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A 'family affair'? The impact of family psychoeducational interventions on depression

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Major depressive disorder is reported to be the most common mental disorder, and one of the leading causes of disability-adjusted life years. It causes high levels of family burden and of expressed emotions. Research interest in family functioning in mental disorders has recently shifted from schizophrenia to unipolar and bipolar affective disorders. However, studies on family burden and on the effect of family psychoeducational interventions on major depression are still very few in number and lack a rigorous methodology, clear outcome measures and adequate follow-ups. Despite this, the few available studies on the efficacy of psychoeducational family intervention in unipolar major depression have had promising results. A comprehensive management of unipolar major depression should include psychoeducational family intervention.

KEYWORDS: depression • expressed emotion • family burden • family functioning • family psychoeducational intervention • major depression



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Learning objectives

Upon completion of this activity, participants should be able to:

- Describe the family burden associated with MDD, based on a review
- Describe the effect of family environment on outcomes of MDD, based on a review
- Describe specific psychoeducational family interventions that may be useful in management of unipolar major depression, based on a review

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Major depressive disorder is reported to be the most common mental disorder, with a lifetime prevalence in the community ranging from 8 to 12% [1,2]. According to the WHO [3], it is the leading cause of years lived with disability, and in the year 2020 will be the third cause of disability-adjusted life years lost worldwide, following HIV/AIDS and ischemic heart disease.

Major depression has been reported to cause high levels of family distress, although this association has not been fully explored, as it has been for other severe mental disorders, such as schizophrenia [4] and bipolar disorder [5]. Family burden refers to the psychological, emotional, financial, social and physical difficulties experienced by those who take care of a mentally ill person. Two dimensions of family burden have been identified [6]. Objective burden includes the practical difficulties of the caring process, such as difficulties in work activities, problems in marital roles, financial constraints and social isolation; subjective burden is related to the psychological distress experienced by relatives as a consequence of the illness, such as guilt, feelings of loss, depression, insomnia and anxiety [7].

The most frequently reported family problems in major depression are: financial difficulties, which are due to both loss of productivity of patients and caregivers and to the direct costs of treating depression; reduction in leisure and social activities; difficulties in marital roles; emotional exhaustion; worries about the future; high levels of anxiety and depression, feelings of not being able to bear the situation any longer; and insomnia [8–11]. Moreover, a direct correlation between family burden and patients' adherence to treatments has been found in this disorder [12]; psychosocial interventions, such as family psychoeducational interventions, have been effective in improving patients' compliance to medications.

Family functioning in major depression

The impact of major depression on the wellbeing of family members has been relatively neglected for many years [13]. Studies carried out since the 1980s have been mostly focused on relatives of patients with schizophrenia, bipolar disorder or dementia, and only recently studies have explored the effect of depression on

family environments and functioning. Available studies show that the family environment can play an important role in determining the course, and the long-term outcome of major depression [14]. The outcome of depressed patients living in highly burdened families is poorer at 1, 4 and 6 years, when compared with patients with low levels of family difficulties [15–18].

Research on the expressed emotions (EE) of families of patients with major depression has shown that relapses are predicted by high EE levels [19]. Mino *et al.* reported in a sample of 39 relatives of patients with mood disorders, that patients living in families with high levels of critical comments and with emotional overinvolvement have a poorer clinical outcome [20]. In a study carried out by Kronmüller *et al.*, EE was found to be significantly associated with poor satisfaction with the marital role, but no significant relationship with outcome was found at 10-year follow-up [21]. Fadden *et al.* reported a significant reduction in social activities in the spouses of patients with depression, which was particularly marked if the patient was male [22]. In this particular study, the main cause of spouses' social discomfort was embarrassment in public places and reluctance to tell people about the patient's mental disorder. Moreover, partners reported difficulties in sexual activities and in dealing with depressive symptoms. They felt that they could not cope with the situation any longer and expressed the need to find a 'way out'.

A more recent study evaluated the risk of developing a psychiatric disorder in a sample of 151 partners of people affected by a mental disorder, including schizophrenia, depression and anxiety disorders [11]. The results show that 41% of partners met the criteria for at least one psychiatric disorder, with a significant gender difference (52% of women vs 32% of men). Additionally, 25% of partners fulfilled the criteria for more than one psychiatric diagnosis. In this study, the type and duration of the patient's illness did not predict prevalence rates of any psychiatric disorder in the spouse of a mentally ill person.

