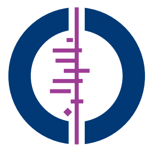

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Family therapy for depression (Review)

Henken T, Huibers MJ, Churchill R, Restifo KK, Roelofs JJ

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[Intervention Review]

Family therapy for depression

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ABSTRACT

Background

People with depression often experience interpersonal problems. Family therapy for depression is a widely used intervention, but it is unclear whether this is an effective therapy for the treatment of depression.

Objectives

To assess the efficacy of family therapy for depression.

Search methods

The following electronic databases were searched using a specific search strategy: CCDANCTR-Studies and CCDANCTR-References searched on 21/10/2005, The Cochrane Central Register of Controlled Trials, Medline (1966 to January 2005), EMBASE (1980 to January 2005), Psycinfo (1974 to January 2005). Reference lists of articles were also searched. Handsearches of relevant journals and bibliographies were conducted and first authors of included studies and experts in the field were contacted for further information.

Selection criteria

Included studies were randomised controlled and controlled clinical trials comparing family therapy with no intervention or an alternative intervention in which depression symptomatology was a main outcome measure.

Data collection and analysis

Methodological quality was independently assessed by two review authors using the Maastricht-Amsterdam Criteria List. The qualitative and quantitative characteristics of the selected trials were independently extracted by three review authors using a standardised data extraction form. Levels of evidence were used to determine the strength of the evidence available. It was not possible to perform meta-analyses because of the heterogeneity of the selected studies.

Main results

Three high-quality and three low-quality studies, involving 519 people with depression, were identified. The studies were very heterogeneous in terms of interventions, participants, and measuring instruments. Despite fairly good methodological quality and positive findings of some studies, evidence for the effectiveness of family therapy for depression did not exceed level 3 (limited or conflicting evidence), except for moderate evidence (level 2), based on the non-combined findings from three studies, indicating that family therapy is more effective than no treatment or waiting list condition on decreasing depression, and on increasing family functioning.

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Authors' conclusions

The current evidence base is too heterogeneous and sparse to draw conclusions on the overall effectiveness of family therapy in the treatment of depression. At this point, use of psychological interventions for the treatment of depression for which there is already an evidence-base would seem to be preferable to family therapy. Further high quality trials examining the effectiveness and comparative effectiveness of explicitly defined forms of family therapy are required.

PLAIN LANGUAGE SUMMARY

Family therapy for depression

This review looks at whether family therapy is an effective intervention in treating people of any age with depression. Family therapy for depression is widely used, especially in the United Kingdom and the United States. The small number of randomised controlled trials included in the review were very heterogeneous, and therefore difficult to synthesise. Family therapy seems more effective than no treatment or being placed on a waiting list, but it remains unclear how effective this intervention is in comparison to other interventions. Further randomised controlled trials are needed.

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BACKGROUND

Description of the condition

Major depression is one of the most common psychiatric illnesses, both in the United States and in Europe (Bijl 1998; ESEMeD 2004a; ESEMeD 2004b; Kessler 1994). Characteristics of depression include dysphoria, loss of interest in normally enjoyable activities, impaired concentration and memory difficulties, and feelings of worthlessness, often associated with suicidal ideation. Physical symptoms such as sleep disturbance, weight change, fatigue and anxiety may occur simultaneously (Hays 1995).

The Global Burden of Disease Study by the World Health Organisation reports that psychiatric illness accounts for over 15% of the burden of disease in established market economies (Murray 1996). The point prevalence of current major depression and dysthymia in various European countries (Belgium, France, Germany, Italy, the Netherlands and Spain) is 3.9% and 1.1%, respectively. The lifetime prevalence rates for major depression and dysthymia are 12.8% and 4.1%, respectively (ESEMeD 2004a; ESEMeD 2004b). These rates show that depression is a public health issue of considerable magnitude. Not only is the individual who is diagnosed with depression faced with distress and impairment in many domains of functioning, depression may also cause major suffering for the families of depressive individuals (Hays 1995). Aside from the individual consequences of depression, evidence from both the United Kingdom (Kind 1993) as well as in the United States (Berto 2000; Greenberg 2004; Wang 2003) indicates direct costs in terms of treatment and indirect costs in terms of lost work days and premature mortality are also high.

Description of interventions for depression

In view of the high prevalence of depression and the significant public health impact associated with this condition, it is important to identify effective and cost-effective treatments for depression. Individuals who receive treatment for their depressive symptoms are currently treated with antidepressants, psychotherapy, or a combination of both. Although there is evidence of effectiveness for antidepressants, psychotherapy is more popular with patients, and a number of different types of psychological therapies are available, including cognitive behaviour therapy, interpersonal therapy, brief psychotherapy, and counselling. All these therapies have shown to be effective in the treatment of common mental disorders (Hammen 1997). Cognitive behaviour therapy has shown to be most effective in alleviating depressive symptoms when compared with psychodynamic therapy, interpersonal therapy and supportive therapy (Churchill 2001). Nevertheless, in all therapies, about 40 % of the patients who are suffering from depression do not respond to treatment (AHCPR 1993).

How the intervention might work

In most psychological therapies, the system in which an individual lives is not taken into account. However, there is a small, but convincing, body of empirical evidence for the relationship between the characteristics of the system in which an individual lives and the onset and continuation of depressive disorders (Gotlib 1995; Gotlib 2002). Individuals suffering from depression often report significant problems in multiple areas of their family functioning, suggesting the need for a more family-oriented approach such as family therapy, or combinations of family therapy with individual psychotherapy and pharmacotherapy in the treatment of depression (Keitner 2003).

Family therapy may be defined as any psychotherapeutic endeavour that explicitly focuses on altering interactions between or among family members and seeks to improve the functioning of the family as a unit, or its subsystems, and/or the functioning of the individual members of the family (Cottrell 2002). The goal of family therapy for depression is working with participants and their family to disengage from destructive forms of communication, and through that process, to reduce the symptoms of depression. Therefore, the primary outcome in trials is not always the reduction of depression in the patient.

There are several family-oriented treatment traditions. Psychoeducational models focus on altering negative attributions about patient illness, teaching coping skills, and providing support to patient and family (Diamond 2001). Behavioural models are based on learning theory and operant conditioning. They typically focus on the parent or parent-child dyad and seek to improve skills by teaching about behavioural contingencies and reinforcement (Diamond 2001). Object relations family therapy is a form of psychoanalytic therapy in which marital and family relationships are considered in terms of the projection of internalised infant-parent patterns onto contemporary adult relationships. The therapist takes a position of containment and comments on replication of patterns and working through toward a more complete integrated and realistic perspective (Cottrell 2002).

Systemic models view dysfunctional family relationships as causing or reinforcing symptoms. Consequently, systems therapists attempt to restructure maladaptive patterns of family interaction, such as re-establishing parental hierarchy, detriangulating a child from parental conflicts, and adjusting weak or rigid boundaries (Diamond 2001). (Cottrell 2002). In structural family therapy, problems are viewed to result from inappropriate family structure and organisation. The therapist is concerned with the boundaries between subsystems and takes responsibility for the direction in which she or he pushes the family by the intentional use of commands, directions, and suggestions (Cottrell 2002). In post-Milan family therapies, the emphasis is on communication and learning. Problems arise from limitations in alternatives. The therapy focuses on a process of posing questions that would facilitate different connections (Cottrell 2002). Solution-focused family therapy suggests that problems are maintained by the way difficulties are viewed and by the repetitive behavioural sequences surrounding attempts to solve them. The task for the therapist is to develop knowledge of the client's strengths and solutions to other problems and then set about the process of applying these to the particular problem at hand (Cottrell 2002). In White's narrative therapy, the therapist looks for unique outcomes and positive exceptions to the problematic story, and amplifies change by use of letter writing, specific audiences and personal enthusiasm. The problem recedes to relative insignificance as a more positive account of the individual emerges (Cottrell 2002). The depressive individual and his or her family members are involved in family therapy and all attend at least part of the sessions.

