family treatment had major psychotic episodes compared to 36% of those allocated to the relatives groups. After two years 33% of individual family treatment cases had had major episodes, but no further episodes occurred in the multiple family group.

Comment:
Attendance at the multiple family groups was very poor. For regular attenders the rate of episodes over the two years was 17%. Where expressed emotion was lowered or contact with key relatives reduced episodes were minimal.


Method:
40 patients outpatients with schizophrenic disorders who were living with their relatives in Valencia, Spain, were randomly allocated to either 1) individual family treatment at home, or 2) relatives' groups (without patient) for a continuing treatment programme.

Results:
The proportion of cases having major episodes after 9 months was similar in both groups; 31% of those whose relatives were assigned to the groups and 29% of those having individual family treatment. However, only 50% attended the groups, and those who attended had a low rate of episodes. Rating scales showed reductions in symptoms. Social functioning improved more in the individual family treatment while the relatives groups reduced symptoms for relatives more.

Comment:
Patients appear to benefit from having their carers trained and supported in their caregiving roles, but a large proportion of family members seem less willing to participate in clinic groups with other families, than in individualised training with their own family particularly when this is provided in their own homes.


Method:
This study compared two multiple family group strategies with one individual family approach in 47 patients with schizophrenic disorders who were in contact with relatives and attending outpatient services in New York city over a 4 year followup period. They were assigned randomly to either 1) MFG with education about schizophrenia, 2) MFG without education, or 3) Individual family education. The family approach was based on the psychoeducation strategies of Hogarty et al (1986).

Results:
After 12 months 13% of cases allocated to the educational MFGs had been readmitted to hospital, 22 % of those in the individual family education, and 43% in the MFG without education. The proportion of patients admitted to hospital was similar for each of the subsequent years in the programme for both the educational approaches, whereas only a few additional cases were admitted in the 7 cases receiving the traditional MFG.

Comments:
This study shows the feasibility and benefits of a continuing educational multiple family programme, which appeared to enhance the outcome found when education is provided in an individual family format.


Method:
172 patients with schizophrenic disorders, who had been admitted to 6 public hospitals in New York State with a psychotic episode were randomly allocated to either 1) individual family treatment, or 2) multiple family group treatment for 24 months.

Results:
16% of those allocated to MFG had major episodes in the 24 months, compared to 27% of those receiving the individual family approach. BPRS ratings showed a trend towards recovery of both positive and negative symptoms over the 2 years. At two years 34% of patients allocated to MFG and 28% of individual family treatment were employed. A rough estimate of costs and benefits suggested that both treatments saved substantial amounts, with the multiple family approach being more efficient.

Comments:
In this project only 13% of cases did not attend the family groups, and 8% dropped out of the individual family approach. All cases had 3 or more individual family sessions before beginning the groups. These sessions focussed on preparing patients and families for the groups and appear to have been successful in achieving effective participation.

**Method:**
68 patients with schizophrenic disorders that were complicated by either poor programme adherence, violence or suicide risks, frequent crises, substance abuse or criminal behaviour were offered 24 months of assertive community treatment (Stein and Test 1980). In addition, they were allocated to either 1) educational multiple family groups, or 2) crisis family intervention when needed.

**Results:**
Hospital admissions were reduced, but occurred at the same rate for both family treatment strategies. Positive and negative symptoms were significantly reduced over the two years and family burden was lowered. MFG patients had higher rates of employment (32% vs 19%) than those receiving only crisis family treatment.

**Comments:**
Family involvement should be a core component of assertive case management programmes, even when patients are not residing together with their families. More extensive family treatment may contribute to improved social functioning.


**Method:**
This study compared 313 patients with schizophrenia randomly allocated to either 1) monthly multiple family educational groups continued for 2 years, or 2) individual family treatment for 12 months plus monthly MFGs for 24 months. It was complicated by the fact that patients were also allocated to three medication strategies: a) optimal dose; b) 20% of optimal dose; or c) "targeted" medication given only when early signs of an episode were detected. The study was conducted in 5 US centres -- San Francisco, New York, Long Island, Philadelphia, and Atlanta.