In a study conducted by Angermeyer *et al.*, 133 spouses of persons with mental disorders reported a significant reduction in wellbeing and quality of life, with a significant correlation

between their quality of life and patients' social functioning [10]. Surprisingly, the poor quality of life reported by spouses of patients with schizophrenia did not significantly differ from that of spouses of patients with depression or anxiety disorders.

Recently, our research group carried out a study in 30 Italian randomly selected mental health centers and in a large sample of relatives of patients with major depression [9]. We showed that the most troublesome practical consequences of taking care of a depressed patient were a reduction in leisure and social activities, while a sense of loss and worries about the future were the most frequently reported psychological difficulties. In this study, factors influencing family burden were a low education level (of both patients and key relatives), more severe symptoms, a worse social functioning and a greater number of previous voluntary and compulsory hospitalizations. Key relatives who received more support from their social network and mental health professionals had lower levels of family burden.

A summary of studies on the effects of major depression on the functioning of adult relatives is reported in TABLE 1.

Unlike the difficulties experienced by adult relatives, those reported by children and adolescents living with patients with major depression have been explored in several studies [23]. It has been shown that major depression influences parenting skills, especially in affected mothers [24], with a reduction of children's psychological wellbeing [23]. Epidemiological data show that children of parents with major depression have a four-times higher risk of developing an affective episode, and that 64% of them develop psychological problems during life [25]. Moreover, school-aged children of mothers with severe depressive symptoms are more likely to experience emotional distress, depression and anxiety.

A number of empirically supported psychological therapies for mood disorders in adults have been developed to address relatives' difficulties in caring for a patient with major depression [26]. However, the most commonly used psychosocial techniques – such as cognitive-behavioral intervention, individual psychoeducation, strategies aimed at improving patient's social relationships and the so-called passive individual psychoeducation – have mainly addressed patients' personal functioning [27]. Little is known about the efficacy of family psychoeducational approaches on major depression.

Family psychoeducational interventions

Approximately 60% of seriously mentally ill persons worldwide live with their families, who often experience high levels of stress and of practical and psychological family burden [28]. A number of studies on the efficacy of family interventions in schizophrenia [29–31] have been conducted over the past 30 years, following research on EE [32], family burden and stress-vulnerability theories [33]. Different models of family intervention have been developed to meet the different family needs, and they include psychoeducation, family education, family consultation, family support, advocacy and family systemic therapy [34]. Among these models, family psychoeducational intervention received the best empirical support by randomized controlled trials and meta-analyses [35,36] in families of patients with schizophrenia.

More recently, the efficacy of this intervention has been proved in other major mental disorders, such as bipolar disorder and major depression.

The different models of family psychoeducational interventions share the general goals of reducing relapses and improving the quality of life of patients and their family members by: providing the whole family with information about diagnosis, symptoms, signs, etiology, course and treatment, including medications and the management of their side effects; improving communication patterns within the family; enhancing the family's problem-solving and coping strategies; encouraging relatives' involvement in social activities outside the family; and focusing on the management of practical daily issues [37]. The models mainly differ in program elements, including: the location of service provision (i.e., home, clinic, outpatient unit and hospital); the length of the intervention; the type of involved professionals; the content emphasized and the information provided; the focus on problem-solving, communication skills or behavioral management; the use of a single versus multiple-family approach; the involvement of relatives; and the way the information is delivered.

Studies comparing the different family psychoeducational models have not demonstrated which is the most effective. However, since the models have so much in common, this distinction is only artificial and not possible on scientific grounds [38].

Aims

This review aims to: first, describe the caregiving consequences of major depression; second, report on the available models of family psychoeducational interventions; and third, review the studies on the efficacy of family psychoeducational interventions for people with major depression and their relatives. Implications for research will also be discussed.

This will not be a systematic review on the use of family psychoeducational intervention in patients with major depression, but rather an overview of recent evidence on this topic. The studies that focus on children and youth have been excluded from our analysis.