Why it is important to do this review

Family therapy is often used in the treatment of conduct disorders, substance misuse, eating disorders and depression. It has become a widely used intervention in child and adolescent mental health services over the last twenty years in the United States (Cottrell 2002). Several reviews on family therapy have been conducted previously (Asarnow 2001; Cottrell 2002; Cottrell 2003; Curry 2001; Di-

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amond 1996; Diamond 2001; Gillham 2000; Kaslow 1994; Sherrill 2004). These reviews show that little research has been conducted on the efficacy of family therapy for the treatment of depression, and that the available evidence for the efficacy of this intervention is heterogeneous. However, to date, no systematic review has been undertaken in this area. In this systematic review, we examined the effectiveness of any type of family therapy for the treatment of depression.

OBJECTIVES

The main objective of this review was to determine the efficacy of family therapy in the treatment of depressive symptoms.
The specific objectives of this review were:
1) To examine the efficacy of family therapy for depression in comparison with no treatment or waiting list conditions
2) To examine the efficacy of family therapy for depression in comparison with treatment with antidepressants for depression
3) To examine the efficacy of family therapy for depression in comparison with other psychotherapies for depression
4) To examine the efficacy of family therapy for depression in comparison with other forms of treatment in combination with family therapy
5) To examine the efficacy of categories of family therapy versus one another.

METHODS

Criteria for considering studies for this review

Types of studies

This review included randomised controlled trials or controlled clinical trials, published or unpublished.

Types of participants

Trial participants were both male and female, with no age restrictions.

For the purposes of reducing clinical heterogeneity, it might have been preferable to limit inclusion based on whether studies had used formal diagnostic criteria to recruit their subjects. However, since individuals with depressive symptoms do not always meet formal diagnostic criteria, but can still experience major problems in family functioning that might benefit from family therapy, we chose to include studies involving participants meeting a diagnosis of major depression disorder (according to standardised criteria, such as DSM-III, DSM-IV or ICD-10) as well as studies involving participants experiencing depressive symptoms.

In this review, 'family' was defined as the nuclear family, consisting of one or two parents and children. The family members did not have to be biologically-related, for instance, parents could be foster-parents. At least one family member had to be identified as having depressive symptoms. The identified family member could be any member of the nuclear family.

Types of interventions

Different types of family therapy (psychoeducational, behavioural, object relations, solution-focused and systemic models, to include structural and post-Milan approaches) were eligible for inclusion in this review. Interventions had to meet the following criteria:

1) The family intervention consists of several phases -assessment, psychoeducation, improving functioning in several areas (cognitive, affective, interpersonal and adaptive behaviour) by cognitive, behavioural and/or systemic approaches and feedback, and closure
2) The intervention must be explicitly delivered by at least one experienced clinician or a trained therapist.
3) The majority of the sessions within the family treatment should be attended by the participant and (all or part of) the family members or primary caregivers.
4) The family intervention should consist of a minimum of six sessions, with a length of at least one hour.

Studies were excluded if the family intervention described was a therapy in which multiple families were treated in a group therapy.

For the purposes of comparing different types of family therapy, when sufficient studies were available, interventions were also categorised as follows:
1) Behavioural (including psychoeducation)
2) Psychodynamic (including object relations)
3) Systemic (including structural, post-Milan)

The eligible studies involved comparisons of family therapy with any comparison, whether it was no treatment or a waiting list condition, any structured individual or group psychological treatment (for example, cognitive behaviour therapy, social skills training, interpersonal psychotherapy), antidepressant therapy, or both.

Types of outcome measures

Primary outcome
1) The primary outcome measure in this review was depression symptom levels. This is usually measured using a range of rating scales, for example, self rating scales such as the Beck Depression Inventory (BDI) (Beck 1961) and clinician-rated scales, such as the Hamilton Rating Scales for Depression (HRSD) (Hamilton 1960).

Secondary Outcomes
Other important outcomes assessed if available in included trials:
2) family functioning
3) other symptoms (eg hopelessness, suicidal ideation, anxiety)
4) behaviour and functioning.
5) other outcomes (eg social support, expectancies of treatment, quality of life)

For overall improvement and improvement of symptoms of depression, both results at the end of treatment and results at follow-up were taken into consideration.

Search methods for identification of studies

Electronic bibliographic databases
The Cochrane Collaboration Depression Anxiety and Neurosis group Controlled Trials Register (CCDANCTR) - Studies was searched - 21/10/2005 - using the following terms:
Diagnosis = Depress* or Dysthymi* or "Adjustment Disorder*" or "Mood Disorder*" or Affective
and
Intervention = Family

CCDANCTR-References was searched - 21/10/2005 - using the following terms:

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Keyword = Depress* or Dysthymi* or "Adjustment Disorder*" or "Mood Disorder*" or Affective
and
Free-text = Family

To supplement the results from the CCDANCTR and CENTRAL the databases MEDLINE (1966 onwards), EMBASE (1980 onwards) and PsycINFO (1974) were also searched using the above terms.

Handsearching
Psychiatric journals identified as being likely to contain RCTs of family therapy for depression were handsearched to identify relevant articles with references to randomisation within the text (Family Process 2003-2004, Journal of Family Therapy 1999-2004).

Bibliographies
References and bibliographies from the text of reports of relevant trials and reviews were examined for further RCTs not yet identified. Social Sciences and Science Citation Index were searched for all included studies.

Personal Communication
The first author on all included studies and experts in the field were contacted for information regarding published and unpublished trials.
Professional associations for family therapy were also identified and contacted.

Grey literature
Grey literature such as conference abstracts/proceedings, government documents and other literature outside of the main journal literature were searched where possible, and the electronic database of Information on Scientific and Technical Proceedings was also explored.

Data collection and analysis

Selection of studies
Two authors (TH and MH) independently screened the abstracts of studies retrieved by the computer-assisted searches. Abstracts of studies identified by citation-tracking or personal communication were also screened by both TH and MH. The inclusion criteria were used to determine whether studies were eligible, and full articles were then obtained from these studies. Any disagreements between TH and MH about the selection of studies were resolved through discussion between TH and MH, and a third author (JR). Thus, the final selection of studies was established.

Data extraction
Three review authors (TH, JR, and KR) independently extracted qualitative and quantitative data from the selected studies using a standardised data extraction sheet. Disagreement between TH and JR, and between TH and KR, was resolved through discussion between the three authors and a fourth review author (MH).

For each study, information was recorded on the study population, interventions, randomisation and blinding procedures, sample size, patient follow-up, statistical analyses, outcome data, follow-up, discussion and conclusions (this was a summary of recorded information).

Obtaining unpublished data for the included trials
Attempts were made to obtain data which were not included in published reports. The first author of each study was contacted through dissemination of a standard letter explaining the purposes of the review and the reasons for requesting the additional unreported data. If no usable information was forthcoming, the study would nevertheless contribute to the meta-analysis.

Methodological assessment of the quality of included trials
Qualitative and quantitative data were extracted relating to the internal validity (the extent to which trials measured what they purported to measure), study power (to establish the likelihood of random errors), and external validity (the extent to which the results are generalisable or applicable to clinical practice). This was done independently by TH and MH using the Maastricht-Amsterdam Criteria List (MACL) (Van Tulder 1997). JR was involved in rating methodological quality if disagreement occurred between TH and MH. Accordingly, review authors were allowed to adjust their score assignments. If additional information on study characteristics was provided by authors on request, this information was used in the scoring of the MACL items. If studies met all inclusion criteria, they were not excluded solely on the basis of their methodological quality.

The MACL was originally developed in the field of muscular-skeletal disorders, but is considered to produce disease non-specific quality ratings. The MACL also incorporates all criteria of other prominent quality scales, such as the Jadad List (Jadad 1996) and the Delphi List (Verhagen 1998). The MACL contains 17 items to assess internal validity (e.g. selection bias, performance bias, attrition bias and detection bias, ten items), external validity (descriptive criteria, 5 items) and statistical aspects (2 items) (see Table 1 for list of items). The total score on the MACL ranges from 0 to 17. To prevent different interpretations of study characteristics between review authors, each item of the MACL was explained in a separate appendix that provided uniform operationalisations of the criteria.