**Results:**
The two-thirds of the patients receiving lowered doses of medication had more psychotic episodes than those on continuous optimal dosages. When only those receiving continuous optimal medication throughout the 24 months were compared, 19% of cases who received combined individual and MFG treatment were admitted to hospital and 31% of those who had MFG only. There were no other advantages for either family strategy.

**Comments:**
Although there was no overall difference between the family treatments in reducing the risk of episodes, the overall rate was low, suggesting that both family approaches made a substantial contribution. Therapists were all trained to deliver the family interventions competently in a series of brief workshops. A system of rating the quality of treatment from audiotaped recordings was developed and used to maintain effective treatment.

**SYSTEMIC FAMILY THERAPY APPROACHES**


**BRIEF FAMILY EDUCATIONAL TREATMENTS**


**FIELD TRIALS**


**Method:**

48 patients with chronic schizophrenic disorders were treated by 8 community psychiatric nurses attending a training course in cognitive-behavioural treatment strategies for patients and families at the University of Manchester. After a baseline period of at least 6 months when supportive case management was provided as usual patients and their key caregivers received the family-based CBT approach for a further 12 months. All received optimal medication from their team psychiatrists.

**Results:**

No improvement was noted in clinical, social or family ratings during the baseline 6-12 months. The 12 months of family-based treatment showed significant improvements in positive and negative symptoms, social functioning, family symptoms and consumer satisfaction. Medication levels were lowered and hospital use reduced. These benefits were achieved with an extra 13 minutes of therapist time per patient each week (47 minutes compared to 33).

**Comments:**

Training nurses to deliver family treatment is straightforward and efficient. The benefits and savings associated with these approaches are evident from the time trainees begin to work with cases, and far exceed the costs of the training within the first year.


**Method:**

42 patients living with their families in Bonn and receiving outpatient medication for schizophrenic disorders from private psychiatrists were allocated to 12 months of 1) family intervention (21) or 2) continued standard psychiatric treatment (21). The samples were matched, but not randomly assigned.

**Results:**

Over the 24 months 24% of the family intervention cases were admitted to hospital compared to 52% of the standard treatment cases. One quarter of crises were associated with poor medication compliance. These advantages were supported by reductions in clinical, social, family burden ratings. A 39% saving in mental health service costs was achieved through the family approach.
Family-based approaches can be employed in complex mental health services, such as those in Germany, where community mental health teams are poorly developed.


**Method:**
12 adolescents (13-18 years) who received 24 months of outpatient treatment with cognitive-behavioural family strategies were compared with a matched sample of similar cases treated in the routine manner at the same clinic in Oslo.

**Results:**
The family treatment group had fewer and briefer admissions to hospital (58% vs 75%). This resulted in 23% cost savings.

**Comments:**
Cognitive-behavioural family interventions can be adapted to a wide range of services, including those for adolescents.

**Berglund, N. (unpublished). How early intervention in psychiatric long-term illness patients and their families influences relapse, medication and family burden**

**Method:**
30 outpatients with schizophrenic and bipolar disorders (N=4) living in West Sweden were allocated to either 1) cognitive-behavioural family treatment, or 2) routine case management. Both groups were treated for at least one year and received minimally effective doses of neuroleptic medication.

**Results:**
13% of patients receiving the family treatment had major psychotic episodes, and 87% of those receiving routine case management. Family burden was halved with family treatment, and although it decreased to similar levels with case management, these benefits did not last. Relatives attitudes to continuing to care for their disabled members was enhanced by the family treatment.

**Comments:**
CBT family interventions can be employed for all psychotic disorders, with changes needed only in the specific education about the nature and treatment of the different disorders. A series of controlled studies of bipolar disorders are near completion. preliminary reports suggest similar benefits to those seen with schizophrenia.


SELECTED REVIEWS


End.