Methods

The PubMed database and the references of chapters and journal articles were searched using the following keywords: "family psychoeducation", "family intervention", "family treatments", "psychosocial interventions", "psychoeducation", "depression" and "unipolar major depression".

All articles published from 1985 to 2011 were considered. All relevant articles that were methodologically sound have been cited. Studies were included if: the methodology was clearly described; family psychoeducational intervention was properly described; the study design included a control group and if the articles were written in English. Studies were excluded if: the patients were under 18 years or over 65 years of age; the intervention was mainly focused on parenting skills; and the intervention was performed as an integrated treatment and not as a preventive intervention.

The studies on effects of major depression on the wellbeing of underage children have been excluded from this review as psycho-

Table 1. Studies on family functioning in major depression.

Study (year), country	Sample size (caregivers)	Inclusion criteria	Assessment instruments	Outcome measures	Main results	Ref.
Fadden <i>et al.</i> (1987), USA	25	Diagnosis of MDD and BD	<i>Ad hoc</i> questionnaire	Evaluation of family burden	41% of carers report financial problems, reduction in social activities, embracement of the diagnosis; 50% reported difficulties in marital relationship	[22]
Wittmund <i>et al.</i> (2002), Germany	45 for the AD group + 54 for the MDD group + 52 for the schizophrenia group	Diagnosis of AD or MDD or schizophrenia	Composite International Diagnostic Interview	Prevalence of psychiatric disorder in mentally ill spouses	41.1% of partner fulfilled the criteria for at least one psychiatric disorder, with a significant gender difference, 25.5% of partners fulfill the criteria of more than one psychiatric diagnosis	[11]
Mino <i>et al.</i> (2001), Japan	36	Diagnosis of mood disorder	Evaluation of EE through recorded tapes of the interview and their transcription	Influence of EE in the outcome of mood disorder	Poorer outcome of the illness in families with high levels of critical comments and emotional overinvolvement	[20]
Heru <i>et al.</i> (2004), USA	21 for MDD group + 17 for BD group	Diagnosis of MDD or BD with three or more episodes in the last 3 years or continuous symptoms for 5 years	Caregiver Strain Scale Family Assessment Device Family Member's Activities of Daily Living Questionnaire	Family functioning and family burden	Higher levels of burden, strain in BD group Significant impairment in family functioning in both groups, with communication being the most problematic area	[18]
Weinstock <i>et al.</i> (2006), USA	121 for MDD group + 92 for BD group	1) Diagnosis of MDD or BD 2) Aged between 18 and 65 years 3) Living with, or in regular contact with, at least one relative	McMaster Clinical Rating Scale	1) Family functioning during acute episode and from acute episode to recovery 2) Differences in family functioning between two diagnostic groups	High levels of family dysfunctioning in both groups during the acute episode Family dysfunctioning can negatively influence the long-term outcome of mood disorder	[14]
Angermeyer <i>et al.</i> (2006), Germany	39 for the AD group + 49 for the MDD group + 45 for the schizophrenia group	Diagnosis of AD or MDD or schizophrenia In charge at local mental health center	Brief WHO – Quality of Life	Quality of life of spouse of patients of three different diagnostic groups	Reduction in wellbeing and quality of life of spouses of patients with a severe mental disorder, with a significant correlation between the spouse's quality of life and the patient's functional level	[10]
Kronmüller <i>et al.</i> (2008), Germany	50	1) Admission in a psychiatric ward 2) Diagnosis of MDD	Five-Minutes Speech Sample	Influence of EE and perceived criticism in long-term outcome (10-year follow-up)	No influence of EE on the course of MDD at 10-year follow-up	[21]

AD: Anxiety disorder; BD: Bipolar disorder; EE: Expressed emotion; MDD: Major depressive disorder.

Table 1. Studies on family functioning in major depression (cont.).