Data synthesis
The selected studies were very heterogeneous in types of interventions, types of complaints, study population and outcomes measures, and therefore meta-analyses were not performed. Findings were reported narratively. Review Manager software was used to summarise the findings.

Levels of evidence
For a more qualitative approach to synthesise the findings from included studies, so-called 'levels of evidence' were used (Ostelo 2002; Van Tulder 1997; Van Tulder 2001). This method of rating evidence enables authors of systematic reviews to summarise the strength of scientific evidence. We classified results of studies with comparable interventions and sufficiently comparable outcome measures according to one of four levels:

1. Good evidence - provided by generally consistent findings in two or more high-quality studies
2. Moderate evidence - provided by generally consistent findings in one high-quality study and one or more low-quality studies, or by generally consistent findings in two or more low-quality studies
3. Limited or conflicting evidence - only one study (either high or low quality), or inconsistent findings in two or more studies
4. No evidence - no studies.

Each item of the MACL was scored as 'positive'(+), 'negative' (-) or 'unclear' (?). A positive score on items 2 to 10 was accredited one point, while a negative or unclear point was accredited no points.

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Item 1 consisted of 1a and 1b: positive scores on these items were accredited 0.5 points each.

High quality studies were defined as studies that fulfilled 5 or more of the 10 MACL internal validity items (range 0-10). Low quality was defined as scoring less than 5 points on the 10 MACL internal validity items.

Generally consistent findings were defined as 75% or more of the studies having statistically significant findings in the same direction.

Methods for future updates

In future updates of this review, meta-analyses will be performed where more than two studies report data on a particular outcome for a clinically comparable intervention with a similar follow-up period. Analyses will be performed using the following methodology:

Measures of treatment effect

For binary outcomes, relative risk (RR) with 95% confidence intervals will be calculated. For continuous outcomes, the weighted mean difference (WMD) with 95% confidence intervals will be calculated where the same instrument has been used across studies, and the standardised mean difference (SMD) will be used where different scales have been used to measure the same outcome.

In the first instance, the fixed-effect model will be used. The random-effects model will be used to test the robustness of the findings. The random-effects model will be used where statistical heterogeneity is observed.

Assessment of heterogeneity

Formal assessment of heterogeneity will be conducted using the chi-squared test and I^2 test. A chi-squared value of less than 0.10 and an I^2 value of greater than 50% will be interpreted as significant heterogeneity.

Dealing with missing data

For binary outcomes, intention to treat (ITT) analysis will be used, in which it is assumed that all dropouts had negative outcomes. For continuous outcomes, available case analysis will be used. Missing statistics, such as standard deviations, will be obtained from trial authors where possible, or calculated from available data.

Subgroup analyses and investigation of heterogeneity

The following subgroup analyses will be performed:
Severity of depression
Clinical setting
Child/adolescents vs adults diagnosed with depression

Where statistical heterogeneity is present, subgroup analyses will be conducted to examine clinical heterogeneity

Sensitivity analyses

Sensitivity analysis will be conducted to assess the robustness of the findings. Where statistical heterogeneity is observed, sensitivity analyses will be conducted to examine methodological heterogeneity, through excluding lower quality studies from analyses.

Publication bias

Data from all selected trials will be entered into a funnel plot to investigate publication bias.

RESULTS

Description of studies

Selection of studies

The computer-assisted searches of databases yielded 13 studies in CCDANTR-studies and 85 references in CCDANTR-references. Of these, 29 full-text articles were retrieved, based on title and abstract, and were screened for eligibility. A further 14 articles were identified through citation tracking or personal communication, and were retrieved for further screening. Of these 43 full-text articles, 30 were selected for additional reading.

Seven authors were contacted for additional information or unpublished data, and five authors responded to our requests. This process resulted in six studies (21 articles) that met eligibility criteria and were included in the review (see 'Characteristics of included studies' table). Fourteen studies (19 articles) were excluded from the review (see 'Characteristics of excluded studies' table). The results from one study have not been published yet, and will be assessed at a later date (Campbell 2003).

Excluded studies

Fourteen studies did not meet our inclusion criteria (see 'Characteristics of excluded studies' table). Four studies were aimed at prevention of depression and therefore depression was not an important outcome measure (Beardslee 1993; Butler 2000; Cicchetti 1999; Sandler 2003). In the study by Anderson 1986, the intervention was only one 4-hour session, instead of the minimum of six one-hour sessions. In the study by Asarnow 2002, the intervention was not aimed at the entire system. The intervention used by Brodaty 1983 did not appear to be family therapy. In two studies, the outcome measures did not include depression symptom levels (Eisdorfer 2003; Solomon 1996). In the study of Friedman 1975, the intervention was marital therapy. Fristad 2002 used a multi-family therapy intervention. The study by Podorefsky 2001 was not a randomised controlled or a controlled clinical trial. Sherrill 1997 used a single-session workshop as the intervention, while in Uebelacker 2004, the outcome measures of different treatment arms were unknown.

Included studies

Six studies met the inclusion criteria, the most important characteristics and outcomes of which were summarised in the 'Characteristics of included studies' table. The studies were published in eight journals (Archives of General Psychiatry, Journal of the American Academy of Child and Adolescent Psychiatry, Journal of Consulting & Clinical Psychology, Hospital and Community Psychiatry, American Journal of Psychiatry, Journal of Affective Disorders, Behaviour Therapy, and the American Journal of Community Psychology), and were written in English.

Characteristics of individual studies

In an RCT by Brent 1997, 107 adolescent participants with DSM-III-R major depressive disorder and their parents were randomised to receive individual cognitive behaviour therapy (CBT), or systemic behaviour family therapy (SBFT) (Brent 1996), with an attempt to control for therapist exposure by offering individual nondirective supportive therapy (NST) as a control condition. The treatment period covered 12 to 16 weeks, with a boosterphase of two to four sessions in as many months. Participants received an average of 11 sessions. Outcomes were measured at intake, at the sixth session, at the end of treatment, at one year follow-up, and 24 months after treatment

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ended. In this study, predetermined criteria were set for a successful outcome which was of clinical relevance.

In an RCT by Diamond 2002, 32 adolescent participants with DSM-III-R major depressive disorder and their primary caretakers were randomised to receive attachment-based family therapy (ABFT) (Diamond 1995), or a waiting list control condition. The duration of the treatment period is 12 weeks. Participants received an average of 8 sessions. Outcomes were measured at intake, mid-treatment (after six weeks), post-treatment (after 12 weeks), and six months' post-treatment. Outcome measures included measures for family functioning, and anxiety for children.

In an RCT by Glick 1985, 169 adult inpatients with schizophrenic disorder, schizophreniform disorder, major affective disorder, and a subgroup meeting other DSM-III axis I diagnoses and their families were randomised. 50 participants in this trial were subgrouped in the group for affective disorders, of whom 29 met criteria for a unipolar depression. These participants received a psychoeducational inpatient family intervention (Glick 1985; Haas 1988) or a comparison treatment, in which the participants were offered treatment as usual, which was among other things individual psychotherapy. Treatment duration was eight weeks. Participants received an average of nine sessions. Outcomes were measured at admission, at discharge, at six months follow-up, and at 18 months follow-up. Outcome measures included family attitude, and role performance.

In an RCT by Miller 2004, 92 adult participants who met criteria for current bipolar I disorder (of which 18 patients met criteria for unipolar depression: data for this subgroup was reported separately) and their family members were randomised to receive family therapy (Miller 2004; Epstein 1990) and pharmacotherapy, psychoeducational group therapy and pharmacotherapy, or pharmacotherapy alone. The length of the RCT is 10 weeks. Participants received six to 10 sessions of family therapy. Outcomes were measured at intake and monthly thereafter. The period of follow-up measurements was 28 months. Predetermined criteria for a successful outcome which was of clinical relevance were set.

In an RCT by Sanders 2000, 47 families with mothers with DSM-IV major depressive disorder, who had children aged between 3 and 9 years old, meeting DSM-IV criteria for either conduct disorder or oppositional-defiant disorder were randomised to receive behavioural family intervention (BFI) (Sanders 2000; Sanders 1993), or cognitive behavioural family intervention (CBFI) (Sanders 2000; Sanders 1993). The period of intervention was 12 weeks. Participants received 12 sessions. Outcomes were measured at baseline, post-treatment and at 6 months follow-up. Outcome measures included cognitive scales, measurements on child behaviour, and perceived social support.

In an RCT by Sandler 1992, 72 surviving spouses of individuals aged 25-50 who had died within the prior two years, with at east one child aged 7-17 years were randomised to receive a family bereavement program (Sandler 1988; West 1991), or a waiting list control condition. Depressive symptoms were measured in the participating children. The length of the RCT was 15 weeks. Participants received three sessions of grief workshop and 12 sessions in the adviser program. Outcomes were measured at intake, and post-treatment. There were no follow-up measurements. Several measures of family characteristics were included, such as family coping, discussion of grief-related issues, and family cohesion.

Overall characteristics of included studies

Five of the included studies were conducted in the United States and one in Australia (Sanders 2000). In four of the studies, outpatients were included (Brent 1997; Diamond 2002; Sanders 2000; Sandler 1992), and in two studies inpatients were included (Glick 1985; Miller 2004). Two studies focused on adolescent participants (Brent 1997; Diamond 2002), one on children (Sandler 1992), and three on adult participants (Glick 1985; Miller 2004; Sanders 2000). The number of participants included varied from 32 (Diamond 2002) to 169 (Glick 1985).

The length of included studies varied from eight (Glick 1985) to 15 weeks (Sandler 1992). Participants received eight (Diamond 2002) to 15 sessions (Sandler 1992) of family intervention. All included studies measured outcomes at intake, three studies measured outcomes during the intervention (Brent 1997; Diamond 2002; Miller 2004), and five studies measured outcomes post-treatment (Brent 1997; Diamond 2002; Glick 1985; Sanders 2000; Sandler 1992). The range of follow-up measurements was no follow-up measurements (Sandler 1992) to follow-up at 28 months (Miller 2004). The types of family therapy offered to the participants in the trials were different in all included studies.

Risk of bias in included studies

Three studies (Brent 1997; Glick 1985; Sanders 2000) were of high methodological quality (five points or more out of ten items on internal validity) and three studies (Diamond 2002; Miller 2004; Sandler 1992) had a low methodological quality (less than five points out of ten items on internal validity). Scores on individual items of the MACL for the trials are presented in an additional table 'Quality assessment: internal validity items (MACL) and scores on MACL' (Table 1).

It is not possible to blind participants or care providers in studies of this nature. In one study there was no concealment of treatment allocation (Brent 1997), and in all the others it was unclear whether or not concealment of treatment allocation was used.

In three studies, information on the avoidance or comparability of co-interventions was poor (Diamond 2002; Miller 2004; Sandler 1992), and in the other three studies co-interventions were avoided or comparable (Brent 1997; Glick 1985; Sandler 1992).

Acceptable compliance of participants, which is an indication of the acceptability of the treatment to participants, was achieved in four studies (Brent 1997; Glick 1985; Miller 2004; Sanders 2000), while withdrawal rates were acceptable in three studies (Brent 1997; Glick 1985; Sanders 2000). The latter is of particular concern since unacceptable withdrawal/dropout rates, especially due to selective withdrawal, represent a major threat to the validity of the results.

In five studies (Brent 1997; Diamond 2002; Glick 1985; Miller 2004, Sanders 2000), adverse events were not described. In the study of Sandler 1992, it was unclear if adverse events were described.

In general, it should be noted that all studies reported well on the supervision and training of therapists during the trial. In only two studies, it was clear that therapists had worked with treatment manuals (Brent 1997; Sanders 2000). The same two studies performed integrity checks. In all studies, it remained unclear if therapists were licensed or registered family therapists.

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The nature of usual care (the exact care participants received) was clearly described in all studies. Four studies reported subgroup analyses or prognostic analyses (Brent 1997; Glick 1985; Sanders 2000; Sandler 1992). In two studies (Brent 1997; Glick 1985), subgroups were similar at baseline regarding the most important prognostic indicators. In the study of Sanders 2000, subgroups were not similar at baseline. In the study of Sandler 1992, it was unclear if subgroups were similar at baseline.

Effects of interventions

The six included studies investigated different interventions, different participants, and different outcomes. For this reason, findings from the studies were reported individually, and no attempt was made to integrate the data in meta-analyses. An overview of the results of included studies is presented in the 'Characteristics of included studies' table. The findings of these studies for the main outcomes of interest are described below. Since the six studies used a diverse range of outcomes and outcome measures, outcome data from each individual study are not reported.

For the purposes of the current version of the review, the findings are organised by type of outcome measure. When additional studies with combinable data are included in updated versions of the review, the results will be organised by treatment comparison.

1. Depression symptom levels
The principal outcome measure used by the six studies in this review was depression symptom levels.

Attachment-based family therapy versus waitlist condition
In a low-quality study by Diamond 2002, over 80% of adolescents treated with ABFT no longer met criteria for major depression at post-treatment, against nearly 50% of adolescents in the waiting list condition. At 6-month follow-up, 15 out of the 24 participants (from a sample of the subgroup that had received treatment, combined with the subgroup that at first was put in a waiting list condition, but later had also received treatment) treated with ABFT were assessed, of whom 13 (87%) did not meet criteria for major depression.

Family bereavement program versus waitlist condition
In a low-quality study by Sandler 1992, there were significant improvements for older children who received the family bereavement program on depression.

Psychoeducational inpatient family intervention versus treatment as usual
In a high-quality study by Glick 1985, female participants who received an inpatient family intervention compared with those in the comparison group (who received standard hospital treatment; a full range of diagnostic services and drugs plus individual, group and milieu therapies), were doing significantly better at time of discharge from hospital on measures of depression symptomatology. Males were little affected by treatment assignment. At both 6 and 18 months, bipolar patients who received an inpatient family intervention showed a better outcome (female patients only), in contrast with unipolar patients, where those who did not receive the intervention showed a better outcome (both sexes). The positive effect of inpatient family intervention on females in the overall group of affective disorders at discharge was attenuated over time; a negative effect on males became evident at 18 months.

Individual cognitive behaviour therapy versus systemic behaviour family therapy
In a high-quality study by Brent 1997, individual cognitive behaviour therapy was superior to systemic behaviour family therapy at post-treatment self-reported depressive symptoms, and remission rate. At one year and two year follow-up, no significant differences were seen in rates of major depression between groups.

Cognitive behavioural family intervention versus behavioural family intervention
In a high-quality study by Sanders 2000, mothers in both the cognitive behavioural family intervention group (CBFI) and the behavioural family intervention group (BFI) reported significantly less depression at post-intervention. When comparing pre-intervention to 6-month follow-up, mothers in both conditions showed less depression at follow-up. At follow-up, more mothers in the CBFI condition had depression within the functional range than mothers in the BFI condition. At 6 months follow-up, more families in the CBFI group experienced a concurrent clinically reliable reduction in maternal depression.

Family therapy and pharmacotherapy versus multifamily group therapy and pharmacotherapy versus pharmacotherapy
The results of a low-quality study by Miller 2004 suggest that neither adjunctive family therapy nor adjunctive multifamily group therapy significantly improved recovery from bipolar I mood episodes, compared to pharmacotherapy alone. However, Miller 2004 stated that the sample size for participants with major depression at intake (n = 18) was not large enough to determine whether there was a significantly different response to the randomly assigned treatments for this group.

Levels of evidence for depression symptom levels
There is moderate evidence (level 2) that family therapy is more effective than no treatment or waiting list condition on depression (Diamond 2002; Sandler 1992). There is limited evidence (level 3) that inpatient family intervention is less effective than treatment as usual for patients with unipolar depression (Glick 1985). There is limited evidence (level 3) that family therapy is less effective than individual cognitive behaviour therapy for depression (Brent 1997). There is limited evidence (level 3) that cognitive behaviour family therapy is equally effective as behaviour family therapy in treating depression (Sanders 2000). There is limited (level 3) evidence that family therapy and pharmacotherapy are equally effective as multifamily group therapy and pharmacotherapy, and pharmacotherapy alone for depression (Miller 2004).