Study (year), country	Sample size (caregivers)	Inclusion criteria	Assessment instruments	Outcome measures	Main results	Ref.
Fiorillo <i>et al.</i> (2011), Italy	324 in 30 Italian mental health centers	1) Diagnosis of MDD 2) Aged between 18 and 65 years 3) At least one depressive episode in the last 2 years 4) Absence of any major physical or psychiatric disorders in the relatives	Family Problem Questionnaire Social Network Questionnaire	Evaluation of family burden	Most frequently reported practical difficulties are reduction in leisure and social contacts Most frequently reported psychological difficulties are reduced leisure and social activities Factors influencing family burden are low educational level, severity of symptoms, worse social functioning, high number of hospitalizations Factor preventing family burden are lots of social contact and support from health professionals	[9]

AD: Anxiety disorder; BD: Bipolar disorder; EE: Expressed emotion; MDD: Major depressive disorder.

educational interventions including children are substantially different from those carried out with adults only [39]. Moreover, this phenomenon has already been explored in several studies, drawing definitive conclusions on its efficacy [40–42]. The magnitude of this phenomenon, as well as lessons for clinical practice, have been clearly described in an updated recent work [43].

Results

In the literature search, only five studies have been identified that explored the efficacy of family psychoeducational interventions in patients with major depression and their relatives (TABLE 2). One was an observational study without a control group [44], and was, therefore, not included in this review. Three studies were randomized controlled trials, and one of them was carried out using a purposive sample. Two randomized controlled trials exclusively included patients with major depression, the other including mixed samples. Since the methodology of available studies is significantly improved from the early trials to the most recent ones, studies are reported chronologically.

A study carried out at the Payne Whitney Clinic (NY, USA) attempted to determine whether the inclusion of a family intervention package added any benefit to the standard hospital treatment in a group of patients with schizophrenia or major affective disorder, and to their relatives. Family psychoeducational intervention consisted of six reality-oriented sessions addressed to solve practical problems, and it was provided by a social worker together with a psychologist [45]. At discharge from the hospital, the intervention improved patients' attitudes toward medications, reduced global disability of patients with affective disorder and led to an improvement of social contacts with their relatives. These positive results were maintained at 18-month follow-up, without statistical differences between the two groups. Although the findings were promising, the study had several limitations. In particular, patients with an affective disorder were included all together in the same arm, without differentiating between major depression and bipolar disorder. Moreover, the randomization process was not very well balanced, in particular regarding patients' sociodemographic characteristics. Therefore, it is not possible to extrapolate from the data analysis the efficacy of the psychoeducational intervention in patients with major depression and their relatives.

Stam and Cuijpers investigated the effects of psychoeducational family support groups on relatives' burden, measured with the Involvement Evaluation Questionnaire in a sample of 164 relatives of patients with major depression, bipolar disorder or psychotic disorder [46]. Treated relatives received information about the patient's disorder, training on coping skills, counseling and support. At the end of the intervention, they reported a significant reduction in family burden, especially in the subdimensions of 'worrying' (concerns about patients, such as safety, finances and health) and 'urging' (activation and stimulation of patients to take care of themselves and to undertake activity). The authors did not differentiate changes in family burden between the different diagnostic groups, and did not randomize families.

Our research group has recently carried out a study to evaluate the efficacy of psychoeducational family intervention on:

Table 2. Studies on the efficacy of the psychoeducational family interventions in major depression.

Study (year), country	Type of intervention (n) and assignment of cases	Inclusion criteria	Assessments	Main results	Ref.
Spencer <i>et al.</i> (1988), USA	IPFI (79) plus SC (89), random assignment	Admission in a psychiatric ward Diagnosis of schizophrenia or major affective disorder	At discharge, 6 and 18 months	In the experimental group: 1) Better attitude toward medications 2) Improvement in patient's social functioning 3) Improvement of relative's social contacts of their relatives	[45]
Stam and Cuijpers (2001), The Netherlands	MPI, with focus on coping skills (119) plus SC (45), purposive sampling	Relatives of patients in charge to local mental health centers, regardless of patient's diagnosis	Baseline and at the end of the intervention	In the experimental group: 1) Reduction in two of four dimensions score of relatives burden (worrying and tension) 2) Close relation between relative's worrying and strain in the relation with the patient	[46]
Shimazu <i>et al.</i> (2011), Japan	IPFI, with focus on problem solving and coping strategies (25) plus SC (32), random assignment	1) Relatives aged between 18 and 35 years 2) Diagnosis of major depressive disorder 3) No history of ECT in patients 4) Patient living with the family for at least 3 months	Baseline and 9 months	In the experimental group: 1) Significant reduction in patient's relapses 2) No reductions in EE	[49]
Magliano (2009), Italy; Fiorillo <i>et al.</i> (2011), Italy	IPFI, with focus on communication skills and problem solving (22) plus informative sessions (22) random assignment	1) Aged between 18 and 65 years 2) In charge at the local MHC from at least 6 months, with at least one contact in the last 3 months 3) At least one depressive episode in the last 2 years 4) No psychiatric admission in the last month 5) Living with at least one family member aged between 18 and 70 years 6) Absence of any major physical or psychiatric disorders in the relatives	Baseline, 6 and 12 months	In the experimental group: 1) Reduction in personal and family difficulties 2) Improvement in social contacts	[47,48]
ECT: Electroconvulsive therapy; IPFI: Individual psychoeducational family intervention; MHC: Mental health center; MPI: Multifamily psychoeducational intervention; SC: Standard care.					

first, clinical status and social functioning of patients with major depression; second, family burden and social network of relatives living with a patient with depression; and third, the wellbeing of their underage children.

The experimental intervention consisted of 12 single-family sessions focused on: providing information about the disorder, its treatments and early warning signs, and teaching communication skills and problem-solving strategies. The control group received an informative package on major depression, its treatments and early warning signs. A total of 44 patients with major depression and their relatives were recruited and randomly assigned either to receive the experimental intervention or the informative package. The psychoeducational family intervention was useful in reducing personal and family difficulties caused by depression, and in improving social contacts both in patients and relatives [47,48]. Despite the fact that this study was carried out with a rigorous sampling procedure, the follow-up period was relatively short (6 months), and the long-term effects are not yet known.

Shimazu *et al.* published a randomized controlled trial on the efficacy of family psychoeducational intervention in major depression [49]. This study involved 57 families who were randomly allocated to the experimental intervention or to the control group. The experimental intervention consisted of four sessions for relatives, without the participation of patients, focused on providing information about the epidemiology, causes, symptoms, treatment and course of major depression. The last sessions were dedicated to teaching strategies to cope with the patients, to reduce EE and to improve problem-solving strategies. The results of this study have demonstrated that the family psychoeducational intervention significantly reduced patients' relapses and family burden at 9 months, but no substantial differences were reported in the levels of EE at follow-up. This study had several limitations. First, EE was assessed with the Five-Minutes Speech Samples and the Family Attitude Scale, which meant that the results were not comparable with the majority of studies, in which the Camberwell Family Interview was adopted. Moreover, the sample size is too small to make these results generalizable.

A summary of studies on family psychoeducational interventions is reported in TABLE 2.

Expert commentary

There is no doubt that major depression is a 'family affair', as the title of this article would suggest. However, only a few studies have explored the efficacy of family psychoeducational interventions for patients with major depression and their relatives. At the current level of knowledge, it is not yet possible to conclude that this approach is useful in reducing affective relapses and family burden, and in improving personal and family functioning, as is the case for other mental disorders. Studies have mostly focused on the effects of depression on children and adolescents. Only a few studies have considered the family as a whole.

Since the effect of psychoeducational family interventions in major depression has not been adequately studied, it is extremely difficult to define what the real impact of the intervention is,

compared with other psychological and psychosocial approaches that have been used in the treatment of major depression, such as individual cognitive-behavioral intervention, individual psychoeducation and passive individual psychoeducation. Moreover, depressed patients are only rarely seen at mental health centers, which represent the best setting for psychoeducational family interventions, while usually they are referred to private settings or to outpatient clinics.

Finally, most of the studies carried out to date included mixed samples of patients with different psychiatric disorders and did not provide differential analyses for the different diagnostic groups. Thus, it is not possible to tease out the findings with major depression for these studies.

The only published randomized controlled trial on the efficacy of psychoeducational family intervention has shown the utility of this intervention in reducing relapse rates in patients with major depression [49]. However, in this study, the intervention was run without including the patients; therefore, its effects on patients' clinical status and social functioning are not known.

Five-year view

The few available studies have several methodological limitations and do not allow us to draw definitive conclusions. More rigorous studies, designed to address the questions still unanswered, are required.