2. Family functioning
Five of the six trials included in the review measured the effects of the interventions on family functioning.

Attachment-based family therapy versus waitlist condition
In a low-quality study by Diamond 2002, participants receiving ABFT reported significantly less family conflict post-treatment than participants in the waiting list group. Furthermore, adolescents treated with ABFT reported significantly higher levels of attachment to their mothers.

Family bereavement program versus waitlist condition
The family bereavement program in a low-quality study by Sandler 1992 increased parental reports of the warmth of their relationship with their children relative to the control group. Parents in the control group reported a greater decrease in discussion of grief-related

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issues in time than did parents in the treatment group. Significant decreases in the occurrence of negative events were reported for younger children in the control group, and marginal decreases of negative events were reported for older children in the treatment program.

Psychoeducational inpatient family intervention versus treatment as usual

The results from a high-quality study by Glick 1985 showed that family attitude toward treatment was significantly better in inpatient family intervention females than in comparison females, whereas family attitude toward the participant was significantly better in males who received the comparison treatment than in males who received inpatient family intervention.

Individual cognitive behaviour therapy versus systemic behaviour family therapy

In a high-quality study by Brent 1997, results suggested that systemic behaviour family therapy decreased family conflict and parent-child relationship problems more than individual cognitive behaviour therapy did.

Cognitive behavioural family intervention versus behavioural family intervention

Sanders 2000 found that mothers in both the CBFI and BFI condition reported greater competence, and less child problem behaviour at post than pre-intervention. Fathers reported more parenting competence at post-intervention. Children in both conditions showed significantly less negative behaviour at follow-up than at pre-intervention.

Levels of evidence for family functioning

There is moderate (level 2) evidence that family therapy is more effective than no treatment or waiting list condition on increasing family functioning measures, such as family conflict, attachment to mother (Diamond 2002) and warmth of parents' relationships with their children (Sandler 1992). There is limited evidence (level 3) that family therapy is more effective than treatment as usual in improving family attitude toward treatment in female patients (Glick 1985). There is limited evidence (level 3) that family therapy is less effective than treatment as usual in improving family attitude toward the patient in male patients (Glick 1985). There is limited evidence (level 3) that family therapy is more effective than individual cognitive behaviour therapy in decreasing family conflict, and parent-child relationship problems (Brent 1997). There is limited evidence (level 3) that cognitive behaviour family therapy is equally effective as behaviour family therapy in improving family functioning (Sanders 2000).

3. Other symptoms

Three studies included outcomes on symptoms other than depression

Attachment-based family therapy versus waitlist condition

In a low-quality study by Diamond (Diamond 2002), adolescents treated with ABFT reported significantly lower levels of hopelessness at post-treatment compared with participants at the end of the waiting list period. Participants receiving ABFT reported significantly lower levels of trait anxiety and suicidal ideation at post-treatment than did participants in the waiting list group at post-waiting list.

Family bereavement program versus waitlist condition

In a low-quality study by Sandler (Sandler 1992), there were significant improvements for older children who received the family bereavement program on conduct disorder problems. Younger children in the comparison group showed significant improvement over time on the measure of conduct disorder.

Individual cognitive behaviour therapy versus systemic behaviour family therapy

In a high-quality study by Brent (Brent 1997), there was no significant difference among the treatment groups for their effect on suicidality, although there were significant decreases in suicidality across all groups.

Levels of evidence for other symptoms

There is limited evidence (level 3) that family therapy is more effective than no treatment or waiting list condition on feelings of hopelessness, trait anxiety and suicidal ideation (Diamond 2002). There is limited evidence (level 3) that family therapy is more effective than no treatment or waiting list condition (for older children) on conduct disorder problems (Sandler 1992). There is limited (level 3) evidence that family therapy is equally effective as individual cognitive behaviour therapy in the prevention of suicide (Brent 1997).

4. Behaviour and functioning

Three studies included behaviour and functioning outcomes.

Psychoeducational inpatient family intervention versus treatment as usual

In a high-quality study by Glick (Glick 1985), female participants who received inpatient family intervention, as compared to those in the comparison group, were doing significantly better at time of discharge from hospital on measures of global functioning.

Individual cognitive behaviour therapy versus systemic behaviour family therapy

In a high-quality study by Brent (Brent 1997), there was an overall improvement in functional status in all treatment groups, but there were no group differences in functional status.

Cognitive behavioural family intervention versusbehavioural family intervention

In a high-quality study by Sanders (Sanders 2000), significantly more families in the CBFI condition than in the BFI condition moved into the functional range of Parent Daily Report measures at post-intervention, and there was a similar trend at follow-up.

Levels of evidence for behaviour and functioning

There is limited evidence (level 3) that family therapy is more effective than treatment as usual in females on measures of global functioning (Glick 1985). There is limited (level 3) evidence that family therapy is equally effective as individual cognitive behaviour therapy, and nondirective supportive therapy on functional status (Brent 1997). There is limited (level 3) evidence that cognitive behaviour family therapy is more effective than behaviour family therapy in improving problematic behaviour in children (Sanders 2000).

5. Other outcomes

Three studies included other outcomes in addition to symptomatology, behaviour and functioning.

Family bereavement program versus waitlist condition

Sandler 1992 found that parents in the family bereavement program reported increased satisfaction with their social support relative to parents in the control group.

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Individual cognitive behaviour therapy versus systemic behaviour family therapy

Brent 1997 found no differences among the groups in parent- or patient-rated treatment expectancies at intake. Parents' views of treatment credibility improved though over time in CBT relative to SBFT and NST. They also found that the prognosis for patients who responded rapidly to treatment was better than the prognosis for participants who initially did not respond to treatment and participants who intermediately responded.

Cognitive behavioural family intervention versus behavioural family intervention

In a high-quality trial by Sanders 2000, mothers in both BFI as well as CBFI conditions reported greater support at post-intervention and at follow-up than at pre-intervention.

Levels of evidence for other outcomes

There is limited evidence (level 3) that family therapy is more effective than no treatment or waiting list condition on satisfaction with social support (Sandler 1992). There is limited evidence (level 3) that cognitive behaviour family therapy is equally effective as behaviour family therapy on quality of life measures, such as perceived social support (Sanders 2000).

DISCUSSION

Summary of main findings

The main objective was to provide a systematic review of the available evidence on the effects of family therapy for depression. Six studies were selected on a priori determined criteria. These studies were largely non-combinable from several aspects, including intervention (participants were treated from very different approaches such as cognitive, behavioural, systemic, psychoeducational or other more unfamiliar theories of family therapy intervention), participants (adults, adolescents and children), and the disorder (measurement instruments). Therefore, results could not be pooled or classified into a single 'level of evidence'. Consequently, an overall conclusion concerning the effectiveness of family therapy for depression could not be drawn.

Despite the existence of some good quality studies and some positive findings, evidence for the effectiveness of family therapy for depression does not exceed level 3 (limited or conflicting evidence), except for moderate evidence (level 2) that family therapy is more effective than no treatment or waiting list condition in reducing depression levels and in increasing family functioning. It should be noted that good evidence (two or more high quality trials with consistent findings) could not be established.

Of all studies conducted on family therapy, only a small number met our inclusion criteria, and the trials that were included were mutually divergent. The inclusion criteria were stringent in terms of criteria related to methodology and reducing the risk of bias, but this is essential to obtain an unbiased evaluation of any treatment. Although well-defined, stringent inclusion criteria in systematic reviews increase the validity of any conclusions that can be drawn, they can, as in this review, limit the scope of findings.

Quality of the evidence

Three of the six included studies were of high methodological quality. The other three studies were of low methodological quality. Often, the low methodological quality was due to incomplete description of the design of the study, but also to randomisation methods, to randomised subgroups that were not similar at baseline, and high attrition rates.