It is, however, well established that families of patients with major depression experience substantial impairments in family functioning, with high levels of practical and psychological burden and of EE. A large, multicentric, international study on families with patients with major depression may help to describe this phenomenon in depth, as has been carried out for schizophrenia and other major mental disorders in the past [50,51].

In regards to family burden in major depression, there is no agreement among the various authors in the identification of its components. In fact, some authors subdivided burden into a practical and a psychological dimension, on the basis of the studies carried out in families of patients with schizophrenia; others have suggested to divide burden into four dimensions, 'urging', 'supervision', 'worrying' and 'tension'. Again, this difference represents a problem when reviewing the available literature and suggests the need to adopt an univocal approach in future studies on family burden in major depression.

Major depression – despite being one of the most burdensome psychiatric disorders – has not been the focus of interest for social psychiatry researchers. Studies on psychoeducational family interventions are very few and have led to mixed results, as a possible consequence of eclectic methodologies. Moreover, most of the studies have investigated the effect of this intervention on underage children, which was not the focus of this review. Finally, all of the available studies have not included long follow-ups, thus the impact of psychoeducational family intervention on the long-term outcome of major depression is not known.

Effective elements of psychoeducational interventions still need to be clarified. Whether the provision of informative packages on depression, treatments and early warning signs has the same

impact as in other mental disorders, or whether more emphasis should be given on the emotional involvement of carers, as is the case with other supportive interventions, is not yet known, and represents an area of research for years to come.

The need to develop an evidence-based psychosocial intervention for the families of patients with major depression should be a clinical and ethical priority for those working in the mental health field in the next few years.

Key issues

- Major depression is associated with high levels of family burden, in particular with financial difficulties, problems in marital functioning, worries about the future, high levels of anxiety and depression.
- Family environment can play an important role in determining the course and the long-term outcome of major depression.
- Children and adolescents of patients with major depression perceive high levels of personal and psychological difficulties.
- Studies on the efficacy of family psychoeducational interventions on family burden, expressed emotions, family functioning and patients' clinical and social functioning are very poor.
- Studies are needed to evaluate the influence of family psychoeducational interventions on the long-term outcome of major depression.

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•• of considerable interest

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A 'family affair'? The impact of family psychoeducational interventions on depression

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Activity Evaluation

Where 1 is strongly disagree and 5 is strongly agree

	1	2	3	4	5
1. The activity supported the learning objectives.					
2. The material was organized clearly for learning to occur.					
3. The content learned from this activity will impact my practice.					
4. The activity was presented objectively and free of commercial bias.					

1. Your patient is a 53-year-old married man with major depressive disorder (MDD). He has a 10-year-old son and a 16-year-old daughter. Based on the review by Dr. Luciano and colleagues, which of the following statements about the family burden is **most likely** correct?

- ☐ A Financial difficulties are caused only by the direct costs of treating depression
- ☐ B His children are not likely to experience personal and psychological difficulties
- ☐ C Time spent in leisure and social activities is unlikely to be affected
- ☐ D Family problems may include emotional exhaustion, worries about the future, and high levels of anxiety and depression

2. Based on the review by Dr. Luciano and colleagues, which of the following statements about the effect of family environment on outcomes of MDD is **most likely** correct?

- ☐ A Family burden does not affect patient adherence to treatments
- ☐ B There is no evidence that family psychoeducational interventions improve patients' compliance with medications
- ☐ C A Payne Whitney Clinic study showed no effect of family psychoeducational interventions on patient attitudes toward medications or on global disability
- ☐ D In a study by the reviewers, psychoeducational family intervention reduced personal and family difficulties caused by depression and improved social contacts in patients and relatives

3. You are considering a family psychoeducational intervention for the patient described in question 1. Based on the review by Dr. Luciano and colleagues, which of the following statements about goals and elements of psychoeducational interventions is **most likely** correct?

- ☐ A General goals are to reduce relapses and improve quality of life of patients and their family
- ☐ B The patient and his wife, but not their children, should be educated about the diagnosis, symptoms, signs, etiology, course, and treatment, including medications and side effects
- ☐ C Relatives should be advised to spend more time at home and to limit outside activities
- ☐ D Effective elements of psychoeducational interventions are well known and included in available models