Some deficiencies in published data were identified. Uebelacker 2004 reports results for the same trial described in the article by Miller 2004. In the study by Uebelacker 2004, the same number of participants (n = 92) as described in Miller's article met criteria for unipolar depression, while in the article by Miller, these participants all met criteria for bipolar I disorder. Further clarification on this apparent inconsistency between articles is still awaited.

Previous reviews

Several earlier reviews on the effectiveness of family therapy for depression have been published, none of which were systematic or assessed the methodological quality of included studies (Asarnow 2001; Cottrell 2002; Cottrell 2003; Curry 2001; Diamond 1996; Diamond 2001; Gillham 2000; Kaslow 1994; Sherrill 2004). Most of these reviews describe the effects of family therapy for depressed children and adolescents. Few reviews have included studies with depressed adults. Furthermore, in earlier reviews, small numbers of studies were discussed. The interventions which have been compared in existing studies are diverse in focus, design, length, and procedure.

Given the fact that there is some evidence for the relationship between the characteristics of the system in which an individual lives and the onset and continuation of depressive disorders, and for reciprocal relationships between depression, parenting behaviour, and parenting stress, it seems intuitively obvious that family therapy might be effective. However, as found in this systematic review, almost all previous reviews on the effects of family therapy for depression have concluded that there is too little evidence to draw any conclusions on the effectiveness of this intervention, and more thorough research is needed to determine the effectiveness of family therapy in comparison to other treatments for depression.

Some reviews have suggested that in case of juvenile depression, the participation of parents in the treatment might be essential (Cottrell 2003; Sherrill 2004). Brent 1997 found that parent-child conflict predicted depression relapse of adolescents. They also found that systemic behaviour family therapy decreased family conflict. These are interesting findings, which could be used in future research on family therapy for depression.

Strengths and weaknesses of this review

In this review, we have attempted to provide an overall picture of the evidence on family therapy for depression in a systematic way. Other reviews on family therapy have not used this approach of the available evidence, and this is the first systematic review on the subject of family therapy for depression. The methodological quality of studies was independently assessed by the review authors to increase the internal validity of this review.

In addition, we have linked the assessment of the methodological quality of the included studies to the results by means of the use of levels of evidence. The methodological quality of studies is often assessed in reviews, but in general it is analysed separately from the results which may cause researchers to draw strong conclusions from low-quality trials (Moja 2005).

In summary, we were not able to perform a quantitative meta-analysis in this review, as the six studies each conducted different comparisons. If the results from more high-quality studies become

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available, our estimates of the effectiveness of family therapy for depression may be made more precise through the quantitative synthesis of trial data.

AUTHORS' CONCLUSIONS

Implications for practice

Family therapy seems superior to a waiting list condition or no treatment. However, when the effectiveness of family therapy is compared to the effectiveness of group interventions, individual cognitive or behavioural interventions, it remains unclear whether family therapy is an effective intervention. There is no evidence on the potentially adverse consequences of this sort of intervention.

It should be noted that family therapy is already a widely used intervention for the treatment of depression, in spite of the lack of high-quality evidence in this field. Whilst acknowledging that clinical practice and the results of research do not always correspond, common sense tells us that a family intervention for depression should only be offered to patients on a systematic basis when there is enough high quality evidence to support the effectiveness of the intervention. At this point, therefore, use of psychological interventions for the treatment of depression for which there is already an evidence-base would seem to be preferable to family therapy.

Implications for research

In order to assess the effectiveness of family therapy for depression, more high-quality trials need to be conducted. To date, the efficacy literature is hampered by small sample sizes, variations in methodological quality and non-comparability between the different forms of family therapy, so that general conclusions concerning the effectiveness or ineffectiveness of this intervention can not be made. Based on the findings in this review, several recommendations for future research can be made:

Firstly, it is imperative to explicitly test differing models of family therapy. Family therapy is loosely defined in the literature. This leads to a heterogeneous set of treatments that are all conducted under the umbrella of family therapy.

Secondly, the effectiveness of family therapy should be compared against other evidence-based therapies for depression, such as medication, interpersonal therapy, and cognitive behavioural treatments. It may also be worthwhile examining family therapy as an adjunctive treatment to other psychological interventions.

Thirdly, with increased emphasis in the literature on the design and conduct of high quality treatment trials, there are methodological aspects that appear particularly relevant, including: the requirement for trials to use treatment allocation procedures of high quality; the need for satisfactory blinding of outcome assessment; and the need for follow-up duration to reflect the possibility that family therapy has incremental benefits after the end of formal treatment, a suitable minimum follow-up duration being twelve months after treatment end (Altman 2001). Trials should be designed with the assistance of a health economist, in order to facilitate the gathering of data relevant to the assessment of cost-effectiveness (Fals-Stewart 2005). Furthermore, future RCTs should ideally contain study samples large enough to include several subgroups of patients. The reporting of trials should also accord with agreed high quality criteria (Begg 1996), including a clear description of the design and methods.

Fourthly, therapists in research studies should use manuals to guarantee the highest possible quality and delivery of treatment (Altman 2001). In this way, family therapy for depression can be standardised, and the variety of therapies that are denominated family therapy can be classified. Furthermore, active components of family therapy interventions can be identified, and built upon in further research and practice. In future research, the use of licensed family therapists seems important to assure and improve the quality of the treatments.

Finally, future research studies should focus on the acceptability of family therapy for patients.

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* Indicates the major publication for the study

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CHARACTERISTICS OF STUDIES

Characteristics of included studies *[ordered by study ID]*

Brent 1997

Methods	Methodological quality: high 1. Randomisation method: adequate 2. Dropouts: numbers, and reasons in each group were described; intention-to-treat analysis performed 3. Outcome assessment: a. Assessors: patients are not blinded to treatment status, no self-report b. Measures: clearly defined and valid c. Follow-up duration: appropriate - 24 months after treatment end 4. Baseline characteristics: reported, and comparable 5. Entry criteria: clearly defined
Participants	107 adolescent patients (aged 13-18) with DSM-III-R major depressive disorder, recruited from a child and adolescent mood and anxiety disorder clinic. Inclusions: normal intelligence, living with at least 1 parent/guardian, with an intake BDI>12. Exclusions: psychosis, bipolar I or II disorder, obsessive-compulsive disorder, eating disorder, substance abuse within the past 6 months, ongoing physical or sexual abuse, pregnancy, and chronic medical illness. Number of therapists unknown. Therapists received intensive training for 6 months by manual and were supervised throughout the trial.
Interventions	RCT to compare three conditions. Both experimental and control interventions involved 12-16 weekly sessions of about 1 hour and a boosterphase (2-4 sessions in as many months); family psychoeducation about affective illness and its treatment, and a psychoeducational manual. T1 (n:37) = individual cognitive behaviour therapy - emphasis on collaborative empiricism, socialising the patient to the cognitive therapy model, and the monitoring and modification of automatic thoughts, assumptions and beliefs. T2 (n:35) = systemic behaviour family therapy (SBFT) - extensive socialisation to the treatment model and education about depression, parenting and developmental issues and emphasizes skill building and positive practice in sessions and at home. C (n:35) = individual nondirective supportive therapy (NST) - to establish, maintain, and build rapport, provide support, and aid the patient in affect identification and expression of feelings through reflective listening, provision of accurate empathy, and discussion of patient-initiated options for addressing personal problems.
Outcomes	1. Measures: a. The School Age Schedule for Affective Disorders and Schizophrenia, Present and Lifetime Versions (K-SADS-P/E) b. Beck Depression Inventory (BDI) c. Dichotomous measure of depressive outcome: sustained (at least 3 consecutive sessions) achievement of a BDI score less than 9 (BDI<9) d. Children's Global Assessment Scale (CGAS) 2. Follow-up times Assessments at baseline, 6 weeks, the end of treatment (12 to 16 weeks), every three months thereafter for 1 year, and 24 months after treatment ended. Postintervention: T1 superior to T2 on response time, self-reported symptoms, and remission rate. 1 and 2 years follow-up: no differences in rates of MDD and clinical recovery between groups.
Notes	Non-compliance: T1&T2&C = 12/107 Withdrawal: T1&T2&C = 17/107 Integrity check

Risk of bias

Bias	Authors' judgement	Support for judgement

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Brent 1997 *(Continued)*

Allocation concealment?	Unclear risk	D - Not used

Diamond 2002

Methods	Methodological quality: low 1. Randomisation method: adequate 2. Dropouts: numbers, and reasons in each group were described; intention-to-treat analysis performed 3. Outcome assessment: a. Assessors: patients are not blinded to treatment status, partly self-report b. Measures: clearly defined and valid c. Follow-up duration: appropriate - six months after treatment end 4. Baseline characteristics: reported, and not comparable (discrepancy BDI) 5. Entry criteria: inclusion and exclusion criteria clearly defined
Participants	32 adolescent patients (aged 13-17) with DSM-III-R major depressive disorder, recruited from schools and through parents. Inclusions: had a primary caretaker who was willing to participate in treatment, BDI-score>17. Exclusions: reporting of other problems primary, already receiving antidepressant medication or psychotherapy, reporting of >13 days of substance use in the previous 90 days, needing a higher evel of care or meeting other exclusion criteria. Four doctoral-level and two master's level therapists, who received training and weekly supervision.
Interventions	RCT to compare two conditions. The experimental intervention involved 12 sessions of 60-90 minutes. T(n:16) = attachment-based family therapy (ABFT) - specific treatment tasks; relational reframe task, adolescent alliance-building task, parent alliance-building task, attachment task, promoting task. C(n:16) = waiting list.
Outcomes	1. Measures a. The School Age Schedule for Affective Disorders and Schizophrenia, Present and Lifetime Versions (K-SADS-P/E) b. Hamilton Depression Scale (HAM-D) c. Beck Depression Inventory (BDI) d. Self-Report of Family Functioning (SRFF) e. Inventory of Parent and Peer Attachment f. Beck Hopelessness Scale g. State-Trait Anxiety Inventory for Children: A-trait (STAIC) h. Suicidal Ideation Questionnaire i. Youth Self-Report 2. Follow-up times Assessments on four occasions: at baseline, 6 weeks, 12 weeks, and at follow-up (6 months posttreatment). T superior over C on depression symptom level, trait anxiety, and family conflict.
Notes	Non-compliance: T&C = 4/16 No integrity check

Risk of bias

Bias	Authors' judgement	Support for judgement
Allocation concealment?	Unclear risk	B - Unclear

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Glick 1985

Methods	Methodological quality: high 1. Randomisation method: adequate 2. Dropouts: number, and reasons in each group were described; intention-to-treat analysis performed 3. Outcome assessment: a. Assessors: patients are not blinded to treatment status, partly self-report b. Measures: clearly defined and valid c. Follow-up duration: appropriate - 18 months after treatment end 4. Baseline characteristics: reported, and comparable 5. Entry criteria: clearly defined
Participants	169 inpatients, classified in 4 diagnostic groups: (1) schizophrenic or schizophreniform disorders with good prehospital functioning over the preceding 18 months; (2) schiphrenic or schizophreniform disorders with poor prehospital functioning over the preceding 18 months; (3) major affective disorder (unipolar n=29, bipolar n=21); (4) other DSM-III axis I diagnosis. Patients were recruited from a clinic in New York City. Inclusions: recently admitted to the unit, one or more indications for family intervention, anticipated length of stay in hospital of 21 days or more, presence and availability of family members, and facility with spoken English. Exclusions: organic disorder or a primary diagnosis of substance abuse, current involvement in family therapy. Number of therapists unknown. Therapists were weekly supervised, this also included periodic review of videotaped sessions with some of the families.
Interventions	RCT to compare two conditions. The experimental condition involved 6-8 sessions of 45-60 minutes. T(n:79, unipolar n:17) = psychoeducational inpatient family intervention - help the family accept the illness and develop understanding of the current episode, identify future stresses inside and outside the family, to elucidate family interactions that produce stress on the patient, to plan strategies for managing or minimising future stress, and to help the patient and family accept the patient's need for continued treatment after hospital discharge. C(n: 89, unipolar n:12) = comparison group (TAU, individual psychotherapy)
Outcomes	1. Measures a. Global Assessment Scale (GAS) b. Psychiatric Evaluation Form c. Family Attitude Inventory d. Goals of Inpatient Family Intervention Rating Scale e. Role Performance Treatment Scale 2. Follow-up times Assessments at admission, at discharge, after 6 months, and after 18 months. T was associated with clinically significant effects at discharge for female patients, but unipolar patients did better without T. A negative effect of T on males becomes evident at 18 months.
Notes	Withdrawal: T&C = 17/186 (T=13, C=4, 6/56 (T=4, C=2) No integrity check

Risk of bias

Bias	Authors' judgement	Support for judgement
Allocation concealment?	Unclear risk	B - Unclear

Miller 2004

Methods	Methodological quality: low 1. Randomisation method: adequate 2. Dropouts: numbers, and reasons in each group were described: intention-to-treat analysis performed

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Miller 2004 *(Continued)*

	3. Outcome assessment: a. Assessors: patients are not blinded to treatment status, no self-report b. Measures: clearly defined and valid c. Follow-up duration: appropriate - at least 6 months after assessment 4. Baseline characteristics: reported, and comparable 5. Entry criteria: clearly defined
Participants	92 participants (aged 18-65) with current bipolar I disorder, recruited in a university-affiliated psychiatric hospital. Exclusions: no DSM-III-R alcohol or drug dependence within 12 months of enrolment. One psychiatrist, one therapist with a master's degree in social work and extensive clinical experience, and two psychotherapists. Treatments were monitored and evaluated at weekly meetings attended by all of the study clinicians and investigators.
Interventions	RCT to compare three conditions. T1(n:33) = family therapy + pharmacotherapy - with family therapy involving 6-10 sessions of 50 minutes of Problem Centered Systems Therapy of the Family (focus on problem solving, communication roles, affective responsiveness, affective involvement, and behaviour control). T2(n:30) = multifamily psychoeducational group therapy + pharmacotherapy - 6 sessions of 90 minutes. T3(n:29) = pharmacotherapy - weekly medication management sessions in the first month. As patients improved, appointments were scheduled less frequently. A mood stabiliser was prescibed to each subject, other medications were used as well, based on the type, intensity, and duration of symptoms.
Outcomes	1. Measures a. Structured Clinical Instrument for DSM-III-R-Patient version b. Modified Hamilton Rating Scale Depression (MHRSD) c. Bech/Rafaelsen Mania Scale Recovery was defined as two consecutive months with Bech/Rafaelsen scores<6 and Hamilton scores<7. 2. Follow-up times Assessments at intake and monthly thereafter. The proportion of subjects within T1, T2 and T3 who recovered by month 28 did not significantly differ. Time to receovery did not differ significantly between the treatment groups. Neither adjunctive family therapy nor adjunctive multifamily group therapy significantly improves recovery from bipolar I mood episodes, compared to pharmacotherapy alone.
Notes	Non-compliance: T1=21/33, T2=20/30, T3=19/29 Withdrawal: T1= 3, T3=2 No integrity check

Risk of bias

Bias	Authors' judgement	Support for judgement
Allocation concealment?	Unclear risk	B - Unclear

Sanders 2000

Methods	Methodological quality: high 1. Randomisation method: adequate 2. Dropouts: numbers, and reasons in each group were described; intention-to-treat analysis performed 3. Outcome assessment: a. Assessors: patients are not blinded to treatment status, partly self-report b. Measures: clearly defined and valid c. Follow-up duration: appropriate - 6 months after treatment end

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Sanders 2000 *(Continued)*

	4. Baseline characteristics: reported, and not comparable (discrepancy BDI) 5. Entry criteria: clearly defined
Participants	47 mothers (with children aged 3-9, meeting DSM-IV criteria for either conduct disorder or oppositional-defiant disorder) with DSM-IV major depressive disorder, recruited from health and welfare agencies and local preschools and elementary schools. Exclusions: subjects who are not able to attend sessions weekly. 6 female therapists, who had or were currently undertaking postgraduate training in clinical psychology and had prior clinical experience with children and families. The therapists followed a manual, training was conducted by the authors, and clinical supervision was provided.
Interventions	RCT to compare two conditions. Both experimental interventions involved 12 sessions of 60-90 minutes: 8 clinic sessions, 4 feedback sessions at home. T1(n:24) = behavioural family intervention (BFI) - uses didactic teaching, therapist-guided practice, role-play, feedback, and coaching to teach behavioural principles and and techniques to parents. T2(n:23) = cognitive behavioural family intervention (CBFI) - the same parenting skills and behaviour management strategies were taught, and cognitive therapy components for the treatment of depression were integrated.
Outcomes	1. Measures a. Sociodemographic Disadvantage Index (SDI) b. Perceived Social Support Inventory (PSSI) c. Child Behaviour Checklist (CBCL) d. Parent Daily Report (PDR) e. Observational measure: 20-minutes videotaped observation sessions, coded using the Family Observation Schedule (FOS) f. Schedule for Affective Disorders and Schizophrenia (SADS) g. Beck Depression Inventory (BDI) h. Automatic Thoughts Questionnaire (ATQ) i. Parent Sense of Competence Scale (PSOCS) 2. Follow-up times Assessments at three occasions: baseline, postintervention (3-5 months), and at follow-up (6 months). Both T1 and T2 are associated with clinically significant improvements in overall child disruptive behaviour and maternal distress. T2 is superior to T1 on maternal depression.
Notes	Non-compliance: T1=5/24, T2=3/23 Withdrawal: T1&T2=2/47 No integrity check

Risk of bias

Bias	Authors' judgement	Support for judgement
Allocation concealment?	Unclear risk	B - Unclear

Sandler 1992

Methods	Methodological quality: low 1. Randomisation method: adequate 2. Dropouts: numbers, and reasons in each group were described; but an intention-to-treat analysis was not performed 3. Outcome assessment: a. Assessors: patients are not blinded to treatment status, mainly self-report b. Measures: clearly defined and valid c. Follow-up duration: inappropriate - no follow-ups 4. Baseline characteristics: reported, unclear if comparable (primarily mother-headed households and relatively heterogeneous in socioeconomic status)

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Sandler 1992 *(Continued)*

	5. Entry criteria: inclusion and exclusion criteria not clearly defined
Participants	72 surviving spouses of individuals aged 25-50 who had died within the prior two years, with at least one child aged 7-17, recruited through letters and follow-up telephone calls. No record of exclusion criteria. Number of therapists unknown, they all had at least a BA degree. Therapists were trained and supervised.
Interventions	RCT to compare two conditions. The experimental intervention involved 3 sessions of family grief workshop and 12 sessions of family adviser program. T(n:35) = family bereavement program: --> family grief workshop - lecture on the nature of grief, exercises to facilitate the identification of grief-related feelings and experiences, with family members and other bereaved families. --> family adviser program - parental demoralisation, parental warmth, stable positive events, negative stress events, closure. C(n:37) = 6-month delayed treatment control.
Outcomes	1. Measures a. Parental demoralisation: PERI demoralisation scale b. Parental warmth: 24 items of the CRPBI c. Family cohesion: 7 items of the FES d. Stable positive events: GLES-C and PDEL e. Family coping by reframing: F-COPES f. Discussion of grief-related issues g. Parent perceptions of support h. Children's satisfaction with family support i. Depression: Child Assessment Scale (CAS), CDI, CBCL (parent report) j. Conduct disorder: CAS, CBCL (self and parent report) 2. Follow-up times No follow-up measures. T was superior to C for older children who received the treatment on conduct disorder problems, and depression. Younger children in C showed significant improvement over time on the measure of conduct disorder, but did not show a similar improvement for depression.
Notes	Non-compliance: T=11/35, C=3/37 Integrity check

Risk of bias

Bias	Authors' judgement	Support for judgement
Allocation concealment?	Unclear risk	B - Unclear

Characteristics of excluded studies *[ordered by study ID]*

Study	Reason for exclusion
Anderson 1986	Intervention only one 4-hour session
Asarnow 2002	Intervention is not aimed at entire system
Beardslee 1993	Aimed at prevention of depression and therefore depression was no important outcome measure
Brodaty 1983	Intervention was no family therapy

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Study	Reason for exclusion
Butler 2000	Aimed at prevention of depression and therefore depression was no important outcome measure
Cicchetti 1999	Aimed at prevention of depression and therefore depression was no important outcome measure
Eisdorfer 2003	Outcome measures did not include depression at symptom level
Friedman 1975	Intervention was marital therapy
Fristad 2002	Intervention was multifamily therapy
Podorefsky 2001	Study is no randomised controlled trial
Sandler 2003	Aimed at prevention of depression and therefore depression was no important outcome measure
Sherrill 1997	Intervention is only single session workshop
Solomon 1996	Outcome measures did not include depression at symptom level
Uebelacker 2004	Outcome measures of different treatment arms are unknown

Characteristics of ongoing studies *[ordered by study ID]*

Campbell 2003

Trial name or title	Childhood depression Biomed-funded psychotherapy outcome study: London, Athens, Helsinki.
Methods	
Participants	Children with depression
Interventions	T1(n:?) = family therapy treatment T2(n:?) = child psychotherapy and parent support treatment
Outcomes	Unknown
Starting date	Unknown
Contact information	D. Campbell, Tavistock Portman NHS Trust, U.K.
Notes	

ADDITIONAL TABLES

Table 1. Quality assessment: internal validity items (MACL) and scores on MACL *(Continued)*

Items and scales	Brent 1997	Diamond 2002	Glick 1985	Miller 2004	Sanders 2000	Sandler 1992
1a randomisation	+	+	+	+	+	+

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Table 1. Quality assessment: internal validity items (MACL) and scores on MACL *(Continued)*

1b concealment of allocation	-	?	?	?	?	?
2 blinded cae provider	-	-	-	-	-	-
3 co-interventions avoided	+	?	+	?	?	+
4 acceptable compliance	+	-	+	+	+	-
5 blinded patient	-	-	-	-	-	-
6 blinded outcome assessor	+	+	+	?	+	?
7 relevant measures	+	+	+	+	+	?
8 acceptable withdrawal	+	-	+	-	+	-
9 timing assessments	+	+	+	+	+	+
10 intention-to-treat	+	+	+	+	+	-
MACL internal validity score	7.5	4.5	7.5	4.5	6.5	3.5
MACL external validity score	4	3	4	4	3	1.5
MACL statistical aspects score	2	2	1	1	2	2
MACL total score	13.5	9.5	12.5	9.5	11.5	6

WHAT'S NEW

Date	Event	Description
1 November 2008	Amended	Converted to new review format.

HISTORY

Review first published: Issue 3, 2007

Date	Event	Description
23 May 2007	New citation required and conclusions have changed	Substantive amendment

CONTRIBUTIONS OF AUTHORS

Tamara Henken (TH) and Marcus Huibers (MH) identified and selected all studies. In case of doubt, they consulted Jeffrey Roelofs (JR) for advice on the selection of studies. TH and MH assessed the methodological quality of selected studies. TH, JR, and Kathleen Restifo (KR) performed the data extraction. Aim was to reach consensus on methodological quality and the results from the data extraction. MH was involved as a fourth reviewer when lack of consensus persisted between TH and JR, or between TH and KR. TH performed the data

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analysis and reported the results. Rachel Churchill (RC) acted as advisor throughout the entire process. All authors are reponsible for the results of this review and contributed to the final manuscript.

DECLARATIONS OF INTEREST

None known.

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INDEX TERMS

Medical Subject Headings (MeSH)

*Family Health; Depression [*therapy]; Family Therapy [*methods]; Randomized Controlled Trials as Topic

MeSH check words

Female; Humans; Male

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